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Abbasids

Dynasty which ruled most of the Islamic world between 750 and 945.

In 750 CE there was a revolution against Umayyad rule which began in eastern Iran and rapidly spread over the whole empire. The Umayyads were totally destroyed except for one prince who fled to Spain and established the Umayyad dynasty there. The newly established Abbasids decided to move the capital from Damascus to a city further east, first Raqqa was chosen and then in 762 Baghdad was founded by the Abbasid caliph al-Mansur. Baghdad grew to be one of the biggest and most populous cities in the world based around Mansur's famous round city. In 836 the caliph al-Mu'tassim was unhappy about clashes between the local population and his troops so he established a new capital further north on the Tigris at Samarra. During this period the power of the caliphate began to decline and control over distant provinces was loosened. Several local dynasties grew up including the Tulunids in Egypt, the Aghlabids in Ifriqiyya and the Samanids in Khurassan (eastern Iran). Internal troubles in Samarra caused the caliph al Mu'tamid to move back to Baghdad in 889; at this time Abbasid power outside Iraq was purely nominal. In 945 the Abbasids were replaced by the Shi'a Buwaihid amirs as rulers of Iraq and Iran. For the next two hundred years the Abbasids remained nominal caliphs with no real authority. In the mid-twelfth century the Abbasids were able to reassert some authority when the Seljuk ruler Sultan Muhammad abandoned his siege of Baghdad. During the reign of Caliph al-Nasir (1179–1225) the Abbasids were able to gain control over much of present-day Iraq. The Mongol invasions and sack of Baghdad in 1258 dealt a final blow to the political aspirations of the Abbasids.

Although Abbasid architecture covers a vast area from North Africa to western India, the majority of extant buildings are in the Abbasid homeland of Iraq. Abbasid architecture was influenced by

three architectural traditions – Sassanian, Central Asian (Soghdian) and later, during the twelfth and thirteenth centuries, Seljuk. Many early Abbasid structures such as the palace of Ukhaidhir bear a striking resemblance to Sassanian architecture, as they used the same techniques (vaults made without centring) and materials (mud brick, baked brick and roughly hewn stone laid in mortar), and built to similar designs (solid buttress towers). Central Asian influence was already present in Sassanian architecture but it was reinforced by the Islamic conquest of Central Asia and the incorporation of a large number of Turkic troops into the army. Central Asian influence is seen most clearly at Samarra where the wall paintings and some of the stucco work resemble that of the Soghdian palaces at Panjikent. The Abbasid architecture of the twelfth and thirteenth centuries is essentially Seljuk architecture built with Iraqi materials.

In addition to the various influences upon it, early Abbasid architecture can be seen to have developed its own characteristics. One of the most notable features of the Abbasid cities of Baghdad and Samarra is their vast scale. This is most clearly demonstrated at Samarra with its extensive palaces and mosques stretched out for more than 40 km along the banks of the Tigris. The scale of the site led to the development of new forms: thus the great spiral minarets of the Great Mosque and the Abu Dulaf Mosque were never repeated elsewhere (with the possible exception of the Ibn Tulun Mosque). Other developments had far-reaching consequences; for example, the three stucco types developed at Samarra rapidly spread throughout the Islamic world (e.g. the Abbasid mosque at Balkh in Afghanistan) and continued to be used centuries later.

See also: Aghlabids, Baghdad, Balkh, Iraq, Samarra, Tulunids, Ukhaidhir

ablaq

Term used to describe alternating light and dark courses of masonry.



Azzam Palace, Damascus. Eighteenth-century example of ablaq masonry, ©Rebecca Foote

It is thought that the origin of this decorative technique may derive from the Byzantine use of alternating courses of white ashlar stone and orange baked brick. The technique of ablaq seems to have originated in southern Syria where volcanic black basalt and white limestone naturally occur in equal quantities. The first recorded use is in repairs to the north wall of the Great Mosque of Damascus which are dated to 1109. In 1266 Sultan Baybars built a palace known as Qasr Ablaq which was built out of bands of light and dark masonry. Although the building has not survived, it demonstrates that the term ablaq was used to describe masonry of this type. In the fourteenth and fifteenth centuries this became a characteristic feature of Mamluk architecture in Egypt, Syria and Palestine. At this stage red stone is also used so that some buildings are striped in three colours, red, black and white. Ablaq continued to be used in the Ottoman period and can be seen in buildings such as the Azzam palace in Damascus. A difference between its use in the Mamluk and the Ottoman periods is that earlier on it was restricted to façades, doorways and windows whereas in the Ottoman period it is used for overall decoration, sometimes including the floors. The technique was also used in Spain and can be seen in the voussoirs of the arcades of the Great Mosque in Córdoba which are red and white.

The technique also seems to have been invented in Europe in the mid-twelfth century although it is not certain whether it was invented independently or copied from Syria. Important European examples are the thirteenth-century churches of Monza,

Siena and Orvieto and a four-storey palace in Genoa.

Afghanistan

Mountainous country located between Iran, India and Central Asia.

Most of Afghanistan is either mountain or desert with only 13 per cent of the land under cultivation. The country is dominated by two mountain ranges, the Hindu Kush and the Himalayas. Communication between different areas is difficult and many villages are cut off by snow for half the year. The climate is extreme with temperatures varying from -26 to 50 degrees centigrade. The population is a mixture of ethnic groups including Pushtun, Tajiks, Uzbeks and Turkoman.

Since earliest times Afghanistan's importance has been based on its position between the great civilizations of Iran to the west and India to the south-east. In addition the country formed a route between nomadic Central Asia and the more settled regions to the south. These diverse cultures have all left their mark on the history and archaeology of the country. Before the second century BCE Afghanistan was ruled by the Achaemenids who traced their origins to the conquests of Alexander the Great. From the first century BCE the country was taken over by nomadic groups from Chinese Central Asia, the most significant of which were the Kushans who established a major empire with Buddhism as the official religion. The great Kushan Empire had broken up by the eighth century CE leaving the Sassanians controlling the west and the

eastern part in the hands of independent Kushan rulers.

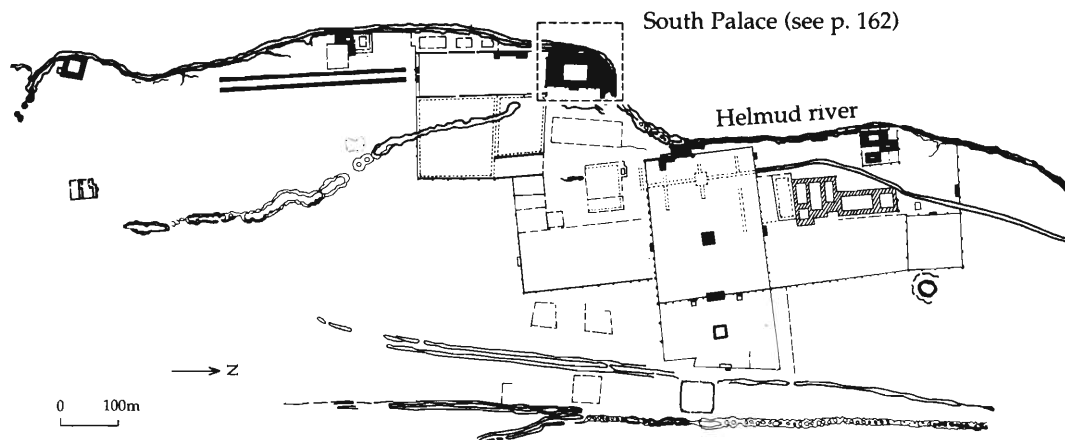
With the fall of the Sassanian Empire the western provinces of Khurassan and Sistan were incorporated into the Islamic Empire although the eastern province of Kabul did not accept Islam until the ninth or tenth century. The first Muslim rulers to control the entire area were the Ghaznavids who seized power from the Samanid rulers of Khurassan in the late tenth century. Under the second ruler, Mahmud, the Ghaznavid Empire was extended to include the Punjab and parts of western Iran. In the late eleventh century the Ghaznavids were threatened by the Seljuks who took over most of Iran and eventually reduced them to the status of vassals. Both the Seljuks and the Ghaznavids were defeated by a local dynasty known as the Ghurids in the late twelfth century. The thirteenth century saw the arrival of the Mongols who incorporated the region into their vast empire. During the fourteenth century the Mongol Empire fragmented and in 1339 Timur established his own empire. Herat was established under the Timurids as capital of the dynasty and became the principal city of the region. A further nomadic invasion at the beginning of the sixteenth century led to the collapse of the Timurid Empire. In 1528 Herat was occupied by the Saffavids whilst the Mughals (descendants of the Timurids) retained control of Kandahar in the south. The decline of these two empires in the eighteenth century led to the establishment of the kingdom of Afghanistan which was able to maintain its independence between the expanding Russian and British empires.

The principal building materials used in Afghanistan are mud brick and pisé, baked brick and stone; wood is fairly rare. The majority of pre-modern buildings in Afghanistan are built of mud brick or pisé and have not survived well the ravages of time. More important buildings are made of baked brick which is often decorated with stucco, painted frescos, tiles or relief brick patterns. There is no tradition of ashlar masonry and stonework usually consists of rubble masonry foundations for mud-brick structures. Exceptions to this usually represent outside influence such as the mosque of Larwand which is Indian in its design and execution.

The oldest identifiable Islamic building in Afghanistan is the ninth-century Abbasid mosque at Balkh. This is a square nine-domed structure with

arches resting on four central piers. The north, west and south sides are solid walls whilst the east side opposite the mihrab is an open arcade resting on two round piers. The distinctive feature of the mosque is its stucco decoration which resembles that of Samarra and demonstrates the long distance transmission of ideas and motifs during this period. A more unusual form is the eleventh-century mosque/madrassa at Lashkari Bazar near the modern town of Bust. This is a square mud-brick and pisé structure with external buttress towers and a central courtyard. On the west side of the courtyard there is a small iwan containing a mihrab. The orientation of the building is aligned with the qibla (unlike other buildings on the site) suggesting that it served a religious function, possibly a madrassa. Further east at Ghazni is the palace mosque of Masud III; this is a rectangular structure with a roof supported on six pillars and three doors on the west side. The mihrab is made from marble panels carved with Quranic calligraphy and stylized vegetation. Contemporary descriptions of the city mention a hypostyle mosque supported with wooden columns made of trees imported from India. Unfortunately no mosques of this type have survived although the carved wooden mihrab in the village of Charkh-i Loghar gives an idea of the quality of woodwork of the period.

Mosques of the Ghurid period show a marked Iranian influence which can be seen in buildings such as the mosque and madrassa of Ghiyath al-Din in the village of Ghist. The remains of the building comprise two large domed units made of brick with semi-circular squinches. A better preserved example is the Shahr-i Mashad Madrassa which forms a square courtyard building with domed room. The most notable feature of the building is the decorative brickwork façade which comprises five blind niches and a projecting entrance iwan or pishtaq. The façade is decorated with cut brickwork and stucco which form elaborate patterns and include fifteen bands of inscription. More unusual is the mosque of Larwand which is built entirely of monolithic stone panels and resembles contemporary Indian architecture. The entrance is set within a façade of three arches supported by faceted engaged columns. The doorway itself is decorated with elaborate carving which resembles woodwork. Inside the mosque is covered with a dome which rests on flat corbels.



Plan of Lashkari Bazar, Afghanistan (after Allen)

Mosques of the Ilkhanid and Timurid periods continued to use the same Iranian forms although a greater variety of vaults was employed. One of the most important innovations was the double dome which was used for tombs and memorials, this comprised a shallow domed ceiling inside and a tall elongated dome outside. The greatest mosque of the Timurid period is the Great Mosque of Herat which was rebuilt during the reign of the Timurid Sultan Husain Baiqara. The mosque is built around a huge brick-paved courtyard with the principal iwan or prayer hall flanked by twin minarets at the west end. Either side of the main iwan are shallower iwans with doors leading to prayer and teaching rooms. Unfortunately the original glazed tilework of the Great Mosque has mostly been replaced although the smaller mosque of Hauz-i Karboz contains a superb example of a tiled Timurid mihrab.

The minarets or memorial towers first erected by the Ghaznavids in the eleventh century are probably the most distinctive feature of Afghan Islamic architecture. The earliest examples are the minaret of Masud III and the minaret of Bahram Shah both at the capital, Ghazni. Each of these structures consists of a baked brick tower standing on an octagonal or cylindrical stone base or socle. The baked brick shafts have a stellate (eight-pointed, star-shaped) plan and are divided into decorative brick panels. The tower of Masud originally stood more than 44 m high but has now been reduced to 20 m. The upper part of both minarets was a cylindrical shaft but these have

now disappeared. Other examples of a related type are the minaret of Zaranj and the minaret of Khwaja Siah Posh, both in Sistan. The Zaranj minaret had an octagonal shaft with a semi-circular flange in the centre of each side whilst the Khwaja Siah Posh minaret comprised sixteen alternating angular and rounded flanges. The culmination of this form is the 65-metre-high minaret of Jam built by the Ghurids in the twelfth century. The height of the structure is further emphasized by its position in a deep valley at the intersection of two rivers. The tower consists of three main sections each in the form of a tapering cylinder. The lowest and largest section is decorated with panels alternating with giant strap-work loops and terminating in a muqarnas corbel balcony. The second and third storeys are each decorated with giant bands of calligraphy.

The first examples of Islamic domestic architecture occur at the site of Lashkari Bazar near the modern town of Bust. The site contains three palaces, the most famous of which is the southern palace which overlooks the Helmand river. This was built around a rectangular courtyard with four iwans (one on each side) leading into separate quarters. The palace was luxuriously decorated with stucco, wall paintings and carved marble panels in a style reminiscent of Abbasid Samarra. In addition to the main palaces there were a number of smaller mansions with a similar design based around a courtyard and iwans. This design was to remain a feature of later Afghan architecture and can be seen in the medieval (thirteenth- to



Twelfth-century minaret, Jam, Afghanistan, ©Ashmolean Museum

fourteenth-century) houses of Dewal-i Khodayda and Gol-i Safed. The village of Dewal-i Khodayda comprises a number of courtyard-iwan houses aligned to protect them from the north-west wind. Gol-i Safed is a walled town with houses of a similar design to Khodayda but more elaborate decoration in the form of blind niches and decorative brickwork.

See also: Herat, Iran, Lashkari Bazar, Mughals, Timurids

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Agades (also Agadez)

Islamic trading city located in the Air region of Niger, West Africa.

The origins of the city are obscure although it is likely that it began as a Tuareg encampment like its western counterpart Timbuktu. The first arrival of Tuareg into the region is not known although Ibn Battuta describes the area as under Tuareg domination in the fourteenth century. In 1405 the Tuareg sultanate of Air was inaugurated and it is likely that Agades was founded at this time. Nevertheless, the first Tuareg sultans remained nomads and were not based in the city until the mid-fifteenth century by which time the town was an important entrepôt for the trade between Timbuktu and Cairo. In the early sixteenth century Sonni Ali the emperor of Gao deposed Adil the ruling sultan of Agades and replaced him with a governor. At the same time a Songhay colony was established and Songhay was established as the official language of the city. Although the city was not captured during the Moroccan invasion of 1591, the disruption of the trade routes meant that the city declined and by 1790 it was almost completely deserted. Many of the inhabitants migrated to the Hausa cities of the south. By the mid-nineteenth century the city had recovered and was once more a prosperous trading centre with a mixed population of Berbers from the Algerian Sahara and immigrants from the Hausa cities of Kano and Sokoto.

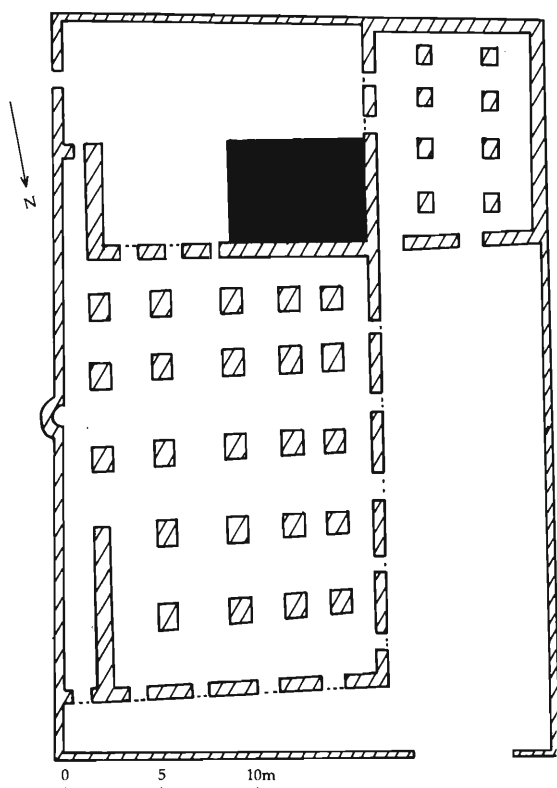
The main building material in Agades is mud-brick although immediately outside the city in the Tuareg encampments stone is the main material of construction. Most houses are single storey with roofs built from split palm trunks laid diagonally across the corners supporting more beams on top of which are palm frond mats with earth piled on top.

Little remains of the pre-nineteenth-century town although descriptions by early European and Arab travellers give some idea of what the earlier Tuareg city looked like. A sixteenth-century description by Leo Africanus describes the city as built in the 'Barbary mode' (i.e. Berber) which implies that it may have consisted of stone houses like those inhabited by the present-day Tuareg of the region. These houses are simple two-roomed rectangular buildings made of stone and mortar often with mud-brick courtyards and outhouses.

Aghlabids

The Tuareg nature of the city is further emphasized by the open prayer place (musalla) and shrine known as Sidi Hamada just outside the south walls of the city. The site consists of an open area of ground with a low bank at the east side against which is built a dry stone wall which rises up to the mihrab in the centre. A nineteenth-century description of the southern part of the city mentions a large mud-brick complex surrounded by a walled enclosure crowned with pinnacles. It seems likely that this may have been the citadel of the Tuareg city although it has also been interpreted as a khan. Also in this area were some well-built (stone?) houses amongst which was a building interpreted as a bath house (hammam).

When the city was resettled in the nineteenth century a large northern extension was added which was enclosed within a city wall (katanga). The houses of this period were built of mud and their interiors resembled those of the Hausa cities of northern Nigeria with moulded mud decoration.



Plan of the Great Mosque, Agades, Niger. Minaret shaded (after Prussin)

The major work of this period was the rebuilding of the minaret of the Great Mosque between 1844 and 1847. The mosque consists of a large rectangular sanctuary with a mihrab in the centre of the east wall and the huge minaret attached to the north-west corner. A nineteenth-century description mentions another ruined minaret to the south of the mosque; this has now entirely disappeared. The present minaret is over 30 m high and tapers from a square base (10 m per side) at the bottom to a square platform (3 m square) at the top. The exterior faces of the minaret are characterized by thirteen layers of projecting palm timbers which act as tie beams for this complex structure. Inside the minaret there is a timber-framed staircase lit by twenty-eight openings (seven on each side). This structure is distinguished from other monumental minarets in the region by its base which consists of four massive earth piers instead of a solid block. The architectural origins of the building are not known although it has been suggested that it bears some similarity to the tapering stone-built minarets of southern Algeria.

See also: Oualata, Timbuktu, West Africa

Aghlabids

Dynasty which ruled the north African province of Ifriqiyya during the ninth century.

Although nominally under Abbasid control, the Aghlabids were able to exercise a great deal of independence. Militarily their great achievement was the conquest of Byzantine Sicily.

The Aghlabids were great patrons of architecture and much of their work has survived. Their work demonstrates a mixture of Byzantine and Abbasid building styles. One of the most important projects was the rebuilding of the Great Mosque of Qairawan and the addition of the huge three-tiered minaret/tower. The Aghlabids were also responsible for major irrigation and water supply systems the most famous example of which are the huge circular cisterns of Qairawan. Much of their effort was also directed towards the development of the coastal towns as bases from which to launch the conquest of Sicily. The military nature of Aghlabid rule is further reflected in the large number of ribats or fortified monasteries which they constructed.

See also: Tunisia

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Agra

City in central northern India famous for its Mughal monuments.

Agra is located on the banks of the river Jumna 160 km south of Delhi. Although Agra was an ancient Hindu city the present city was refounded as a capital by Sikander Lodi at the beginning of the sixteenth century. In 1505 Iskander built a mud-brick fortress by the banks of the river at the centre of his new city. However, in 1526 the Lodis were defeated by Babur at the battle of Panipat and Agra was incorporated into the expanding Mughal Empire. Although Agra became one of the principal Mughal cities, little construction took place until 1565 when the third emperor Akbar demolished the old fort of Sikander Lodi and built a new fort faced in red sandstone. For the next eighty years Agra was the imperial capital apart from a brief period between 1571 and 1585 when Akbar moved to nearby Fatehpur Sikri.

The main monuments of Agra are the fort and the Taj Mahal which are located 1.5 km apart on the west bank of the river. The fort consists of a roughly triangular area enclosed by a huge red sandstone wall capped with pointed crenellations. The walls have two main gates (the Delhi Gate and the Amar Singh Gate) and are surrounded by a deep paved moat. The fort is the product of several construction phases the earliest of which belongs to the reign of Akbar. Little of Akbar's original palace survives, except for the enclosure walls and the Jahangiri Mahal which is a Hindu-style pavilion in the south part of the building. Most of the interior of the fort may be attributed to the reign of Shah Jahan who also built the Taj Mahal which can be viewed across the water from the private apartments of the palace. Although less rigidly planned, the interior of the Agra Fort bears a striking similarity to the Red Fort in Delhi also built by Shah Jahan. The layout is based around a series of formal gardens and pavilions the most beautiful of which is the Mussaman Burj or octagonal tower which overlooks the river and is capped by an octagonal copper dome. Other important monuments in Agra include the Rambagh, the Chini Ka Rauza and the tomb of Itmad al-Daula. The Rambagh is a formal four-part garden laid out

by the first Mughal emperor Babur. In the centre of the garden is an open octagonal domed pavilion standing on thirty-six columns. The Chini Ka Rauza is a Persian-style tiled tomb crowned with a bulbous dome built for the seventeenth-century poet Afzal Khan. The tomb of Itmad al-Daula is a square structure with octagonal domed minarets at each corner, the outer surface of the tomb is decorated with carved white marble and geometric marble screen. In the centre of the structure is the tomb of Itmad al-Daula which is lined with yellow marble and has fine pietra dura stone inlay.

See also: Delhi, India, Mughals, Red Fort, Taj Mahal

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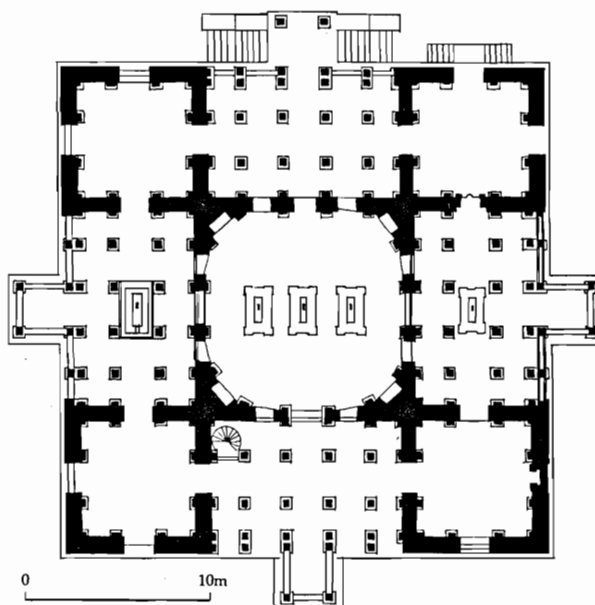
Ahmadabad

Main city of Gujarat in western India with a mixed Hindu, Muslim and Jain population.

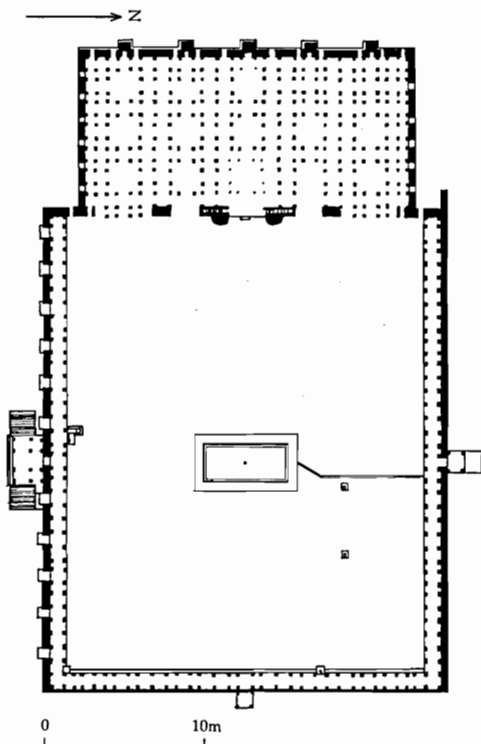
The old city is located on the east bank of the Sabarmati river. Ahmadabad was founded by Ahmad Shah I in 1411 near to the old Hindu town of Asaval which it replaced. The Bhadra towers erected by Ahmad Shah to protect the citadel are the oldest surviving part of the city; however, most of the original fortifications have been destroyed. The city contains some of the best examples of medieval Gujarati architecture which is characterized by its integration of Hindu, Jain and Islamic forms.

At the centre of the city is the Jami Masjid built by Ahmad Shah I and completed in 1424. The plan of the building comprises a huge rectangular courtyard with entrances on three sides and a covered sanctuary to the west. The sanctuary is divided into fifteen domed bays (five wide and three deep) supported on 260 columns. In the centre of the sanctuary façade is the huge main entrance flanked by two tall minarets (now partially demolished). At the end of each of the aisles there is a mihrab made of coloured marble. The central

Ajdabiya (Roman Corniclanum)



Plan of the tomb of Ahmad Shah, Ahmadabad, India



Jami Masjid, Ahmadabad, India

aisle is three times the height of the rest of the building and contains projecting balconies looking in to the central area. To the east of the mosque is the tomb of Ahmad Shah which consists of a square domed mausoleum in the centre with four smaller square domed chambers at the corners and pillared verandas in between.

One of the finest buildings of the city is the Rani Sipri Mosque built in 1514. The building is quite small and has a pronounced Hindu character with elaborate carved decoration and fine perforated jalis or screens.

See also: Gujarat, India

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Ajdabiya (Roman Corniclanum)

Prominent Fatimid city in Libiya.

Ajdabiya's owed its importance to its position on the junction of two important routes, the coastal route from Tunisia to Egypt and the desert caravan route from the oases of Jaly and al-Ujlah. Although the site was known in Roman times, it was during the Fatimid period that the city achieved its greatest development.

Several remains of the Fatimid complex have been recovered including a rectangular mud-brick enclosure wall, the qasr or palace and the mosque. The palace is a rectangular stone built structure approximately 22 by 33 m with solid circular corner towers and semi-circular buttress towers. The palace has one entrance in the north wall leading into a courtyard enclosed by apartments. At the opposite end to the corner from the entrance there is a large T-shaped suite of rooms which probably functioned as the royal apartment. The royal apartments were once luxuriously decorated with stucco work.

The most important building at the site is the mosque located in the south-west corner of the complex. Extensive archaeological work on the mosque has defined a Fatimid and pre-Fatimid phase above an earlier Roman site, but only the Fatimid phase has been investigated in any detail. In 912 the Fatimids sacked the town of Ajdabiya and destroyed the mosque building a new one on the site. The Fatimid mosque consists of a rectangular structure (47 by 31 m) built out of mud brick with corners, piers, jambs and other structurally important points built out of stone. There was one entrance in the north-west side opposite the mihrab and several other side entrances, all of which appear to have been plain in contrast to the monumental porches at Mahdiya and Cairo. Inside there is a large courtyard paved with flagstones and a water tank in the middle at the northern end of the mosque. The courtyard is surrounded by arcades and on the south-eastern side is the sanctuary. The latter has a wide central aisle running at right angles to the qibla wall where it meets a transept running parallel to the qibla wall; all the other aisles are aligned at right angles to the qibla.

To the left of the main entrance is a large square block 4 m high which was the base of a minaret with an octagonal shaft. This is the earliest example of this type of minaret which was later developed into the characteristic Cairene minaret form. There are also traces of a staircase built into the wall which have been interpreted as the remains of a staircase minaret used before the erection of the later octagonal one.

Little remains of the mihrab apart from the foundations and some stucco fragments; however, nineteenth-century drawings depict it as a curved recessed niche with a horseshoe arch.

See also: Fatimids, Libiya

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ajimez

Spanish term for pair of windows sharing a central column. This is one of the distinctive features of Islamic buildings in Spain and is especially noticeable on minarets.

Albania

Mountainous country in south-eastern Europe which was incorporated into the Ottoman Empire in the fifteenth century.

The first Ottoman incursions into Albania in the late fourteenth and early part of the fifteenth century were fiercely resisted by the Albanians under their leader Skanderberg who managed to unite the various feudal factions who had previously ruled the country. The resistance of the people together with its mountainous terrain meant that the country was not fully conquered until the late fifteenth century. Few Turks settled in the country which nevertheless converted to Islam. This remained the state religion until the revolution of 1967 when the country became officially atheist. Mosques were converted into museums and minarets were demolished in order to destroy the distinctive Islamic appearance of the cities. In 1991 with the collapse of the authoritarian communist regime Islam has again become the main religion with 72 per cent of the population Muslim and 27 per cent Christian (Greek Orthodox and Catholic). As a result mosques have been reopened with rebuilt minarets. There are substantial numbers of Albanians living abroad particularly in the USA where there are four Albanian mosques (in Detroit, Chicago and Waterbury, Connecticut).

A recent survey has indicated that there may be as many as 800 mosques surviving in Albania along with 300 historical Muslim sites. The mosques in Albania are of two types, the classical Ottoman type derived from Byzantine architecture based on a square domed area with a triple-domed portico and the more common rectangular buildings with wooden painted ceilings which are typical of the Balkans. The oldest Muslim building in the country is the Berat Congregational Mosque built in 1380. Another early mosque is the Ilias Mirahori Mosque in the town of Korçë built in 1494 after the Ottomans had gained control of the whole country. One of the most celebrated mosques in Albania is at Krujë 20 km north of the capital Tiranë. The mosque, located in the grounds of Skanderberg's castle, was built in 1779 and has wooden ceilings painted to look like a dome set on squinches. Another famous building is the Peqin Mosque built in 1822 which incorporates a clock tower into the design of the minaret.

Much of the secular Ottoman architecture in Albania was destroyed in the fierce modernizing programmes of the 1960s and 1970s with the exception of the towns of Gjirokastër and Berat which have been preserved as museum towns. The town of Gjirokastër is built on slopes around the citadel which is located on a high plateau. The town is first mentioned in the twelfth century although the majority of surviving buildings belong to the seventeenth and eighteenth centuries. The typical house in the city consists of a tall stone block structure up to five storeys high with external and internal staircases, a design thought to originate from fortified country houses in southern Albania. The basic form of the house consists of a lower storey containing a cistern and stable with an upper storey reached by a flight of exterior stairs. The upper storey was divided into two units: a guest room, and a winter or family room containing a fireplace. Later on more storeys were added to accommodate extended families; these upper floors were reached by internal staircases. In the seventeenth century houses were built with two wings protecting the lower external staircase.

Berat is a much older city dating back to the Illyrian period. Initially conquered by the Ottomans in the fourteenth century, it was then recaptured, and not finally occupied by the Turks until 1417. The town is located on the banks of the Osun river and like Gjirokastër is built around a citadel.

The citadel was remodelled by the Turks soon after its capture in 1417 and again in the eighteenth and nineteenth centuries to take account of the use of artillery. Like the fortified houses of Gjirokastër the houses of Berat have external staircases and the main living area of the building is on the upper floor. However, at Berat this feature was designed to overcome the hilly nature of the ground rather than for defensive reasons. Thus to avoid dampness and having to excavate hillsides the houses are built on stone substructures which are sometimes used for storage. The upper parts of Berat houses are built out of timber filled in with lath and plaster and then whitewashed. The verandas sometimes extend along the whole front of the house although in many cases part of the veranda is occupied by a separate room. In the nineteenth century many of these verandas were filled in with large glazed windows. Inside the houses are elaborately decorated with carved and painted woodwork.

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albarrani

Spanish term for a tower projecting from the walls of a castle or city fortifications and connected by means of a bridge. The earliest example in Spain is at Mérida and is connected to the ninth-century fortress, but most other examples are later.

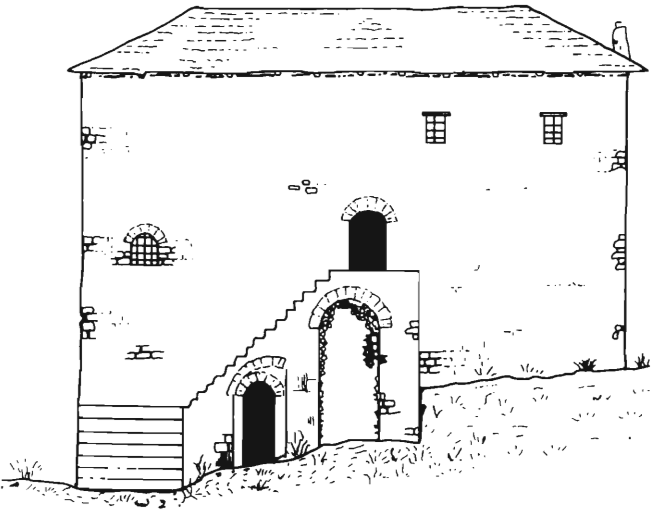
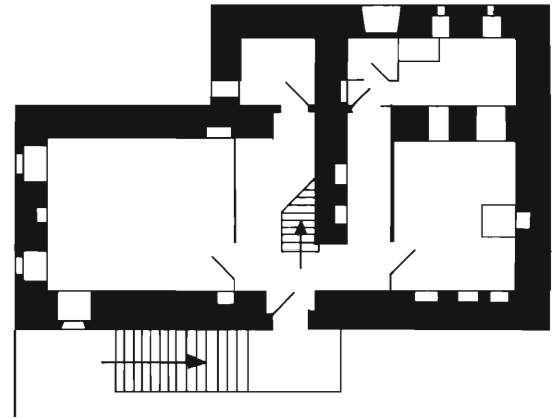
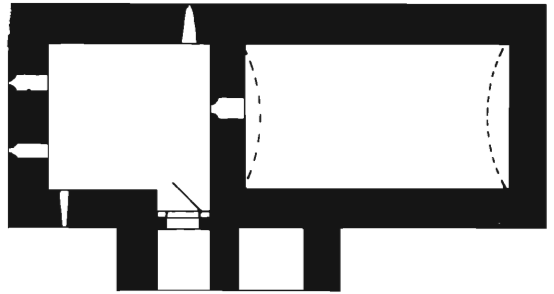
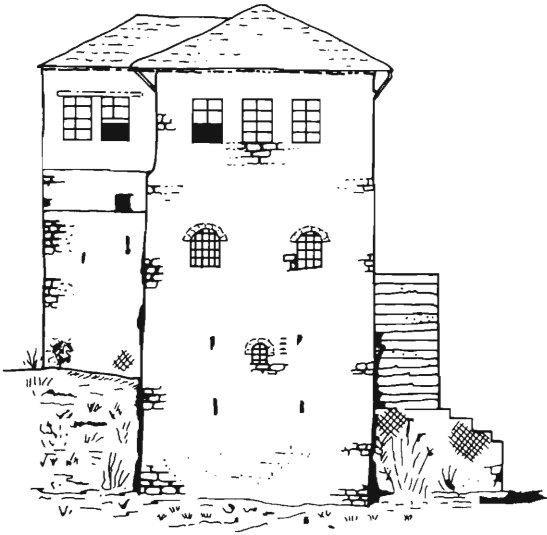
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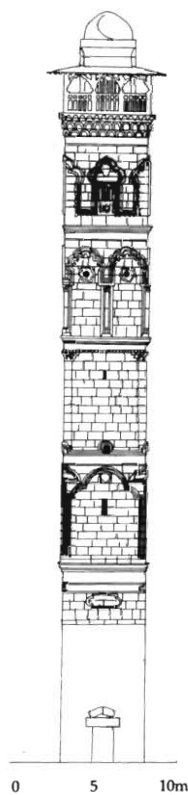
Aleppo (Arabic Halab)

Syria's second city located on the river Qoueiq in north-west Syria.

Aleppo is often regarded as the oldest inhabited city in the world because of its continuous history from at least the twentieth century BCE. Although the city was of great significance in Roman and Byzantine times its importance declined during the first three centuries of Islam in favour of the nearby city of Qinnarisin. Under the Hamdanids Aleppo once more became powerful as capital of a dynasty ruling northern Syria; this was short-



Tower houses in Gjirokastra, Albania (after Lawless)



Eleventh-century minaret of the Great Mosque, Aleppo

lived, however, and the city was not able to recover its status until 1129 when Imad al Din Zengi was made governor. Imad al Din was able to consolidate his position through a series of victories against the Crusaders which established him as premier ruler in Syria. Under Imad and his successors the Zangids and later the Ayyubids the city grew to be one of the great cities of Islam. Despite the Mongol invasions of 1260 and 1400 Aleppo remained a major city throughout the Middle Ages and the Ottoman period.

Although there are the remains of an Umayyad mosque enclosed within the Great Mosque, most of the monuments in Aleppo belong to the period after the eleventh century. During the twelfth and early thirteenth centuries a number of important madrasas were built including al-Zahiriyyah (1217), al-Sultaniyyah (1223) and the Madrasa al-Firdaws which includes a mosque, a school and a turbah. Important public buildings from the fourteenth and fifteenth centuries include the Maristan

(hospital) Arghuni and the Hammam al-Nasiri (public baths).

In spite of the great beauty of Aleppo's madrasas and mosques the best-known feature of the city is its fortifications, particularly the citadel which dominates the old city. Although fortification on the citadel began as early as the tenth century, the most spectacular work dates from the thirteenth century under Ghazi al Malik al-Zahir. During this period the glacis, triple entrance and most of the towers were built. Characteristic features of this work are the monumental inscriptions, carved animal sculpture and massive masonry. In addition to the citadel the old city is enclosed within a medieval wall and gates.

Whilst the medieval period saw the development of Aleppo's fortifications and religious buildings the Ottoman era produced a large number of commercial and industrial buildings. Prominent amongst these are Khan al-Sabun (early sixteenth century), Khan al-Jumruk, Khan al-Wazir and Bayt Dallal (all seventeenth century). These buildings belong to a complex network of suks which extend for a distance of 15 km.

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Algeria

North African country located between Morocco and Tunisia.

Algeria can be divided into three main regions, the Mediterranean coast known as the Tell, the High Plateaux immediately south of the coast and further south the Sahara desert. The Tell is dominated by coastal mountains, although there are three small sections of coastal plain, one at Algiers, one at Oran and one at Annaba. The High Plateaux are more arid with marginal areas for agriculture. The Sahara desert covers four-fifths of the country and links it to West Africa.

Algeria did not exist as a political unit until the Ottoman occupation of the sixteenth century (the country did not include the Sahara regions until the early twentieth century). Before that period it

is difficult to separate the history of this area from the rest of North Africa. The first Arab invasion of Algeria occurred in 681 and by the beginning of the eighth century the Byzantine towns of the coast had all surrendered. The predominantly Berber population was converted to Islam relatively quickly and in the early eighth century took part in the conquest of Spain. A notable feature of Algeria at this point was the rapid development of religious sects the most important of which were the Kharijites who established independent rule in the area. The expansion of the Fatimids in the ninth century attracted Berber support particularly along the coast, although those of the south remained opposed to the Fatimid regime. During the eleventh century Berber groups in the south of the country emerged as a coherent political and military force known as the Almoravids. The Almoravids were able to conquer most of Morocco and Algeria and Spain before the end of the eleventh century. Internal disputes meant that the dynasty lasted only fifty years more before being overthrown by the Almohads, another Berber group with similar origins. Like their predecessors the Almohads too had early successes, but did not last much beyond the twelfth century. The political history of the region from the thirteenth to the sixteenth century is quite confused, with various local dynasties trying to establish control over the whole area. The Spanish took advantage of this situation and invaded in 1510. There was strong local resistance to the Spanish invasion and the Ottoman Turks were called in as allies against the Christians. The Turks formally established their rule in 1587 by appointing a governor and defining the present borders of the country. In the early nineteenth century the French occupied the coastal cities to prevent attacks on their ships. This temporary occupation gradually developed into a virtual annexation with French settlers arriving in the country. The occupation lasted until 1962 when Algeria was established as an independent state.

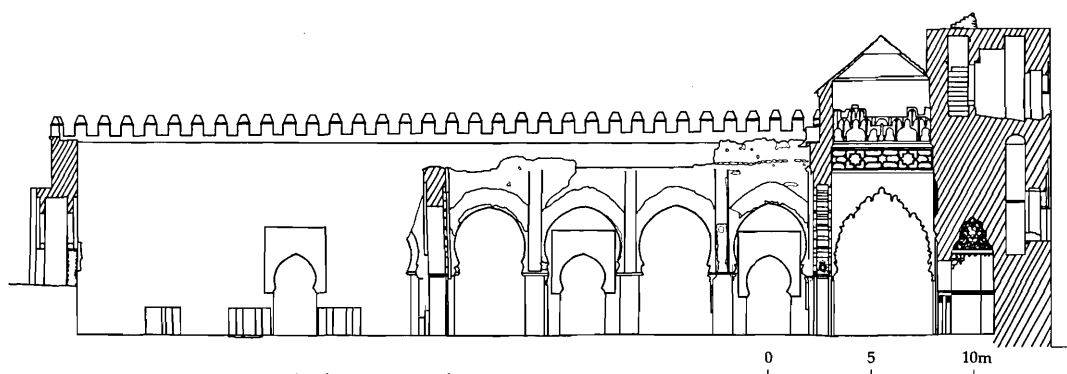
The principal building materials of Algeria are stone, baked brick and mud brick (*toub*) with wood used as a roofing material. In the coastal cities the quality of the buildings is of a very high standard with ashlar masonry and ornamental stonework in a style similar to North Africa and Spain. South of the coast dressed stonework is very rare and even palatial buildings such as Qal'at Banu Hammad are built out of roughly squared stone. Baked brick is

found mostly in coastal cities such as Tlemcen and Nedroma, although is also used for houses in oasis cities in the east such as Tamelhat where houses have decorative brickwork panels. Roofing tiles made of baked clay are a feature of coastal cities, in particular Tlemcen which is heavily influenced by neighbouring Morocco. Mud brick is used in the High Plateaux regions and in the oasis towns of the desert.

The earliest Islamic architecture which has survived belongs to the Sanhaja Berber dynasties. Excavations at Ashir 170 km due south of Algiers have revealed the remains of a tenth-century palace built by the Zirid dynasty. The palace is a rectangular enclosure (72 by 40 m) with a large central courtyard around which were four separate residences. Across the courtyard from the entrance there was an arcade resting on columns behind which was a domed audience hall. One hundred and fifty kilometres east is the site of Qal'at Banu Hammad capital of the Hammadid dynasty. The city is located high up in the mountains at an altitude of 1,400 m. The city was founded in 1007 by Hammad the father of the dynasty and a relation of the Zirids. Excavations at the site have revealed the Great Mosque and three palaces. In 1015 Hammad broke his allegiance to the Fatimids and pledged his support for the Abbasids. The results of this change of policy can be seen in the architecture of the city; thus a minaret was added to the Great Mosque and the palaces are decorated with carved stone screens reminiscent of contemporary Abbasid stucco work. To the north of Qal'at on the coast is the city of Bougie which became the Hammadid capital from 1060 to 1085, but there are few standing remains of the Hammadid city with the exception of a monumental sea gate.

The south of Algeria was a refuge for Ibadis who rebelled against both the Shi'a orthodoxy of the Fatimids and the Sunni orthodoxy of the Abbasids and their local supporters. In the eleventh century the Ibadis established a capital at the oasis town of Sadrat. Excavations have revealed a number of houses decorated with ornate stucco in the Abbasid style.

The rise of the Almoravids in the eleventh century led to the development of a new mosque form which can be seen in the Great Mosques of Tlemcen, Nedroma, Algiers and Tozeur. This new form preserved the North African tradition of aisles running perpendicular to the qibla with a



Section of Great Mosque of Tinnal, Algeria (after Golvin)

dome in front of the mihrab. The new development was to integrate the lateral arcades into the prayer hall of the mosque and incidentally reduce the size of the courtyard. Another notable feature is that none of the mosques was built with minarets although these were added in later periods.

The breakdown of central political authority after the twelfth century meant that with occasional notable exceptions there were few major architectural projects. In religious architecture this meant the construction of madrassas instead of congregational mosques and in secular architecture it meant the construction of khans/funduqs instead of palaces. A notable exception to this general pattern is the city of Tlemcen which formed the centrepiece of a contest between the Zayyanid and Marinid dynasties. The most ambitious project of the period was the city of al-Mansura outside Tlemcen which was built by the Marinids in 1303 as a base for besieging Tlemcen. After the failure of the first attempt a new siege city was built in 1336. At the centre of this city was the Great Mosque which still survives in its unfinished state. The mosque forms a large rectangle 85 by 60 m and, like the Almoravid mosques, the lateral arcades form an integral part of the prayer hall. The most striking feature of the building is the minaret, at the base of which is the main entrance to the mosque. The minaret is built in a reddish stone decorated with geometric patterns carved into it.

Ottoman architecture was confined principally to the coastal cities with the best examples in Algiers which became the capital at this time. Under French rule Islamic architecture was relegated to a secondary position, although at the beginning of the twentieth century they introduced

the West African 'Sudanese Style' to cities such as Ardar in the southern Sahara.

See also: Algiers, Qal'at Banu Hammad

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Algiers

Capital city of Algeria.

Algiers is located in the middle of the north coast of Algeria and is built on the site of the Roman town of Icosium. The Muslim city was founded in 944 and rose to prominence under the Almoravids who built the Great Mosque. The city did not become the capital until the Ottoman conquest of the sixteenth century. The city has two seventeenth-century Turkish mosques built in the classical Ottoman style with a large central dome and multiple-domed portico. There are also a number of Turkish mansions in the city built on the wealth derived from attacking Christian ships.

See also: Algeria, Qal'at Banu Hammad

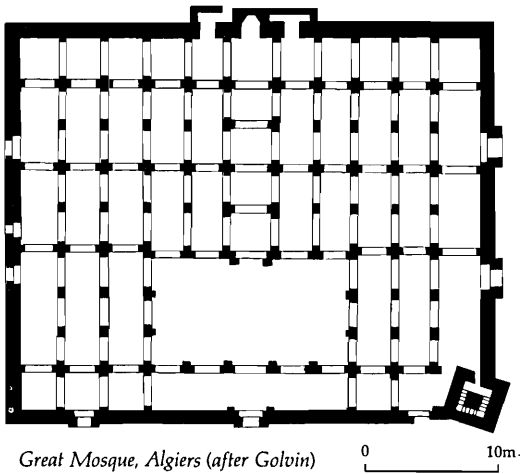
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Alhambra

Palace complex in Granada in south-west Spain known for being one of the most beautiful examples of Islamic architecture.



The name Alhambra, 'The Red Fort', accurately reflects the building's fortified position on a rocky spur in the middle of Granada between the river Darro and the river Genil. The city of Granada first rose to importance in 1012 as capital of the Zirid dynasty who established their base on the site of the Alhambra. Later in 1231 the city was capital of the Nasirid dynasty under Banu al-Ahmar who ruled the province of Andalucía until the final conquest of Ferdinand and Isabella in 1492. As rulers of the last Muslim state in Spain the Nasirids were able to collect some of the most able craftsmen in the peninsula.

The oldest part of the present structure is the Alcazaba which was built in the twelfth century by the Almohads and which protects the western end of the spur on which the Alhambra is built. It is entered through the Puerta de las Armas and enclosed by strong walls which are fortified by rectangular towers. The earliest of these is the Torre Quebrada whilst other early towers are the Torre del Adarguero and the Torre del Homenaje. The Torre del Homenaje was the keep of the Alcazaba and in it the first Nasirid emirs had their apartments. Excavations within the Alcazaba have revealed traces of barracks and a large cistern which date from this early period.

Most of the Alhambra, however, dates from the fourteenth and fifteenth centuries and consists of several palaces built for successive emirs. The earliest of these is known as the Palacio del Partal;

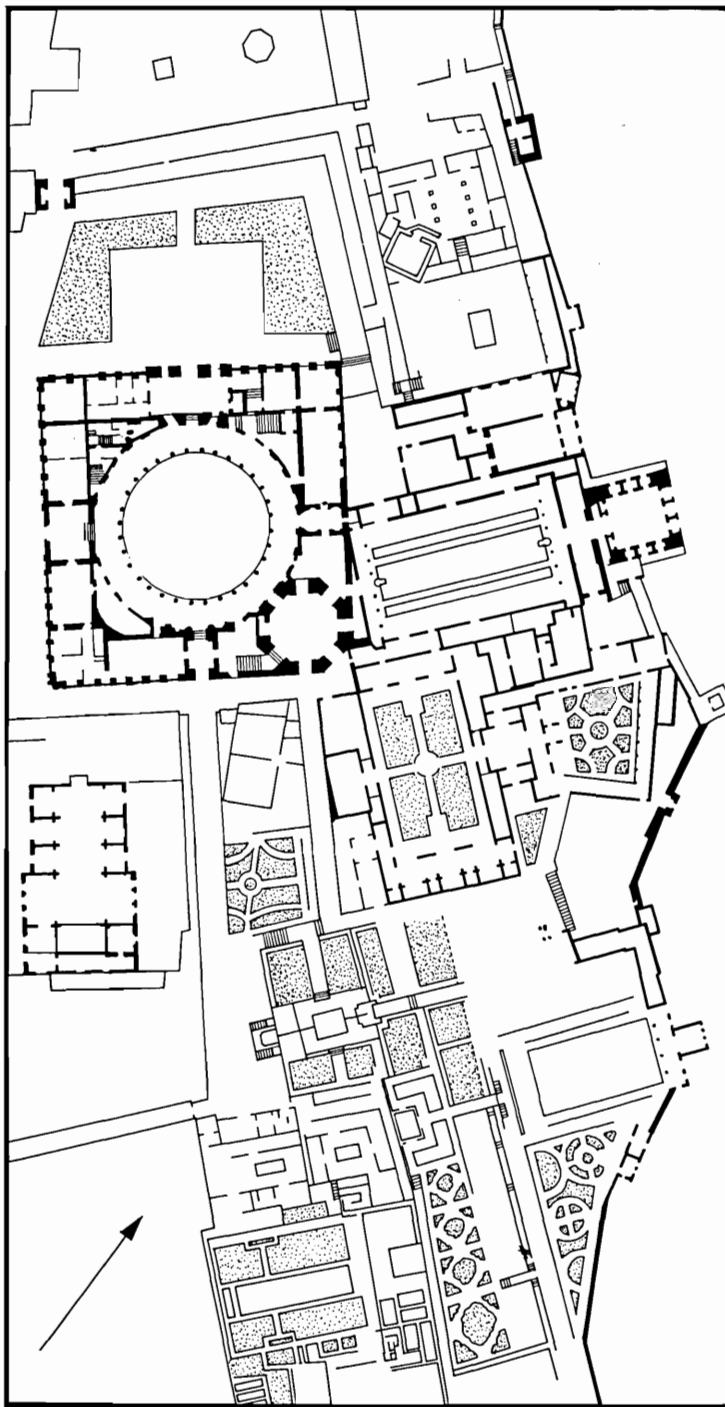
built in the early fourteenth century, it now consists of a tower with an arcaded patio on brick piers. There is also a small mosque built for Yusuf I in 1354 with a small mihrab. The largest and most famous of the palaces is the Palacio de Comares which takes much of its present form from Muhammad V's rebuilding in 1365. The palace is entered through a series of patios or arcaded courtyards with central pools or fountains. The main courtyard for the Comares palace is the Patio de los Arrayanes, on either side of which were the private rooms of the emir's wives. On the north-east side is the entrance to the emir's private quarters known as the Sala de la Barca. This room consisted of a long rectangular chamber with alcoves at either end covered in semi-domes decorated with stars; the area between the alcoves is covered by an inverted boat-shaped vault. These quarters lead via a small mosque to the Salón del Trono or throne room. This room is a large square structure with three deep vaulted recesses on each side formed by the artificially thick walls. The recesses open into paired or single arched windows which overlook the city of Granada whilst the interior of the room is decorated in a profusion of coloured tiles, carved stucco and intricate carpentry.

Later, to distinguish between the personal quarters and formal public reception rooms, Muhammad V created the Patio de los Leones leading on to the Sala des Reyes as a centre for ceremonial. These buildings are regarded by many as the culmination of Islamic palace architecture. The centrepiece of the Patio de los Leones is the fountain, consisting of a polygonal basin supported by marble lions. The Sala des Reyes is a long room or series of rooms opening on to a larger vaulted area, which in turn opens on to the Patio de los Leones. Architecturally this room is a complex structure which questions the distinction between internal and external space. Each of the smaller rooms is decorated with painted ceilings depicting scenes of chivalry and the walls are decorated with intricate stucco work.

See also: Granada, Spain

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Plan of Alhambra Palace Granada, Spain (after Goodwin)



The Partal Palace Alhambra, © J.W. Allan, Ashmolean Museum

Almohads

North African Berber dynasty which ruled over much of North Africa, Spain and parts of sub-Saharan West Africa.

The Almohads originated from the Atlas mountains of Morocco and were led by a religious leader who preached moral reform. They defeated the ruling dynasty of the Almoravids and established the greatest empire of the western Islamic world. In 1170 the capital was moved to Seville from where resistance to the Christian reconquest could be organized.

Almohad architecture is characterized by its mosques and fortifications. The most notable feature of Almohad mosques are the large minaret towers which dominate the great mosques of Seville, Marakesh and Rabat. Under their predecessors, the Almoravids, minarets were thought to be inappropriate and were left out of mosque designs. The Almohads were responsible for reintroducing the minaret, first in a tentative form, as in the

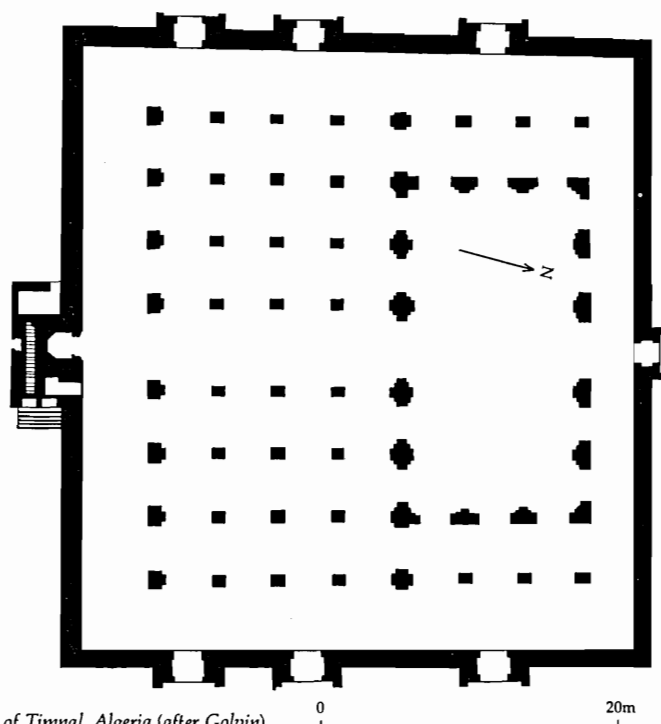
minaret of Timnal where it is a low tower behind the mihrab, and later in a monumental form. The design varied from one tower to another but the basic form was a square shaft containing a central core with a vaulted room on each storey. The exterior was usually decorated with windows set within frames made of cusped arches which formed networks of lozenge shapes. The form of these minarets established a tradition which was followed in mosques of the fourteenth century and later.

City walls are equally demonstrative symbols of Almohad ideology with stepped crenellations and decorated gateway façades. The best examples of Almohad fortifications are the city gates at Rabat with their complex bent entrances and monumental façades decorated with cusped arches.

See also: Marakesh, Morocco, Rabat, Seville

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Plan of Great Mosque of Tinnal, Algeria (after Golvin)

Amman (Roman Philadelphia)

Capital of Jordan containing palace of Umayyad princes.

The Umayyad palatial complex which probably dates from the early eighth century occupies the ancient citadel area in the centre of modern Amman. The most famous part of the complex is the cruciform reception hall which stood at the entrance to the palace. This building consists of four arched iwans set around a central square space which was probably an open courtyard rather than a roofed space. The interior of the courtyard and iwans are decorated with blind niches which are reminiscent of Sassanian buildings in Iraq and further east. Each iwan comprises a tall slightly pointed arch facing the courtyard with a semi-dome behind. In general the form of the building seems to represent an eastern tradition whilst the materials and method of construction suggest a more local (Roman) ancestry.

The rest of the palatial complex forms a rough parallelogram bisected by a central street or processional way. On either side of the central street

there are separate buildings or apartments each built around its own courtyard. At the end of the main street a gateway leads into a large courtyard dominated by a large iwan. A door at the back of the iwan gives access to a cruciform domed chamber which may have served as the throne room.

The other important Umayyad building in Amman was the Friday mosque which was demolished and completely rebuilt in 1923. This was a large rectangular building measuring 60 m by 40 m with three entrances on the north side opposite the mihrab. At some later period, probably during the thirteenth century, a square minaret was built at the north-east corner.

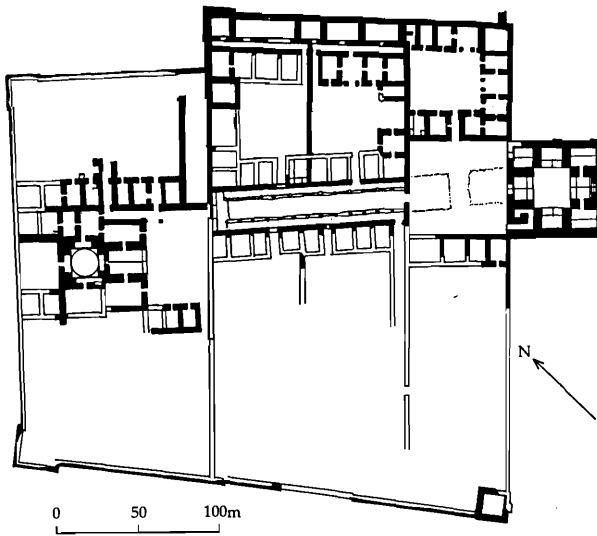
See also: Jordan, Umayyads

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'Amr, Mosque of

Mosque in Fustat, said to be the oldest mosque in Egypt.



Plan of Umayyad palatial complex, Amman (after Northedge)

The present structure consists of a large roughly square enclosure measuring approximately 120 m on each side. The great variation in the thickness and design of the walls testifies to the building's long history of development and restoration. The first mosque on the site is said to have been built by 'Amr ibn al-'As in 641–42. 'Amr was the chief commander of the Arab troops who won Egypt for Islam and so the building has an historical significance beyond the surviving architecture. Although the remains of this earliest mosque have not survived, there are several historical accounts from which the design of the building can be reconstructed. It consisted of a rectangular structure 29 by 17 m without a concave mihrab and was probably built of mud brick and palm trunks.

Thirty-two years later in 673 the first mosque was pulled down and a larger structure built to accommodate the growing number of Muslims. As well as being larger the new mosque was equipped with four towers which could be used for the call to prayer. These have been interpreted as the first minarets although it is likely that they were not much higher than the roof of the mosque.

The earliest mosque from which any remains survive belongs to the reconstruction of 827 carried out by 'Abd Allah Ibn Tahir. The remains comprise the southern wall of the present mosque which contains blocked-up windows alternating with

round-arched niches with shell-like hoods. Both niches and windows are framed by engaged colonnettes. Internally there are remains of wooden cornices carved in late Hellenistic style which joined the end columns of the arcades to the wall. Descriptions of the mosque in the tenth century describe it as having glass mosaics on the wall and a bayt al-mal, or treasury, in the centre of the courtyard which together with the four towers suggest a resemblance to the Great Mosque of Damascus.

In later periods several reconstructions and restorations were carried out. The most important changes include those made by Khalif Hakim who added two arcades in the sahn and had the mosaics removed, Sultan Baybars who rebuilt the north wall, the merchants whose restorations were carried out in 1401–2, Murad Bey who strengthened the building and added two minarets in 1797–8. In the restorations of Muhammad Ali in the 1840s the mosque achieved its present form.

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K. A. C. Creswell, *A Short Account of Early Muslim Architecture*, revised and enlarged ed. J. Allan, Aldershot 1989, 8, 15, 17, 46, and chapter 14, 303–14. This gives a detailed account of the building.

Anjar ('Ayn Jar)

Umayyad city in Lebanon.

Anjar was built by the Umayyad caliph al-Walid in 714–15 CE. The city is contained within a rectangular enclosure (370 m north–south and 310 m east–west) supported by a series of solid semi-circular buttress towers and four hollow corner towers. There are four principal gateways and the walls were originally crowned with stepped merlons (crenellation). Internally the city is built to a regular plan recalling earlier Byzantine and Roman cities. There are four principal colonaded streets which meet at the centre in a tetrapylon. Many of the buildings are built of alternating courses of ashlar blocks and layers of baked brick. There is a series of shop units (3.5 m wide and 5 m deep) lining the main streets behind the colonades. In the south-east quadrant of the city is a palace within a rectangular enclosure (about 70 by 60 m). The interior of the palace is divided into four units arranged symmetrically; at the south end there is a building with a triple aisles and an apse resembling a basilical hall, this is duplicated at the north end. To the north of the palace is the mosque which is entered from the west street. The mosque is a rectangular structure (47 by 30 m) with a small central courtyard surrounded by two aisles on the west, east and qibla (south) sides whilst there is one aisle on the north side. On either side of the mihrab are two entrances which lead into a narrow lane that connects with the palace. There is a small bath house next to the north gate which comprises a square vaulted hall, leading via two intermediate rooms into a hot room.

Ankara (Ancyra)

Capital of Republic of Turkey set in the centre of the Anatolian plain.

During the ninth century Anatolia was subject to a number of Arab raids, the most serious of which occupied Ankara for a short period. However, the city was not finally captured until 1071 when it fell to the Seljuk Turks. The oldest surviving mosque in the city is the Aslan Cami built out of wooden columns and reused classical and Byzantine stones. In 1402 the Ottomans suffered a major setback at Ankara when they were defeated by Timur. During the seventeenth century the city

was considered to be one of the more important business centres with its own purpose-built bedestan (now the Museum of Anatolian Civilizations). Ankara has some interesting examples of Ottoman domestic architecture with houses built out of wooden frames filled in with brickwork. However, for most of the Ottoman period the city was of minor importance and only rose to prominence when Mustafa Kemal Atatürk chose the city as the site for Turkey's new capital. As a planned city Ankara has some of the best examples of Turkish Republican architecture which is a heavy monolithic architecture reminiscent of Eastern Europe under Communism. The architecture of this period is tempered by conscious references to a Turkish past which include large overhanging eaves and simplified Seljuk-type stonework. Prominent examples of this architecture are the railway station and the offices of the Turkish historical society.

See also: Ottomans, Seljuks, Turkey

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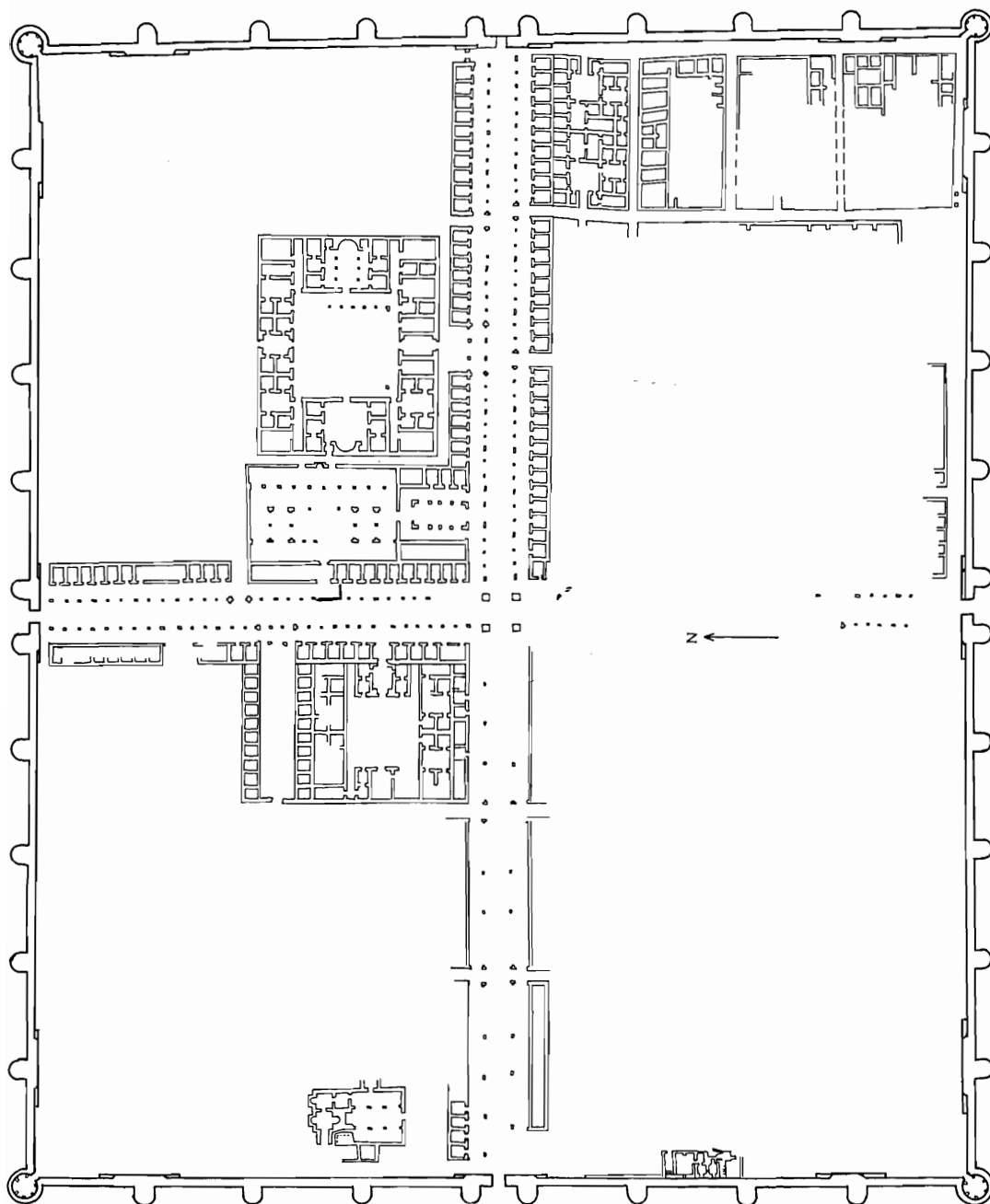
A method of construction whereby a flat roof rests directly on columns (i.e. without intervening arches).

al-Aqmar Mosque

Small Fatimid mosque in Cairo noted for its design and the decoration of the façade.

The mosque is known as al-Aqmar, 'the moonlit', and was founded by Ma'mun al-Bata'ih, vizier of the Fatimid caliph al-Amir in 1125. The building consists of a small 10-metre square courtyard surrounded by an arcade one bay deep on three sides and three bays deep on the qibla side. Most of the building is made from brick except for the front which faces the main street which is faced in dressed stone.

Architecturally the most important feature of the building is the way the façade is set at a different angle from the rest of the mosque to reconcile the need of having the mosque correctly oriented towards Mecca and the façade facing



Plan of Umayyad city, Anjar, Lebanon (after Creswell)



Principal street, Anjar, Lebanon

onto the main street. This is the first mosque in Cairo to adopt this arrangement which became common in later mosques. The façade is further emphasized by its decoration and design. It consists of a projecting entrance in the centre flanked by two large niches (only one of these is now visible). The hood of each niche is composed of radiating flutes with a central medallion. The projecting portal consists of a central doorway also with a fluted hood. Either side of the doorway are two smaller niches each with a cusped arch surmounted by a muqarnas moulding. The shape of the arches, the fluted hoods with central medallions and the arrangement of the façade are all features which later become common in Cairene architecture.

Al-Aqmar is also important as it is the first instance of a mosque which incorporates shops into its design. The mosque was originally raised up above street level and the shops were incorporated into the outside walls of the building on a lower level.

See also: Cairo, Fatimids

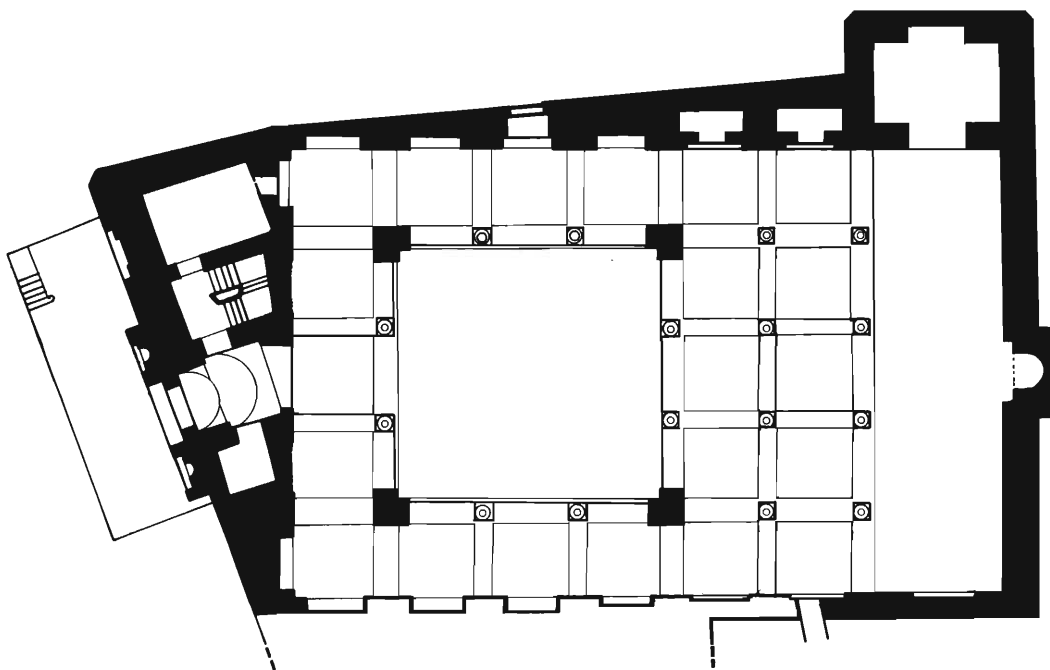
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al-Aqsa Mosque

The principal mosque of Jerusalem which forms part of the sacred enclosure (haram) with the Dome of the Rock at the centre.

The Aqsa Mosque is located on the southern part of the Haram al-Sharif on an axis with the south door of the Dome of the Rock. In the time of Umar a mosque is known to have been built on the site although it appears to have been a semi-permanent structure made out of re-used material, hastily put together to form a covered prayer area with a shed roof. During the reign of al-Walid the mosque was rebuilt with its present alignment.



Plan of mosque of al-Aqmar, Cairo (after Williams)



Mosque of al-Aqmar, Cairo. © Creswell Archive, Ashmolean Museum

arasta

Only a small part of al-Walid's mosque survives but this indicates that the aisles all ran perpendicular to the qibla wall (as they do today). This arrangement is unusual and recalls the arrangement of Byzantine churches such as the Church of the Nativity in Bethlehem.

The earthquake of 748 severely damaged the mosque which was subsequently rebuilt by the Abbasid caliphs al-Mansur (759) and al-Mahdi (775). The mosque of al-Mahdi had a raised central aisle leading to the mihrab in front of which he built a wooden dome; either side of the central aisle were seven side-aisles. An earthquake of 1033 destroyed the mosque and it was once again rebuilt by the Fatimid caliph al-Zahir in 1035. This mosque had a total of seven aisles, a central aisle with three aisles on either side.

See also: Damascus Great Mosque, Dome of the Rock, Jerusalem, Medina, Palestine, Umayyads

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arasta

Turkish term for a street or row of shops whose income is devoted to a charitable endowment or waqf (equivalent to a European shopping arcade).

Arastas are found in most of the regions of the former Ottoman Empire and usually form part of a commercial or religious complex which may include a han (or khan), a mosque and bath house. Many arastas were probably made of wood but these have largely disappeared leaving only those made of more permanent materials. Arastas are often covered over with a barrel vault and have a row of shops either side of a central street, but they can also be open to the sky. Important examples of arastas include the Misir Çarşı in Istanbul, the arasta associated with the Selimiye mosque in Edirne and the arastas at the Sokollu complex at Lüleburgaz and the Selim I complex at Payas both designed by Sinan.

See also: Ottomans

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arch

Method of vaulting area between two walls, columns or piers.

Islamic architecture is characterized by arches which are employed in all types of buildings from houses to mosques. One of the most common uses is in arcades where arches span a series of columns or piers to form a gallery open on one side. Arcades are used to line mosque courtyards although they are also used in courtyard houses.

The earliest form of arches employed in Islamic architecture were the semi-circular round arches which were characteristic of Roman and Byzantine architecture. However, fairly soon after the Islamic conquests a new type of pointed arch began to develop. Round arches are formed from a continuous curve which has its centre at a point directly below the apex and level with the springing of the arch on either side. Pointed arches are made by forming each side of the arch from a different centre point, the greater the distance between the two points the sharper the point. In the Dome of the Rock built in 691 the arches supporting the dome are slightly pointed whilst in the cisterns at Ramla built in 759 there is a pronounced point. The arches at Ramla are formed by a separation of the points by a distance of one-fifth the span of the arch; this ratio became standard in many early Islamic buildings.

Another arch form developed during the early Islamic period is the horseshoe arch. Horseshoe arches are those where the arch starts to curve inwards above the level of the capital or impost. Horseshoe arches were developed in Syria in pre-Islamic times and have been recorded as early as the fourth century CE in the Baptistery of Mar Ya'qub at Nisibin. The earliest Islamic monument with horseshoe arches is the Great Mosque of Damascus where the arches of the sanctuary were of slightly horseshoe form. However, the area where horseshoe arches developed their characteristic form was in Spain and North Africa where they can be seen in the Great Mosque of Córdoba. In Tunisia the horseshoe arches of the Great Mosque of Qairawan and the mosque of Muhammad ibn Khairun have a slightly pointed form. Probably the most advanced arch form developed in the early Islamic period is the four-centre arch. This is a pointed arch form composed of four curved sections each with its own centre producing



'Atshan, Khan, Iraq

an arch with steep curves lower down and flattened point at the apex. The earliest occurrence of the four-centred arch is at Samarra at the Qubbat al-Sulaiybiyya. Another arch form which makes its first appearance at Samarra is the cusped arch which is used in the external decoration of the Qasr al-Ashiq. This arch form later became one of the favourite decorative arch forms used throughout the Islamic world from Spain to India.

Arches were not used in India before Islamic times where trabeate construction was the main method of roofing an area. However, arches were regarded as essential by the first Muslim rulers who built arched screens in front of trabeate structures such as the Quwwat al-Islam Mosque in Delhi. Even the screens of the earliest Indian mosques were not composed of true arches but were corbelled structures made to look like arches.

artesonado

Spanish term for wooden panelled ceiling found in Islamic and Mudéjar buildings. Some of the best

examples can be found in palaces especially the Alhambra in Granada.

'Atshan, Khan

Small palatial building in the Iraqi western desert between Ukhaidhir and Kufa.

Built of baked brick the design is similar to Ukhaidhir although on a much smaller scale (17 m per side). Externally the building has a simple regular plan consisting of four circular solid corner towers with semi-round towers on three sides and an entrance set between two quarter-round towers on the north side. Internally the building appears to have an irregular plan with long vaulted halls along two sides and a small courtyard decorated with a façade of blind niches. The structure was probably built in the Umayyad period although it has previously been considered an Abbasid (post-750) construction.

See also: Ukhaidhir

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avulu

avulu

Turkish term for the courtyard of a mosque which in the summer could be used as an extension of the prayer area.

ayina kari

Mosaic of mirrored glass used in Mughal architecture.

Ayyubids

Medieval dynasty which ruled Syria, Palestine, Iraq, Egypt and Yemen during the twelfth and thirteenth centuries.

The founder of the dynasty was Shirukh, a Kurdish retainer of the Zengid prince Nur al-Din. First Shirukh secured the governorship of Aleppo and later was appointed vizier to the Fatimid ruler of Egypt. Shirukh was succeeded by his nephew Salah al-Din who rapidly extended his position and became ruler of Egypt, Syria and northern Iraq whilst he appointed his brother ruler of Yemen. Salah al-Din's greatest accomplishment was the defeat of the Crusaders and the reconquest of Jerusalem. Salah al-Din died in 1189 and his empire fragmented under his successors who ruled various parts of the empire until the mid-thirteenth century.

Ayyubid architecture was dominated by the need to combat two enemies: the Crusaders in Palestine and the rising threat of Shi'ism and religious dissension. To combat the Crusaders a network of fortresses was built which rivalled those of the Crusaders both in size and technical sophistication. Amongst the best examples of Ayyubid military architecture are Qal'at Rabad at Ajlun in Jordan and Qal'at Nimrud at Banyas in Syria. In addition the fortification of citadels was improved and the famous gateway of the Aleppo Citadel dates from this period. Some of the techniques of fortification were learned from the Crusaders (curtain walls following the natural topography), although many were inherited from the Fatimids (machicolations and round towers) and some were developed simultaneously (concentric planning).

Shi'ism was an equally dangerous threat to the Ayyubids who built a large number of madrasahs in both Syria and Egypt. In Egypt the Ayyubids

had to reintroduce religious orthodoxy after two centuries of government-imposed Shi'ism. In Syria there was a so a growing threat of Shi'ism in the form of the Assassins who had benefited from the confusion of the Crusader conflict. The Ayyubids tried to promote Sufism as an orthodox alternative and began to build khanqas and Sufi shrines to provide a focus for these activities.

See also: Cairo, Damascus, fortification, Syria, Yemen

Azerbaijan

Country lying south of the Caucasus and east of the Republic of Armenia.

The present Independent Republic of Azerbaijan is the northern part of the Azeri-speaking region which also includes north-western Iran. The capital of the southern part of Azerbaijan is Tabriz whilst the capital of the Independent Republic is Baku. The Independent Republic of Azerbaijan received its name from the Turkish invasion of 1918 although historically it may be identified with the Albania of classical writers. The country lies to the south of the Caucasus and to the east of the Republic of Armenia. More than half of the country is mountainous, though the eastern coastal strip bordering the Caspian Sea is relatively flat. From the twelfth century at least Baku has been known for its natural oil wells which are also the basis of its modern economy. Turkish became the main language of the country after the Seljuk invasions of the eleventh century. Most of the population is Muslim although there are a small number of Zoroastrians with their own fire-temple.

Unlike much of Central Asia and Iran Azerbaijan has its own well-developed, dressed-stone masonry tradition. This can be seen in the tombs, madrasahs and mosques of Azerbaijan which have façades carved in relief in a style reminiscent of Seljuk Anatolia. One of the best examples of this stone-working tradition is the palace of the Shirvan Shas in Baku which has monolithic stone columns with austere geometric capitals. Baked brick was also used throughout Azerbaijan, though predominantly in south (now western Iran). One of the most elegant examples of Seljuk brickwork is found in the Gunbad-i-Surkh at Maragha which was built in 1146.

See also: Baku

al-Azhar

One of the main mosques in Cairo and also important as one of the oldest universities.

The name of the mosque, al-Azhar, means 'the flourishing'. The mosque was built in 970 by the Fatimid caliph al-Muciz as the main mosque of the new city of al-Qahira. In 989 the mosque was given the status of theological college to teach the Isma'ili theology. Because of its age and importance the mosque has undergone many alterations and developments although the core of the tenth-century mosque is preserved. The original mosque consisted of a central courtyard with three arcades, two either side of the qibla and the qibla arcade itself. A raised transept runs from the mihrab to the courtyard and there were originally three domes in front of the qibla wall, one above the mihrab and one at either corner.

The plan shares many features with the Fatimid architecture of North Africa, in particular the arrangement of the aisles and the projecting entrance similar to that of Ajdabiya in Libiya.

Later in the Fatimid period the size of the courtyard was reduced by adding four extra arcades around the courtyard. Also a dome was added to the courtyard end of the transept and was hidden by a pishtaq or raised wall above the arcade. Some of the original Fatimid stucco decoration is also preserved, in particular the hood of the prayer niche and on the interior of the arcades. The style is similar to stucco found at Samarra but includes scrolls and palmettes typical of Byzantine decoration.

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azulejo

Spanish term for small glazed tiles often used as dadoes in courtyards and palaces.

B

bab

gate.

badgir

Iranian term for wind tower. Tall chimney-like structure which projects above the roof of a building to expel warm air in the day and trap cooler breezes at night.

See also: mulqaf

Badr al-Jamali, Tomb of (also referred to as the Mashhad of al-Juyushi)

Important eleventh-century Fatimid tomb complex in Cairo.

This complex was built by the Armenian general Badr al-Jamali, chief vizier of the Fatimid caliph al-Mustansir, in 1085. Although it is known as a mashhad or tomb complex, the name of the person buried or commemorated is not known (Badr al-Jamali is buried elsewhere).

The complex consists of a prayer room, a small domed room (possibly a tomb) and a tall square minaret built around a small courtyard. The courtyard façade of the prayer room consists of a triple-arched arcade with a large central arch and two smaller side arches. The prayer room is cross vaulted except for the area in front of the mihrab which is covered with a large dome resting on an octagonal drum resting on plain squinches. Both the mihrab and the dome are decorated in stucco work in an Iranian style.

The minaret or tower consists of a tall rectangular shaft with a two-storey structure on the top. This is a square room with a domed octagonal pavilion above it. A significant feature of the design is that at the top of the shaft is a muqarnas cornice which may be one of the first occurrences of this decoration in Egypt. On the roof of the complex are two domed kiosks containing prayer

niches. The exact function of these is not known although it has been suggested that they were shelters for the muezzin who would make the call to prayer from the roof similar to the goldasteh found in mosques in Iran.

The exact purpose of this unique building is not known although there have been suggestions that it is a watchtower disguised as a mosque or that it is a victory monument commemorating the victories of Badr al-Jamali.

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bagh

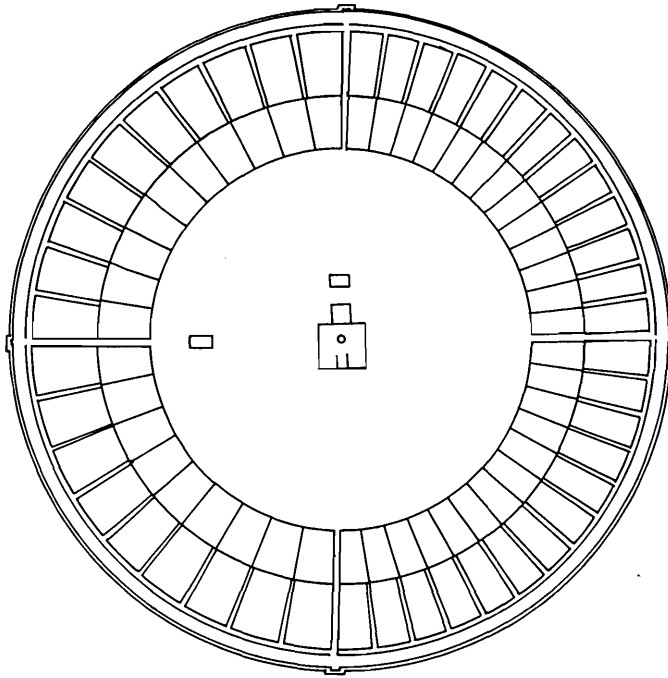
Iranian and Mughal term for garden or garden pavilion.

See also: chahar bagh

Baghdad (Madinat al-Salam)

Capital city of Iraq.

Baghdad was founded by the Abbasid caliph al-Mansur in 762. According to historical accounts al-Mansur built a round city with four gates and a palace and mosque at the centre. Leading from the four gates to the centre there were streets lined with shops and markets whilst the area between these streets were quarters reserved for different groups of people. The round shape of the city may be derived from Central Asian ideas of planning or may have some symbolic significance. In any case a round city wall would be both cheaper to build for a given area and would be easier to defend (no weak corner points). The defensive nature of the city is further emphasized by the bent entrances



Reconstruction of plan of eighth-century Round City of al-Mansur (Baghdad) (after Creswell)

and the double wall. Unfortunately nothing remains of al-Mansur's city with the possible exception of a mihrab in the Iraq museum. The round city was built on the west bank of the Tigris and shortly afterwards a complementary settlement was founded on the east bank known as Mu'asker al-Mahdi. In 773 al-Mansur moved the markets outside to a place called al-Karkh. From 836 to 892 the capital was transferred to Samarra because of troubles with the caliph's Turkish troops in Baghdad. When Caliph al-Mu'tamid moved back to Baghdad he settled on the east bank of the Tigris which has remained the centre of the city to the present day.

The Buwaihids built a number of important buildings, such as the Bimaristan al-Aduli (hospital) and the Dar al-Alim (house of science) but the Seljuk conquest found the city in a ruinous condition because of the conflict between the Buwaihid amirs and their soldiers. In 1056 Tughril Beg separated his residence from the rest of the city by a broad wall. Although few buildings of the Seljuk period survive, an idea of the appearance of the city in the thirteenth century (before the Mongol invasion) can be gained by looking at the illustrations of al-Wasiti

to the Maqamat of al-Harriri (MS Arabe 5874).

During the period of the later Abbasid caliphate (twelfth to thirteenth century) a massive defensive wall was built around east Baghdad which for centuries marked the boundary of the city. The walls had four gates of which only one survives, the Bab al-Wastani. The gate stood in the centre of a moat and was connected to the city wall and the outside by two brick bridges. The arch of the main entrance is decorated with geometric interlace and is flanked by two lions in relief. Other buildings which survive from this period are the Zummurud Khatun Tomb, the Mustansiriya Madrasa, the building known as the Abbasid palace and two minarets. The Zummurud Khatun Tomb built in 1209 consists of a conical muqarnas dome built on an octagonal base. The sides of the base are decorated with decorative brickwork set over a series of blind niches. Until the eighteenth century a ribat and madrasa built at the request of Zummurud Khatun (mother of the Abbasid caliph al-Nasir) were located near the tomb. The Mustansiriya Madrasa was built between 1227 and 1233 and is the most famous surviving building in Baghdad. It

was built by the caliph al-Mustansir and contained four Sunni law schools (i.e. Sha'fi, Hanafi, Maliki and Hanbali). The madrasa is a rectangular courtyard building with four large iwans, one for each law school. The courtyards and iwans are faced with ornate hazarbaif brickwork and carved interlace. The building now known as the Abbasid palace was probably originally the madrasa of al-Sharabiyya built by Sharif al-Din Iqbal in 1230. The building is situated within a rectangular enclosure of 430 square metres and is dominated by a vaulted hall over 9 m high. The brickwork decoration of the building is identical to that of the Zummurud Khatun Tomb. The surviving pre-Mongol minarets belong to the Jami' al-Khaffin and the 'Ami Qumuriyya Mosque; both structures comprise a cylindrical shaft resting on a square base with muqarnas corbelling supporting the balcony.

The most important remains of the Ilkhanid period are Khan Mirjan and the Mirjaniya Madrasa. The khan was built in 1359 to support the madrasa which was completed in 1357. The madrasa is mostly destroyed apart from the gateway which is a monumental portal with carved brickwork similar to that of the Abbasid palace. Khan Mirjan is a remarkable building built around a central covered courtyard. The roof of the courtyard is made of giant transverse vaults which in turn are spanned by barrel vaults. This system made it possible to cover a huge interior space as well as providing light to the interior (through windows set between the transverse vaults).

Many buildings survive from the Ottoman period, the most significant being the shrine of al-Kadhimiyya which houses the tombs of the imams Musa al-Kadhim and Muhammad Jawad. The shrine has been successively rebuilt and much of the structure belongs to the eighteenth or nineteenth century. The shrines stand in the middle of a large courtyard lined with two storeys of arcades. The tombs are covered by tall golden domes and flanked by four minarets, a porch runs around three sides of the tomb structure and there is a mosque on the south side.

The traditional houses of Baghdad are built of brick around small central courtyards. Many houses had projecting wooden balconies often with carved wooden screens. Most of the houses had wind-catchers (mulqaf) which would keep the houses cool during the oppressive summer heat.

See also: Iraq

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Bahrain

The State of Bahrain comprises a small island on the west side of the Persian/Arabian Gulf located between Qatar and Saudi Arabia.

During Antiquity the island may have been known as Dilmun and during the early Islamic period was known as Awal. The Islamic history of the country is closely tied to its Persian and Arabian neighbours, a fact which is reflected in its architecture and culture. The island seems to have been an important trading centre in the Sassanian period but seems to have missed out from the general economic boom of the early Islamic period. In the tenth century the island escaped from the control of the Abbasid dynasty and became one of the main bases of the Ismaili Carmathian state which controlled much of the northern Gulf during this period. With the collapse of the Carmathians in the tenth century the island came under the control of the Yumids who were another local dynasty. From the twelfth century onwards Bahrain was under the influence of Persian dynasties who used the island as a trading base with pearls as the basic commodity. In 1504 Bahrain was captured by the Portuguese who controlled the island until 1602 when the country again fell under the influence of Iran. In the 1780s the Khalifa family came from Arabia and established themselves as rulers of the island with British protection. In 1860 Bahrain became a British dependency until its independence in 1971.

The building materials on Bahrain are similar to those used elsewhere in the Gulf and include limestone and coral blocks for masonry and palm trees for wood and thatch. The country contains several early Islamic sites the most famous of which is Qal'at Bahrain on the north coast. The Qal'at as revealed by excavation is a small rectangular building with round corner towers, semi-circular buttress towers and a projecting entrance made out of two quarter circles with a gateway between. Next to this fort is a large fortress built in the thirteenth century which is known as the Portu-

guesse fort because of its restoration in the sixteenth century.

Bahrain contains several historical mosques, the most famous of which is the Suq al-Khamis Mosque founded in the eleventh century. The present building has two main phases, an earlier prayer hall with a flat roof supported by wooden columns dated to the fourteenth century and a later section with a flat roof supported on arches resting on thick masonry piers (this has been dated to 1339). Another distinctive building is the Abu Zaidan Mosque built in the eighteenth century which has a long transverse prayer hall with open sides and a triple arched portico.

The typical Bahrain merchant's house is built around several courtyards each of which forms a separate unit opening on to a series of shallow rooms. Upstairs the arrangement of rooms is repeated but instead of the thick stone walls of the ground floor the walls are built of a series of piers alternating with panels made out of thin coral slabs. Sometimes two layers of coral slabs were used with a cavity in between to provide increased thermal insulation. The temperature of the lower rooms is kept low by various ventilation ducts connected to wind catchers. In addition to coral panels plaster screens are used as a means of ensuring privacy in the upper part of the house. These screens are often decorated with geometric patterns, the most common of which is a series of intersecting rectangles producing a stepped pattern. Most of the traditional houses of Bahrain are located in the Muharraq district of the capital Manama. The most famous house is the palace of Sheikh Isa built in 1830 and recently restored as a national monument. The house is built around four courtyards and includes some beautiful incised stucco panels in the upper rooms.

See also: Kuwait, Oman, Qatar, Saudi Arabia, UAE

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Baku

Capital of the Independent Republic of Azerbaijan.

Baku is located on a peninsula on the west coast of

the Caspian Sea. The city has always been famous for its naturally occurring oil wells although it did not achieve political importance until the fifteenth century, when it was established as the capital of a local dynasty known as the Sherwan Shahs. The Sherwan Shahs had established themselves along the west coast of the Caspian Sea as early as the fourteenth century although they did not move to Baku until their previous capital of Shir'wan was captured by the Qara Qoyonulu in 1426. The Sherwan Shahs were effectively destroyed in 1500 when the Saffavid ruler Isma'il killed the reigning shah. Baku remained part of the Iranian Empire from the sixteenth until the early twentieth century when it was annexed by Russia.

One of the earliest Islamic monuments in Baku is the Kiz Kallesi which is a huge round bastion tower built of brick. The tower was probably built in the eleventh century although the precise date has not been agreed. The tower may have formed part of the city walls of Baku although alternatively it may have been an independent castle or watchtower. The majority of monuments in Baku date from the period of the Sherwan Shahs or later. The most important monuments form part of the royal complex which stands on a hill overlooking the Caspian Sea. All of these buildings are made out of large bluish-grey limestone blocks which are carefully squared and dressed. At the centre of the complex is the palace which was built in the mid-fifteenth century. The layout of the palace is based on two interconnected octagons with two storeys. A tall entrance portal opens into an octagonal hall which in turn leads via a passageway into a smaller hall. The palace complex includes a private mosque which has a cruciform plan entered from monumental portal set to one side. One of the other arms contained a separate women's mosque and there was another prayer hall upstairs. The complex also includes a number of mausoleums the most important of which is the tomb of the shahs. This comprises a square central chamber leading on to four barrel-vaulted side rooms. The dome is slightly pointed and decorated with faceting.

See also: Azerbaijan

Balkh, Hajji Piyadi Mosque (also known as Masjid-i Tarikh, Nuh Gunbad or Masjid-i Ka'b al-Akhbar)

Site of a badly damaged mosque, believed to date from the early Islamic period.

The mosque is situated north-east of the city walls

Banbhore

of Balkh in Afghanistan. Most scholars agree that the monument should be dated to the ninth century CE. Although the roof itself has collapsed the building is regarded as one of the earliest examples of a nine-domed mosque.

The mosque is built out of a combination of baked and unbaked brick and pisé. The extant remains include massive round piers and smaller engaged columns typical of Abbasid architecture.

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Banbhore

Major early Islamic site in Pakistan.

Banbhore is located on the north bank of the Gharro Creek near the Indian Ocean coast in the Pakistani state of Sind. Archaeological work at the site has revealed a long-term occupation from the first century to the thirteenth century CE which includes three distinct periods, Scytho–Parthian, Hindu–Buddhist and early Islamic. It seems probable that the site is the ancient city of Debal referred to in early Muslim accounts of the area and conquered by the Arab general Mohammed ibn al-Qasim in 711.

The city comprises a large area enclosed by a stone and mud wall strengthened by solid semi-circular bastions with three main gateways. The walled area is divided into two parts, an eastern and a western section separated by a fortified stone wall. In the middle of the eastern sector is the congregational mosque. The mosque has a roughly square plan, built around a central courtyard, two arcades on each of the sides except the qibla side which is three bays deep. The mosque has been dated by an inscription to 727 CE, two years after the capture of Debal. Significantly there is no trace of a concave or projecting mihrab which confirms the mosque's early date as the first concave mihrab was introduced at Medina between 707 and 709 (see also Wasit and mihrab).

Remains of houses and streets have been found both within the walls and outside to the north and east. Large houses were built of semi-dressed stone or brick, the smaller houses of mud brick.

See also: Pakistan

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bangala

Mughal and Indian term for roof with curved eaves resembling the traditional Bengali hut.

See also: char-chala, do-chala

Bangladesh

See Bengal

Basra

Early Islamic garrison town and Iraq's principal port.

Basra was founded in 635 as a twin garrison town of Kufa. The purpose was to relieve the pressure of the constant immigration into Iraq as well as to provide a base for the opening of a new front against the Arabs of Bahrain. The majority of Arabs in Basra, unlike those of Kufa, had not taken part in the wars of conquest in Iraq. The first mosque was marked out with reeds and people prayed within the enclosed space without any fixed building. In 665 CE a new mosque was built on the site by Ziyad, governor of Iraq. The mosque was built out of baked bricks with a flat roof supported by teak columns. Unfortunately the expansion of modern Basra has meant that no remains of the early period stand above ground.

See also: Iraq, khatta

bayt

Arabic term for house. In Umayyad and Abbasid architecture it is used to describe the living units within palaces and desert residences.

bayt al-mal

Arabic term for treasury (literally 'house of the money'). In Friday mosques usually an octagonal or square room raised up on columns in the centre of the courtyard.

bazar

Market area in Turkish city.

The Turkish word bazar is derived from the Persian 'pazar'. A Turkish bazar will normally contain a number of specialized buildings such as bedestens,

bath houses (hammams), hans (khans) and caravan-serais as well as private shops, market stalls and a mosque. One of the earliest examples of a Turkish bazar is that of Bursa which was first developed in the fourteenth century. This complex includes six mosques, three baths, seventeen khans, six madrasas and a bedestan.

See also: arasta, bedestan, Ottomans

bedestan

Special closed form of Turkish market where goods of high value were traded. The usual form of bedestan is a long domed or vaulted hall two storeys high with external shop units.

Originally bedestan referred to the area of a market where cloth was sold or traded from the 'bezzahan' (cloth market). The earliest bedestans were probably specific areas of a general bazar or market. The earliest known bedestan is the Beyşehir Bedestan built in 1297 according to an inscription above the gateway. The building consists of a closed rectangular courtyard covered by six domes supported on two central piers. There are doorways on three sides and on the outside there are small open shop units, six on the east and west sides and nine on the north and south sides.

During the Ottoman period bedestans developed as a specific building type and became the centre of economic life in a city. Because they could be locked they were often used for jewellery or money transactions and came to be regarded as signs of prosperity in a city. Ottoman bedestans were built in a variety of forms and may include features such as external shops, internal cell units and arastas (arcades). The simplest plan consists of a square domed hall with one or two entrances like those at Amasya or Trabzon. More complicated structures like the Rüstem Pasha Bedestan in Erzerum consist of a central enclosed courtyard surrounded by a closed vaulted corridor containing shop units.

Bengal

Low-lying delta area in the north-west corner of the Indian subcontinent.

The character of Bengal is largely determined by the Ganges and Bramaputra rivers which divide into innumerable branches before entering the sea. Although the area is currently divided between the two modern states of India and Bangladesh it

retains a certain homogeneity based on its language (Bangli) and culture.

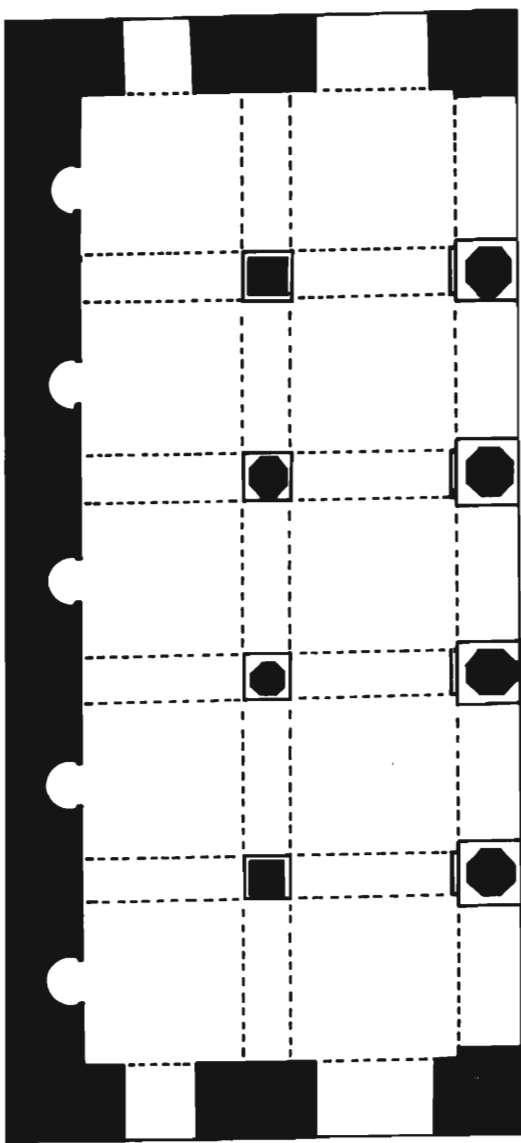
In the thirteenth century the region was conquered by Muslim Turks who occupied the city of Gaur (Lakhnaw) in north-west Bengal. From this base the areas of Satgaon (south-west Bengal) and Sonargaon (east Bengal) were conquered and incorporated into an independent sultanate in 1352 CE by Iliyas Shah. Despite dynastic changes the area remained independent until the sixteenth century when it was incorporated into the Mughal sultanate, and even then it still retained its identity as a separate province.

Lack of suitable building stone in the area meant that the predominant materials of construction were red clay bricks from the alluvial silts and bamboo and thatch. The majority of buildings were made of bamboo and thatch and consist of a rectangular area which is roofed by a curved thatch roof ('char-chala' and 'do-chala'). Most of the more important buildings, however, were made out of brick. In the pre-Mughal period such buildings were faced either with red terracotta plaques or less frequently in stone. From the sixteenth century onwards brick buildings were coated in white plaster.

One of the achievements of Bengali building was its translation of traditional bamboo and thatch architecture into more permanent stone and brick forms. One of the best examples of this is the use of curved roofs from the sixteenth century onwards. There are two main forms of this roof – do-chala and char-chala. A do-chala roof consists of a central curved ridge rising in the middle with curved side eaves and gabled ends. A char-chala roof is made of crossed curved ridges with curved eaves. The earliest surviving example of this roof type in a brick building is the tomb of Fath Khan at Gaur dated to the seventeenth century. This form was so successful that it was used elsewhere in the Mughal Empire, at Agra, Fatehpur Sikri, Delhi and Lahore. In addition to its aesthetic appeal curved roofs also have a practical purpose in an area of high rainfall.

Other characteristic features of Bengali architecture adopted by the Mughals and used elsewhere are the two-centre pointed arch and the use of cusped arches for openings.

The predominant form of Islamic architecture in Bengal is the mosque. In pre-Mughal Bengal the mosque was virtually the only form of Islamic building, although after the sixteenth century a



Mosque of Zafar Khan, Ghazi, Bengal. Note multiple mihrabs (after Michell)

wide variety of Islamic building types such as the caravanserai and madrasa were introduced. Characteristic features of Bengali mosques of all periods are multiple mihrabs, engaged corner towers and curved cornices. Although multiple mihrabs sometimes occur in North India, Bengal is the only place where they are a constant feature in

mosques. The number of mihrabs is determined by the number of entrances in the east wall. Engaged corner towers are a constant feature of Bengali architecture and may derive from pre-Islamic temples. Curved cornices are probably derived from the curved roofs of bamboo huts; it is possible that they may have a practical function for draining water away from the base of the domes.

During the pre-Mughal sultanate three types of mosque were built, rectangular, square nine-domed and square single-domed.

Mosques built on a rectangular plan are divided into aisles and bays according to the number of domes on the roof. At the east end of each aisle is a doorway and at the west end a mihrab. There are also openings on the south and north sides of the mosque corresponding to the number of bays. The nine-domed mosques are similar to those found elsewhere in the Islamic world, but they differ in having three mihrabs at the west end. The most popular form of mosque in pre-Mughal Bengal was the single-domed chamber. It is likely that this design is developed from the pre-Islamic temple of Bengal.

None of these early mosques was equipped with minarets and sahnas as was common in the Middle East but these features were introduced with the Mughal conquest in the sixteenth century. However, the Mughals were also influenced by the local architecture of Bengal and it is from this period that we have the first example of a do-chala roof translated into brick (the Fath Khan Tomb at Gaur, dated to the seventeenth century).

Muslim buildings can be found all over the region of Bengal, although the largest concentrations can be found at Dhaka and Gaur (Lucknow). Calcutta, the capital of Indian Bengal, was founded during the period of British rule in the nineteenth century. As might be expected the early mosques of the city show strong British influence. The descendants of Tipu Sultan built three mosques in the city all with the same double-aisled, multi-domed rectangular plan. The most famous of these buildings, the Tipu Sultan Mosque built by his son Muhammad, is built in the style of a European building with Tuscan colonettes and Ionic columns used for the windows and central piers.

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beteng

Indonesian term for enclosure wall, used to refer to the outer walls of palaces in Java.

Bijapur

City in southern India famous for its sixteenth- and seventeenth-century architecture.

Bijapur is located on an arid plateau between the Krishna and Bhima rivers. The city rose to prominence under the Adil Shahi dynasty who ruled the city from the fifteenth century until its conquest by the Mughals in 1686. Traditionally the dynasty was founded in 1490 when the Turkish governor Yusuf Khan declared the independence of Bijapur. By the sixteenth century the Adil Shahi dynasty ruled a huge area which extended as far as Goa on the western coast.

Since the seventeenth century the city has shrunk so that the present town occupies less than half the original area. The original city walls with a circumference of over 10 km survive to give some idea of the city's original importance. These massive walls are surrounded by a moat and protected by ninety-six bastions. There are five main gateways, each of which consists of a bent entrance protected by two large bastions. Within this huge enclosure there is a smaller walled area known as the Arquila or citadel which forms the centre of the modern town. The city is supplied with water by a series of underground water channels interspersed with water towers to regulate the pressure.

Water is perhaps the most distinctive element in the architecture of Bijapur and is used for ornamental tanks, water pavilions, bath houses and ornamental channels. The Mubarak Khan is one of the best surviving examples of a water pavilion; it consists of a three-storey structure with a shower bath on the roof. Other notable examples include the Jal Mandir Palace once located in the centre of a reservoir (now disappeared) and the Sat Manzili which was originally a seven-storey structure enlivened with water tanks and spouting water.

The city contains several mosques, the largest of which is the Jami Masjid founded in the sixteenth century. The mosque has a rectangular central courtyard containing several fountains in

the centre. The mosque sanctuary is nine bays wide and is crowned by a large central dome. One of the more unusual features of the mosque is the stone floor which is divided up into 2,250 individual prayer spaces. Other important mosques in the city are the Jhangari Mosque and the Mecca Masjid which is enclosed within huge walls.

The city contains many tomb complexes the best known of which is the mausoleum of Muhammad Adil Shah II, known as the Gol Gumbaz. Other important mausoleums include the Ibrahim Rauza built between 1626 and 1633. The complex consists of a large square area enclosed within a tall wall and entered via a monumental gateway flanked by twin minarets. In the centre of the complex is a raised platform containing two large buildings either side of a sunken rectangular tank. To the east surrounded by a colonnade is the domed tomb chamber which has an extraordinary suspended stone ceiling. To the west of the pool is the mosque with four thin minarets, one at each corner. The whole complex is decorated with painted, inlaid and carved ornament in the form of flowers and arabic calligraphy.

See also: Deccan, Gol Gumbaz, India

birka

Arabic term for tank, reservoir or cistern.

blazon

Decorative device or symbol used in Mamluk architecture to denote particular amirs or military dignitaries.

The earliest blazons were circular shields containing a simple symbol. Later these became complex designs divided into three fields with a variety of symbols used to denote different offices (i.e. a napkin represents the master of the robes and a pen box represents the secretary). The earliest example of a blazon was found in the tomb of Sheikh Iliyas in Gaza dated to 1272. Blazons are not used after the Ottoman conquest of 1517.

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Bosnia

Independent state in south-eastern Europe, previously constituting part of the former Republic of Yugoslavia.



Fourteenth-century composite Mamluk blazon used by warrior class (after Mayer)

Islam was introduced to Bosnia by the Ottoman Turks although it later became the religion of a large proportion of the native Bosnian population. The first Turkish invasion of Bosnia was in 1386 and by 1389 after the battle of Kosovo the Bosnian rulers had accepted Turkish suzerainty. In 1463 the Bosnian king Stjepan Tomasevic failed to pay tribute to the Ottomans resulting in a further invasion of Bosnia. By 1512, with the conquest of the district of Sebreinik, all Bosnia had been incorporated into the Ottoman Empire. After the conquest there was large-scale Islamization which appears to have spread from the towns outwards. During the seventeenth century Bosnia served as a base for the conquest of Hungary whilst during the eighteenth century it became a border area between the Austro-Hungarian and Ottoman empires. In 1878 Bosnia was invaded by the Austro-Hungarian army after the Turks had been forced to leave under the terms of the Congress of Berlin. After the First World War Bosnia was incorporated into the Federal Republic of Yugoslavia until 1992 when it became an independent state.

In general Ottoman buildings in Bosnia reflect the imperial architecture of Istanbul, Bursa and Edirne although there are also elements of a local style. This style seems to have been partly developed by Dalmatian builders from Dubrovnik who were hired to construct some of the monumental buildings. One characteristic of Dalmatian building

is the use of small cut stones instead of the bricks more commonly used in Ottoman architecture. Another notable feature of Bosnian architecture is the use of squinches instead of the triangular pendentives more common in Turkish architecture.

Four main periods of Islamic architecture have been identified. The first period which begins with the Turkish conquest is characterized by the founding of cities such as the capital Sarajevo, Banja Luka and Mostar. Also during this period many public buildings and mosques were founded by the Turkish governors and aristocracy. Important buildings from the sixteenth century in Sarajevo include Ghazi Khusraw Bey Cami, the 'Ali Pasha Cami and the Brusa Bedestan. During the second period, in the seventeenth century, the patronage of buildings was mostly by local merchants and includes khans, bath houses and mescits although some imperial buildings were erected such as the Tekke of Hajji Sinan in Sarajevo (1640). During the eighteenth and nineteenth centuries (the third period) there was increased European influence in the architecture as well as fashions imported from Istanbul. An interesting phenomenon is the development of the town of Trevnik as the official residence of the Ottoman vizier. Under the Austro-Hungarian Empire a fourth period can be distinguished which was characterized by an attempt to build non-Turkish Islamic architecture. Many of the buildings of this period were built in 'Moorish Style', the most famous example of which is Sarajevo Town Hall.

See also: Albania, Bulgaria, Ottomans

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brickwork

In many areas of the Islamic world brick is the primary building material.

There is an important distinction to be made between fired or baked brick and mud brick. Fired brick requires fuel to heat the kilns, making it relatively expensive, although the firing makes it more durable and therefore more suitable for monumental building. Architecture of the early Islamic period drew on two distinct building traditions each of which used fired brick as a major component. In

the Mediterranean area brickwork derived from Byzantine and ultimately Roman traditions whereas in former Sassanian territories it dated back to the ancient civilizations of Mesopotamia and Iran.

In the Byzantine tradition brick was usually used for specific parts of a building such as the dome or as string courses to level off layers of rubble wall. In the area of Syria and Jordan the availability of good quality stone meant that bricks were little used in the Byzantine architecture of the area and consequently were little used in the early Islamic architecture of the area. In the few examples – Mshatta and Qasr al-Tuba – where brickwork is employed it seems to be an import from the Sassanian east rather than a continuation of a local tradition. It is only with the Ottoman conquest of Anatolia that the Byzantine brickwork tradition becomes fully incorporated into Islamic architecture.

In the east (Iran and Iraq), however, brick was employed in the earliest Islamic buildings (i.e. Khan Atshan) as a direct continuation of Sassanian practice. It was in this area that the techniques of decorative brickwork developed using either standard bricks arranged in patterns or specially shaped bricks. Bricks could be laid vertically, sideways, flat on or in a herringbone pattern and were used to form geometric patterns or even inscriptions. Particularly elaborate brickwork was referred to by the Persian term *hazarbaf* (qv). Brickwork of the Seljuk period, from the eleventh to thirteenth century, in Iran and Central Asia is particularly elaborate using specially manufactured bricks. A particularly good example is Aisha Bibi Khanum Mausoleum at Djambul, Uzbekistan.

See also: *hazarbaf*, mud brick

Bukhara

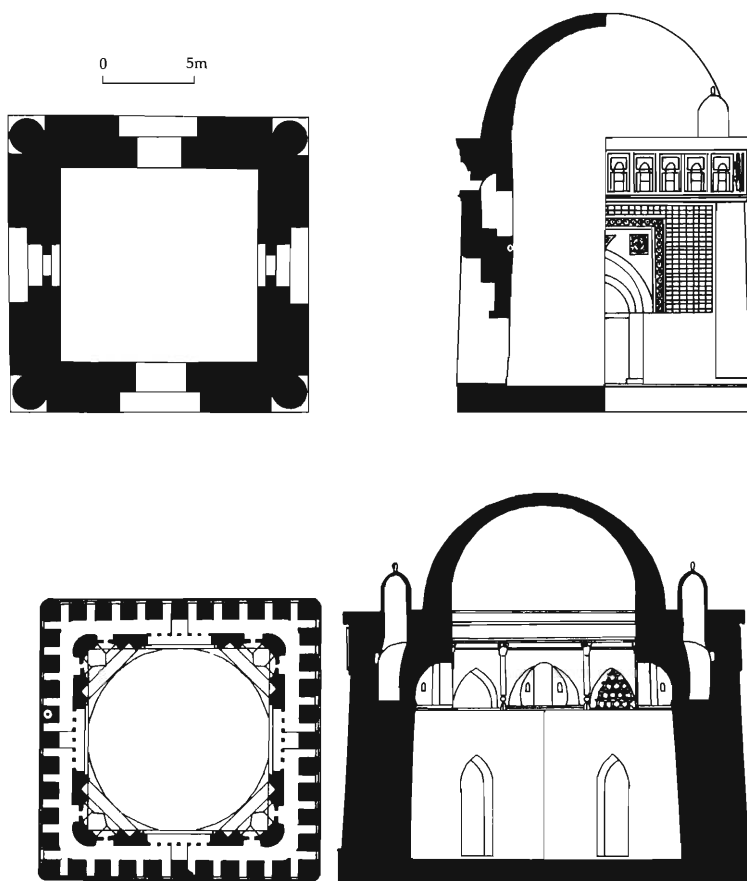
Oasis city in the Republic of Uzbekistan, Central Asia.

Bukhara is located in the valley of the Zeravshan river 200 km west of Samarkand. The city was first mentioned by its present name in a seventh-century Chinese text; however the city itself is probably older. The first Arab raid on Bukhara occurred in 674 although it was not finally conquered until 739. During the ninth and tenth centuries the city was under the rule of the Samanids and from 900 was capital of the province of Khurassan. During this period the city flourished and became established as one of the greatest centres of learning in the Islamic world.

Descriptions of Bukhara in the Samanid period indicate that it consisted of two main parts, the citadel and the town itself. The citadel and the town were separate walled enclosures on a high plateau, with a space between them which was later occupied by a congregational mosque. The citadel had a circumference of 1.5 km and contained, besides the palace, the city's first Friday mosque which was built on a pagan temple. The town itself was approximately twice the size of the citadel and was enclosed by a wall with seven gates. Later the whole area of the city and the citadel was enclosed within a wall with eleven gates (visible until 1938). In addition to the city walls there were outer walls which enclosed the villages around the city to protect them from nomad attacks; traces of these walls still survive.

Little is left of the Samanid city except the tenth-century mausoleum of the Samanid rulers known as the mausoleum of Isma'il the Samanid. This is one of the earliest examples of Islamic funerary architecture and consists of a square chamber with a hemispherical dome and decorative brickwork on both the exterior and the interior. The corners of the building are formed by engaged cylindrical brick piers whilst the corners of the dome are marked by small domed finials. In the centre of each side there is a recessed niche containing a door which acts as a focus for the surface decoration. The main form of decoration is small, flat, tile-like bricks laid alternately in vertical or horizontal groups of three. Another decorative technique is bricks laid horizontally in groups of three with one corner projecting outwards producing a dog-tooth pattern. This dog-tooth pattern is used mainly in the spandrels of the door arch which are also decorated with square terracotta plaques. At the top of the exterior façade there is an arcade of small niches which mask the zone of transition and also provide light to the interior. The decoration of the interior is similar to the exterior façade although here tiles are set vertically on end producing a diaper pattern. The dome rests on arched squinches which alternate with arched grilles which admit light to the interior.

The collapse of the Samanids at the end of the tenth century led to the gradual decline of Bukhara under their successors the Kharakhanids. This decline was reinforced by the Mongol invasions of the thirteenth century which twice destroyed the city. There seems to have been no recovery in the



Tenth-century tomb of the Samanids, Bukhara, Uzbekistan (after Creswell)

fifteenth century and it was not until the arrival of the Uzbeks in the sixteenth that the city recovered some of its former splendour. There are few structures which survive from the period between the Samanids and the Uzbeks although there are a few important buildings which date from the twelfth century. The most famous of these is the Kaylan Minaret which is a huge tower over 45 m high and is decorated with bands of decorative brickwork. The tower is a tapering cylinder with an arcaded gallery surmounted by an overhanging muqarnas corbel; its form is similar to that of Seljuk towers in Iran with its band of polychrome tile decoration at the top. Another twelfth-century structure demonstrating Seljuk influence is the shrine of Chasma Ayyub with its conical dome. A few buildings

survive from the fifteenth century including the Ulugh Beg Madrasa built in 1417.

Most of the major monuments of Bukhara date from the Uzbek period and include the massive Kukeldash Madrasa, the Divan Begi Mosque and Madrasa and the Kaylan Mosque. The buildings of this period resemble the Timurid buildings of Samarkand which they were clearly intended to imitate in both size and design. Another feature of this period is the grouping of buildings around a focal point or square such as the Lyabi Hauz or the Poi Kaylan in order to increase the visual effect. The Kukeldash Madrasa measures 80 by 60 m and is the largest madrasa in Central Asia although its decoration is surprisingly austere. The Divan Begi Mosque and Madrasa are equally impressive



Tenth-century mausoleum of the Samanids, Bukhara © StJohn Simpson



Minaret of the Kaylan Mosque, Bukhara © StJohn Simpson

with tall pishtaq entrances framed by twin minarets. The largest mosque in the city is the Kaylan Mosque built in the sixteenth century with the twelfth-century minaret nearby. The entrance to the mosque is through a huge entrance iwan or pishtaq decorated with blue glazed tiles covered with yellow flowers and turquoise stars. Within the mosque is a huge courtyard surrounded on three sides by a deep arcaded gallery. At the south-west end is another large iwan which leads to a domed room covered with a mihrab.

During the eighteenth century there was a move away from the monumental architecture of the first Uzbek rulers towards a lighter form of architecture inspired by Saffavid Iran. One of the finest examples of this style is the Masjid-i Jami opposite the Bola Hauz which has a magnificent hypostyle wooden porch supported on twenty wooden columns with painted muqarnas capitals.

See also: Samarkand, Timurids, Uzbekistan

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Bulgaria

A small country located on the Danube in south-eastern Europe.

Bulgaria borders Turkey, Greece, Serbia, Russia and Romania. The name of the country derives from the Bulgars, a Turkic people who conquered this area in 679 CE and adopted Christianity from the Byzantines in 865. The presence of Islam in Bulgaria is almost exclusively connected with the Ottoman conquest of the region.

The first Ottoman conquest in Bulgaria took place in the mid-fourteenth century when they occupied part of the area now known as Bulgarian

Bulgaria

Thrace. In 1396, after Sultan Bayezid's victory at the battle of Nikeboli (Nicopolis), the Danube area of Bulgaria was incorporated into the Ottoman Empire. From the end of the fourteenth century Bulgaria was strongly Ottomanized and new Muslim cities were established especially in the south-east of the country. By the sixteenth century this part of the country was predominantly Muslim and remained so until the nineteenth.

The main building materials used in Bulgaria were similar to those used by the Byzantines and later the Ottomans in Anatolia. These included baked brick on its own, baked brick in combination with ashlar masonry, ashlar masonry, coursed rubble masonry with wood and mud brick and wood. The choice of material depended partly on the area and partly on the status of a particular building.

Bulgaria can be divided into two main regions on the basis of Ottoman architecture: Bulgarian Thrace and the area of the Danube (Danubia). Bulgarian Thrace was the first area conquered by the Ottomans and so has a higher proportion of Ottoman buildings than the rest of the country.

Bulgarian Thrace

One of the oldest Islamic structures in Bulgaria is the turba of Lal Sahin Pasa in Kazanlik, thought to date from the mid-fourteenth century. The turba is an open, domed canopy supported on piers; the entire structure is made out of baked brick.

Most of the surviving Ottoman buildings, however, are in the major cities. Some of the best examples can be found in Plovdiv (Turkish Filibe and Byzantine Philippopolis) in the south-east of Bulgaria near Turkish Thrace. Here the Ottomans founded a new Muslim settlement outside the walls of the Christian one. The focal points of the city were the two mosques located at either end of the city centre. The older of these is the Cumaya Cami or Great Mosque built by Murad II in the 1420s which is reputedly one of the largest and most important mosques in the Balkans. It has nine bays roofed by three central domes and six wooden vaults, and beneath the central dome is a pool or fountain. In general the building resembles that of the Sehadet Cami in Bursa built in 1365. To the south of the Great Mosque is the Zaviye Cami or Imaret Mosque built in 1440 which formed the core of a commercial district with a bedestan

and hammam. The Ottoman town of Filibe was developed between these two mosques and a main street was built to link the two.

To the east of Filibe is the city of Yambol which was established after the Ottoman conquests in 1365. Probably the most important monument at Yambol is the Eski Cami built between 1375 and 1385. This consists of a single-domed unit built of brick and ashlar masonry in the Byzantine and early Ottoman style. In the mid-fifteenth century rooms were added on to the sides and a square minaret was also added. At Yambol too is one of the best preserved examples of an early Ottoman bedestan. This consists of a long hall roofed by four domes and entered through the middle of the long sides. On the outside of the building are thirty vaulted rooms or shop units.

North and West Bulgaria (Danubia)

Outside Thrace Ottoman buildings tended to have more local characteristics. In the area of Danubia a particular form of mosque developed consisting of a spacious wooden rectangular hall with a flat roof or wooden ceiling (sometimes with an inset wooden dome), covered by a gently sloping roof. This roofing system was lighter than a brick or stone dome so that walls could be made thinner and could be built out of coursed rubble rather than ashlar masonry. Two examples of such mosques survive at Vidin on the Danube; the mosque of Mustafa Pasa built in the early eighteenth century and the Ak Cami built in 1800. Both are built out of coursed rubble masonry with flat wooden ceilings under tiled roofs. Another such mosque at Belgradcik (Haci Husseyin Aga) has a carved wooden ceiling in the local Bulgarian style.

A characteristic type of building found in north-east Bulgaria is the tekke or dervish lodge. The Kizane Tekkesi near Nikopol on the Danube is characteristic of the Besiktasi order in the sixteenth century. The complex is built of wood and mud brick and was last rebuilt in 1855. The tekke comprises several elements including a kitchen, guesthouse, assembly hall and the mausoleum of the saint.

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burj

Arabic term for a fortified tower.

Bursa

Located on the slopes of the Uludağ (Great Mountain) in north-west Anatolia, Bursa became the first capital of the Ottoman state after its capture from the Byzantines in the fourteenth century.

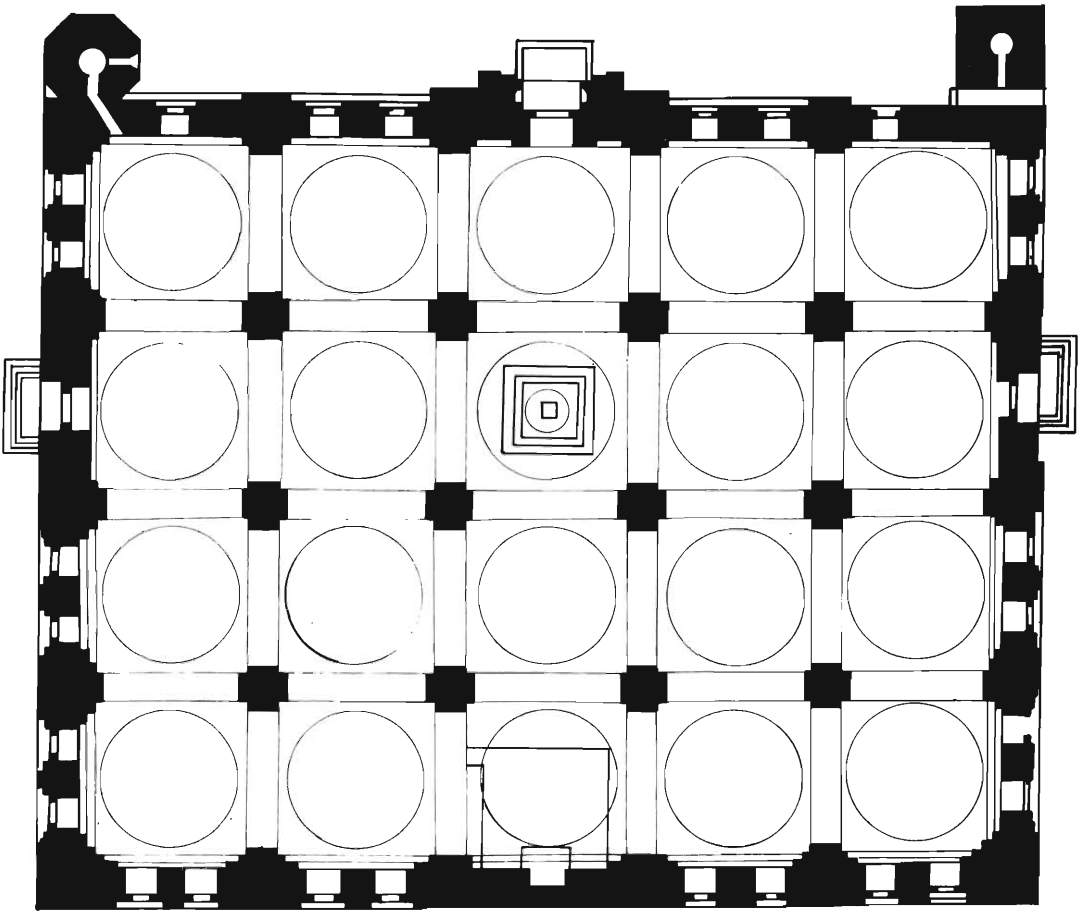
The city first came under Turkish control in 1071 after the battle of Manzikert when it was captured by the Seljuk leader Alp Arslan. In 1107 the city was recaptured by the Byzantines who retained their control until 1326, when it was finally taken by the Ottomans after a ten-year siege. During the remainder of the fourteenth century Bursa was established as the Ottoman capital with imperial mosques, palaces and a flourishing commercial centre. In 1402, after the battle of Ankara, Timur marched westwards where he plundered and burned the city. It quickly recovered and during the subsequent period one of the city's most important monuments, the Yeşil Cami, was built. However, the city never recovered its former importance especially as it had been replaced as capital by Edirne in 1366. In 1429 the city suffered a severe plague, and the fall of Constantinople in 1453 meant that it was no longer the Asian capital of the Ottomans. During the sixteenth century Bursa was merely a provincial city and there are no major monuments of this period in contrast to Edirne and Istanbul. In the early nineteenth century the city was established as the centre of the silk trade with the first silk factory opened in 1837.

Bursa is dominated by the ancient citadel which had proved such an obstacle to early Turkish attacks. The early Ottoman palaces were built of wood on the spurs of the mountain and none has survived. However, the commercial centre of the city, established by Orhan in the fourteenth century, still contains a number of early buildings. The oldest Ottoman building in Bursa is the Alaettin Cami built in 1335 which consists of a square domed prayer hall and vaulted portico. Two years later Orhan built the first of the Bursa T-plan mosques. It consists of a domed central courtyard

flanked by two student rooms and with a prayer hall to the south. Orhan's mosque was part of a complex which included two bath houses and a soup kitchen. One of the bath houses, known as the Bey Hammam, has survived in its original form and is the oldest known Ottoman bath house. The building has the same basic form as later hammams and consists of a large domed dressing room leading via an intermediary room to the cruciform domed hot room. Next door on the same street is the Bey Han also built by Orhan in the early fourteenth century. This is a two-storey structure built around a central rectangular courtyard with an entrance on the north side and a stable block at the back. The lower windowless rooms were used for storage whilst the upper floor contained the rooms for travellers each with its own chimney.

To the west of Bursa is an area known as Çekirge which was developed as a royal centre by Orhan's successor Murat between 1366 and 1385. At the centre of the complex was the Hüdavendigâr Cami, or royal mosque, which is a unique example of a madrasa and zawiya in one building. The lower floor is occupied by the zawiya and mosque whilst the upper floor is the madrasa. The zawiya and mosque is built to the same T-plan as was used earlier in Orhan's mosque whilst the upper floor is built as a traditional madrasa modified to the shape of the building below. The arrangement is unusual because the zawiya was used by mystical dervishes hostile to religious orthodoxy and the madrasa by students and teachers of orthodox Islamic law. The combination reflects the political situation of the time when the Ottomans were moving away from their role as leaders of frontier warriors with traditional dervish supporters to a more centralized state system relying on religious orthodoxy for support. Like the Hüdavendigâr Mosque, the Beyazit complex begun in 1490 includes a zawiya mosque and an orthodox madrasa although here the two buildings are separate with the mosque zawiya on a hill and the rectangular madrasa below. The mosque has the same T-plan as Orhan's original mosque although the tall five-domed portico represents an advance in mosque design.

The main mosque of Bursa is the Ulu Cami (Great Mosque) built by Beyazit between 1399 and 1400. The mosque covers a large area (63 by 50 m) and is roofed by twenty domes resting on large square piers. The main entrance and the



Ulu Cami, Bursa, Turkey (after Goodwin)

mihrab are on the same central axis and there is a sunken pool underneath the second dome in front of the mihrab. The interior is decorated with giant black calligraphy which dates to the nineteenth century but which may be copied from earlier originals.

The culmination of the Bursa T-plan mosques is the Yeşil Cami built by Mehmet I between 1403 and 1421. The building forms the centre of a complex which includes a madrasa, bath house, soup kitchen and the tomb of Mehmet I. The last imperial mosque to be built in Bursa is that of Murat II built in 1447. The building is a simplified version of the T-plan mosque and dispenses with the vestigial entrance vestibules found on the earlier mosques so that the portico leads directly on to the domed courtyard. Although the Mu-

radiye was the last of the Bursa imperial mosques, the Bursa T-plan continued to influence the form of later Ottoman mosques.

Bursa is well known for its bath houses (kapilica) which relied upon naturally occurring warm spring water. The sulphurous spring water occurs naturally at a temperature of 80° which is too hot for human use so that it must be mixed with cold water to achieve a bearable temperature. One of the oldest thermal bath houses is the Eski Kapilica (Old Bath House) rebuilt by Murat I on the site of an earlier Roman bath. Also famous is the Yeni Kapilica built by the grand vizier Rüstem Pasha in the sixteenth century which has a similar plan to the Haseki Hammam in Istanbul built by Sinan.

See also: Ottomans, Yeşil Cami

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Byzantine architecture

Architecture characterized by brick and masonry construction, round arches and domes, developed within the Byzantine Empire.

Byzantine architecture was of crucial importance to the development of early Islamic architecture and later the architecture of the Ottoman Empire. At the time of the Islamic conquest of Syria in the seventh century Byzantine was essentially a continuation of Roman architecture. There were, however, a few major differences, the most significant of which was the massive church-building campaign of Justinian (sixth century) which made Christianity

the central focus of architecture. Also noticeable in the architecture of this period was the influence of the capital Constantinople on the rest of the empire.

During the ninth to eleventh centuries the Byzantines recovered from the disastrous effects of the Islamic conquests, and in this period there is evidence of Islamic influence on Byzantine architecture, particularly in descriptions of the palaces of Constantinople.

During the fourteenth to fifteenth centuries Byzantine architecture was a major influence on that of the Turkish principalities in Anatolia. In particular the domed basilical church had a formative influence on early Ottoman mosques.

See also: Hagia Sophia, Ottomans, Umayyads

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Cairo (Arabic: al-Qahira)

Capital of Egypt and one of the most prominent cities of the Islamic world. The English name for the city derives from the French, Le Caire, which in turn is derived from the Arabic al-Qahira. The modern town is composed of the remains of four cities established in this area during the early Islamic period.

At the time of the Islamic conquest the capital of Egypt was Alexandria, although by 641 a new city called Fustat was founded further south on the east bank of the Nile, next to the old Roman fortress town of Babylon. In 750 the newly established Abbasid caliphs established another city or camp known as al-‘Askar to the east of Fustat. During the ninth century the semi-autonomous Tulunids expanded further north-east with the establishment of the city of al-Qataic which was based around the grand palace of Ibn Tulun. Under the Fatimids Egypt became the seat of the caliphate and to this end in 971 a new city was founded to the north-east. Originally the city was called al-Mansuriyya, but four years later was renamed al-Qahira ‘the victorious’, after al-Qahir (the planet Mars), which was in the ascendant at the time of its foundation. Although today the whole city is referred to officially as Cairo or al-Qahira, before the eighteenth century only the original Fatimid capital was referred to by this name whilst the whole city was known as Misr or Masr (literally Egypt).

The original al-Qahira of the Fatimids was a luxurious palace city described by contemporary writers as having marble floors grouted with gold and vast treasure houses filled with beautiful golden objects. From the tenth to the twelfth century Cairo was symbolically divided between al-Fustat, the commercial and popular capital, and al-Qahira, the royal city of the caliphs. The devastation and dislocation brought about in Egypt by the Crusaders changed the old order, so that al-Qahira was no longer exclusively a royal enclosure and instead became the true capital whilst al-Fustat became a dying suburb.

Salah al-Din planned to unite the city by enclosing both Fustat and al-Qahira in massive walls. Although unable to complete this project Salah al-Din was able to build the massive citadel on Muqattam hill. During the Mamluk and Ottoman periods the city continued to grow with suburbs growing up around the citadel and al-Qahira and huge cemeteries extending east and west into the desert.

The Fatimid Cairo

The two most important pre-Fatimid buildings to survive in some form are the mosque of Camr at Fustat and the mosque of Ibn Tulun. Little survives of either, nor of the original mosque of Camr ibn al-‘As built in 641 and said to be the earliest mosque in Egypt. The most important feature of the present mosque is that it indicates the position of the original settlement of al-Fustat. The mosque of Ibn Tulun on the other hand represents the remains of the city or settlement known as al-Qataic founded by Ahmad ibn Tulun. In many ways the Tulunid capital resembled the contemporary Abbasid capital at Samarra – from the triple-arched gate, the polo ground and the racecourses, to the extensive use of stucco.

The Fatimid Period (969–1171)

This is earliest time from which a significant number of monuments survive. It was during this period that Egypt became centre of the caliphate which ruled from North Africa to Palestine. Although the Fatimids ruled a vast empire, they were to a certain extent strangers in Egypt as the majority of the population remained Sunni. This alienation is reflected in the way al-Qahira was kept as an official city closed to the general population. The caliphs lived in palaces lavishly decorated with gold and jewels and when they died they were also buried within them. Unfortunately nothing survives of these palaces as they were

systematically destroyed by later rulers, although detailed descriptions can be found in the writings of Nasiri Khusraw or al-Maqrizi.

The best surviving examples of Fatimid architecture in Cairo are the mosques of al-Azhar (970) and al-Aqmar (1125) which demonstrate a transition from early Islamic to medieval forms. Despite later accretions, the mosque of al-Azhar represents an early Islamic hypostyle form with three arcades around a central courtyard. The sanctuary is composed of five aisles parallel to the qibla and a central transverse aisle which is emphasized by being both higher and wider than the surrounding roof. Originally there were three domes at the qibla end, one in front of the mihrab and one on either side. Three aisles around a central courtyard and the arrangement of three domes are all features common in early North African mosques. Inside the mosque was lavishly decorated with stucco work, only part of which survives (around the mihrab and on parts of the arcades). The stucco has some Abbasid influence although there are also Byzantine and Coptic elements in the designs.

Built some 150 years later, the mosque of al-Aqmar has a much more sophisticated design, reminiscent of the later medieval buildings of Cairo. It was founded by the vizier Ma'mun al Bata'ihi during the reign of Caliph al-Amir. The interior plan consists of a small central courtyard surrounded on four sides by triple arcades. The sanctuary consists of a small area divided into three aisles parallel to the qibla wall. Initially the mosque would have been covered with a flat hypostyle roof but it is now covered with shallow brick domes. Stylistically the most important feature of the plan is the way the entrance is positioned at an angle to the main building. This feature allows the mosque to be incorporated into a pre-existing street plan whilst having the prayer hall correctly aligned for the qibla. This is one of the earliest examples of this type of plan which was to become more pronounced in Mamluk religious buildings. The other important feature of the al-Aqmar Mosque is the decoration of the façade which was developed in later mosques to be a main feature of the design. The façade is made of stone overlying a brick structure. Today the right hand side is hidden by a later building but it is assumed that it was originally symmetrical with a projecting portal in the middle. The decoration of the façade is dominated by decorated niches with fluted conch-

like niches, an arrangement used in more complex forms in later mosques. The al-Aqmar Mosque is also significant as the earliest mosque to incorporate shops in its design (these were below the present street level and have been revealed by excavations). Another important mosque of Fatimid Cairo is that of the caliph al-Hakim built between 990 and 1003. The mosque, which has recently been restored, has a large rectangular courtyard surrounded by four arcades. A transept aisle opposite the mihrab indicates the direction of the qibla which is further emphasized by three domes. The entrance to the mosque is via a large projecting portal similar to that of the mosque of Mahdiyya, the Fatimid capital in North Africa. Probably the most famous feature of this mosque are the minarets at either end of the north façade. They were built in 990 and consist of one octagonal and one cylindrical decorated brick tower; at some later date (probably 1110) the lower parts of these minarets were encased in large brick cubes for some unknown reason.

Apart from mosques, various other types of religious building are known to have been built in Fatimid Cairo including many tombs or mashads devoted to religious personalities. However, most of these have not survived or have been altered beyond recognition as they have been in continuous religious use. An exception to this is the mashad of al-Juyushi also known as Mashad Badr al-Jamali.

This structure consists of two main parts, a domed prayer hall opening on to a courtyard and a large minaret. Although there is a side chamber which may have been a tomb, there is no positive identification of the person commemorated. The prayer hall is covered with cross vaults except for the area in front of the mihrab which is covered with a tall dome resting on plain squinches. The minaret is a tall square tower capped by an octagonal lantern covered with a dome. A notable feature of the minaret is the use of a muqarnas cornice which is the first example of this decoration on the exterior of a building. The roof of the complex also houses two small kiosks whose function has not been resolved. Other notable Fatimid mashads are the tombs of Sayyida Ruqayya and Yayha al-Shabih both in the cemetery of Fustat. The first of these was built to commemorate Sayyida Ruqayya, a descendant of Cali even though she never visited Egypt. The layout of this building is similar to that

of al-Juyushi except that the dome is larger and is fluted inside and out. Visually the most impressive feature of this building is the mihrab, the hood of which is composed of radiating flutes of stucco set within a large decorated frame.

The best surviving examples of Fatimid secular architecture are the walls and gates built by Badr al-Jamali between 1087 and 1092. The first walls and gates of Cairo were built of brick during the reign of al-Mucizz but were replaced with stone walls by Badr al-Jamali in the eleventh century. The stone for the walls was mostly quarried from ancient Egyptian structures and many of the stones display hieroglyphic inscriptions and ancient motifs. The walls were built on three levels: a lower level raised slightly above the street level containing shops and the entrances to gates, a middle level containing vaulted galleries and pierced with arrow slits, and an upper level consisting of a parapet protected by large rounded crenellations. The gates are set between large semi-circular or rectangular buttress towers, the lower parts of which are made of solid masonry. The surviving gates of Fatimid Cairo are Bab al-Nasr (Gate of Victory), Bab al-Futuh (Gate of Conquest) and Bab Zuwayla (after a North African tribe prominent in the Fatimid armies). The general appearance of the towers and gates seems to be developed from Byzantine military architecture.

The Ayyubid Period (1171–1250)

The Ayyubid period in Cairo represents a return to orthodox Sunni Islam. One of the consequences of this was that there was not allowed to be more than one Friday mosque in any urban area. Instead the Ayyubid period saw the foundation of many madrassas and khanqas as a means of propagating orthodox law and religion. The earliest such madrasa was that of Imam Shafci founded by Salah al-Din. Although the madrasa has not survived, the connected tomb of Imam Shafci still stands. This is much larger than any of the earlier Fatimid tombs measuring approximately 15 m square underneath the central dome. The wooden cenotaph of the imam survives intact and is decorated with carved geometric designs around bands of Kufic and Naskhi script which are dated to 1178.

The best surviving example of an Ayyubid madrasa is that of Sultan al-Salih Najm al-Din

Ayyub built in 1243. It is built on the site of one of the great Fatimid palaces. Like the Mustansariyya this madrasa was built for all four of the orthodox Sunni rites of Islamic law with a separate area for each rite; today only the minaret, the entrance complex and part of the east courtyard survive. The original plan consisted of two courtyards either side of a passageway. Each courtyard was flanked on two sides by small barrel-vaulted cells and on the other two sides by large iwans. The minaret of this complex is the only surviving Ayyubid minaret of Cairo and consists of a square brick shaft with an octagonal upper part covered with a ribbed dome. The entrance-way includes a decorated keel-arched niche, in the centre of which is a Naskhi foundation inscription; the whole is encased by a muqarnas frame.

One of the finest buildings attributed to the Ayyubid period is known as the 'Mausoleum of the Abbasid Caliphs' because it was used for this purpose after the Mongol sack of Baghdad. Although there is some dispute about its date of construction, it is generally agreed to have been built between 1240 and 1270. The central dome is supported on two tiers of squinches which alternate with similarly shaped windows and muqarnas stucco niches so that the zone of transition becomes two continuous bands of niches. This pattern was later adopted for most domes resting on squinches.

Other important buildings of the late Ayyubid period are the tomb of Sultan Salah al-Din, the mausoleum of Shajarat al Durr and the minaret of Zawiyat al Hunud all dated to around 1250.

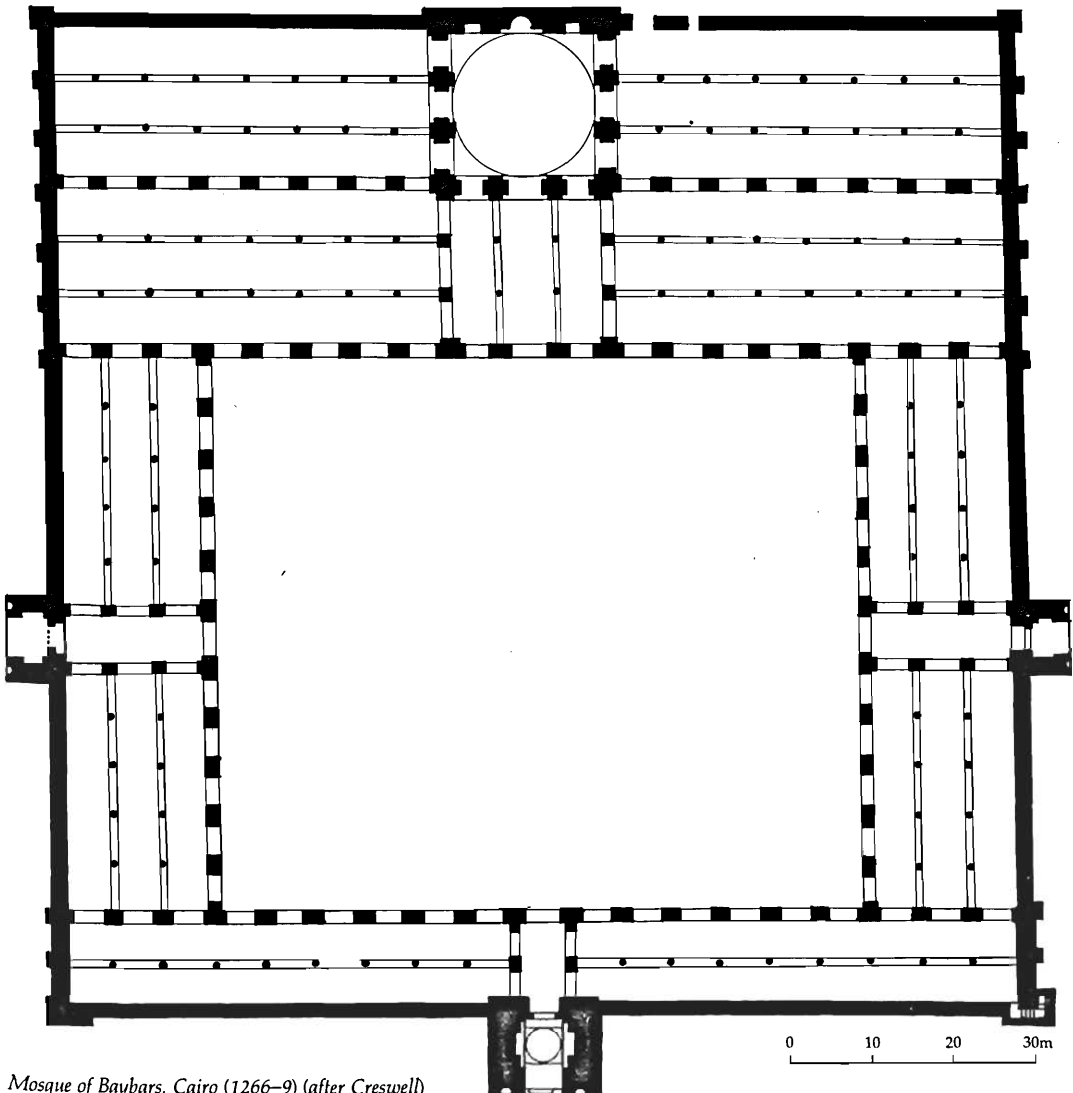
Few remains of secular buildings survive with the exception of the citadel and the fortification walls. The citadel was probably the most substantial building of Ayyubid Cairo, its main function being to strengthen and connect the city's walls. It was built on Muqattam hill in the style of Syrian castles of the Crusader period using material taken from several small pyramids at Giza which were demolished for the purpose. Both square and round towers were used to fortify the walls which may reflect two periods of construction, one under Salah al-Din and one under his son and successor al-Malik al-'Adil. Innovations to the fortifications included bent entrances in the gateways and arrowslits which reached the floor.

Bahri Mamluk Period (1250–1382)

The early Mamluk period is architecturally the most prolific period in Cairo with a wide range of major building projects carried out. Many of these buildings have survived demonstrating a diverse range of styles, techniques and designs. During this period some of the major forms of later Cairene architecture were established such as the erection of *sabils* on street corners often linked to primary schools. During this period there was also

considerable foreign influence from Sicily, Iran, North Africa and Spain which was absorbed into the architecture of Cairo.

Congregational mosques were founded during this period after the strict Shafi'ite orthodoxy of the Ayyubid sultans who only permitted one congregational mosque in the city, that of al-Hakim. Under the Mamluks each area had its own Friday mosque and during the fourteenth century *madrasas* and *khanqas* were also used as Friday mosques. The earliest and grandest mosque built



Mosque of Baybars, Cairo (1266–9) (after Creswell)

under the Mamluks was that of Sultan al-Zahir Baybars built between 1266 and 1269. Although partially ruined the general plan of this mosque can be reconstructed – it consists of a large rectangular courtyard with arcades on four sides and projecting entrances on three sides. Most of the arcades rested on columns except for those around the sanctuary which rest on rectangular piers. The outer walls are protected by rectangular buttresses in between which are pointed arched windows with stucco grilles. The walls are built out of stone, and alternate courses are painted to achieve the effect of *ablaq* masonry; the upper part of the wall is crenellated. There was once a minaret next to the main entrance which has now disappeared. The area in front of the *mihrab* known as the *maqsurah* was once covered with a large wooden dome decorated in marble; between this and the courtyard was a nine-domed transept.

Another royal mosque of this period is that of Sultan al-Nasir Muhammad at the citadel, built between 1318 and 1385. Like that of Baybars this is a hypostyle mosque built around a rectangular courtyard with a large dome covering the area in front of the *mihrab*. The most remarkable feature of this mosque are the two cylindrical stone minarets, one opposite the army headquarters and the other opposite the royal palace. The more elaborate of the two faces the palace and is decorated with vertical and horizontal zig-zag patterns with a small solid bulbous dome on the top. The other minaret is similar except that it is less decorated and has a hexagonal pavilion covered by a bulbous dome. The upper portion of each minaret is covered in blue, white and green faience tiles. It seems likely that both the faience decoration and the bulbous domes are copied from similar minarets in Iran, probably Tabriz, where such forms were common at the time.

Other important mosques built during this period were those of Amir Altinbugha al-Maridani built in 1340 and of Amir Aqsunqur built in 1347. Important features of the al-Maridani Mosque include the minaret which is the earliest example of the octagonal minaret with pavilion which was to become typical of later Cairene architecture. The building is also notable for its wooden *mashrabiyya* screen that separates the *maqsurah* from the rest of the mosque. The mosque of Aqsunqur is a good example of an attempt to use a Syrian building tradition in Egypt. The building was originally

roofed with cross-vaults in the Syrian style but later these were replaced with a flat wooden roof.

Probably the most famous building of Mamluk Cairo is the Sultan Hasan Mosque. This was built on a four-iwan plan madrasa and was the first madrasa in Cairo to be accorded the status of a congregational mosque. The building consists of a square central courtyard with four great iwans. The largest of the iwans is a prayer hall behind which is the domed mausoleum. Between the four iwans are four separate courtyards one for each of the orthodox Sunni rites of Islamic law. The building includes several notable architectural features amongst which are the doorway thought to be modelled on that of the Gök Madrasa at Sivas and the floriated stucco inscriptions in the prayer hall.

Mausoleums were a common feature of religious and semi-religious institutions from the early Mamluk period onwards. One of the best examples of this is the mausoleum, madrasa and hospital of Sultan al-Mansur Qalawun built between 1284 and 1285. Today the hospital has disappeared leaving only the madrasa and mausoleum. The madrasa is built on the typical Cairene four-iwan plan with iwans of differing sizes. The largest iwan is that of the prayer hall which is arranged in three aisles like a Byzantine basilica. The most outstanding feature of the complex is the mausoleum itself which consists of a huge rectangular hall with a central dome supported on piers and massive columns arranged in a manner similar to the Dome of the Rock in Jerusalem. The walls are decorated in a wide variety of materials including marble inlay, mother of pearl and coloured stones. The *mihrab* is one of the largest in Cairo and is decorated with several tiers of blind niches within the niche itself. The importance of the mausoleum is evident from the fact that it had its own madrasa in addition to the madrasa attached.

Although mausoleums did not usually achieve the grandeur of Qalawun's tomb, often the mausoleum was the most impressive part of a complex. Thus the tomb of Sultan Baybars al-Jashankir was an elaborate and richly decorated building in relation to the rather plain *khanqa* associated with it. Tombs often acted as a focal point for a building and sometimes incorporated foreign features or unusual techniques in order to draw attention to the building and its founder. This can be seen in the madrasa-mausoleum of Amir Sarghitmish built

in 1356 where the mausoleum is not placed next to the prayer hall as was usual but instead was built in a position so that its façade and profile were directly on the main street. The mausoleum is covered by a double-shell dome set on an unusually high drum with an exterior moulding of muqarnas marking the transition from drum to dome. This form of dome is not usual in Cairo and may have been copied from similar domes in Samarkand.

Circassian Mamluk Period (1382–1517)

Several developments took place in the fifteenth-century architecture of Cairo which distinguish it from the earlier Mamluk period. These developments were of two basic types: those concerned with the layout and plan of buildings and those concerned with the decoration and construction of buildings.

The biggest factor affecting design and layout was the lack of space in an increasingly crowded area. The most obvious result of this was that mosques tended to be smaller and were designed to fill awkwardly shaped plots. The size of mosques was reduced in a number of ways, the most notable of which was the reduction in size of the central courtyard until it became a small square area in the centre covered by a wooden lantern to admit light. A result of this design change was that the side walls of mosques were now pierced with many windows to make up for the lack of light from the courtyards. Also there was a move away from the hypostyle mosque towards the four-iwan plan used for madrassas. However, the form of the iwans changed from brick or stone vaults to flat wooden roofed units. Another change was that now madrassas did not include accommodation blocks for students who were located outside.

The trend which had begun in the fourteenth century of using madrassas as Friday mosques was extended so that now buildings would fulfil several roles such as khanqa, madrasa and jami. The earliest example of such a combination was the complex of Sultan Barquq built between 1384 and 1386.

One of the exceptions to the decreasing size of mosques is the Khanqah of Sultan Faraj ibn Barquq built between 1400 and 1411. This large complex was deliberately built outside the main urban area in the cemetery on the eastern outskirts of Cairo.

The plan adopted for this building was that of a hypostyle mosque, with a spacious central courtyard containing an octagonal central fountain. Despite its traditional Friday mosque layout this structure contained living units for Sufis as well as two domed mausoleums flanking the sanctuary or prayer hall.

Many of the changes in the architecture of the late Mamluk period are concerned with the building and decoration of domes. Among the most famous features of Cairo are the carved stone domes built during this period. These are fairly unique to Cairo although occasional examples can be found elsewhere, such as the Sabil Qaytbay in Jerusalem which is known to be a copy of similar Egyptian domes. Up to the late fourteenth century most domes in Egypt were either built of wood or brick, and stone domes were only used for the tops of minarets. It is thought likely that this was the origin of the larger stone domes used on tombs. The earliest stone domes had ribbed decoration similar to that seen on the tops of minarets; later this was developed into a swirled turban style as can be seen on the mausoleum of Amir Aytimish al-Bajasi built in 1383. The next stage was zig-zag patterns followed by the intricate star patterns which can be seen on the mausoleums built for Sultan Barbays. Under Sultan Qaytbay an important innovation was made where the star pattern would start at the top, whereas previously decoration had started at the bottom. With the increasing sophistication of dome decoration it was natural that domes were set on higher drums so that they could be seen from far away. The increased confidence in stone carving exhibited in domes is also reflected in the decoration of minarets which are now also carved in stone. One of the earliest examples of this is the minaret belonging to the complex of Sultan Barquq built between 1384 and 1386. The minaret is octagonal throughout and has a central section composed of giant intersecting circles.

Another innovation in the architecture of this period was the triangular pendentive. The earliest examples in Cairo were used in the citadel mosque of al-Nasir Muhammad and were made of wood. Later pendentives were used for stone domes although muqarnas squinches continued to be used. A related feature introduced at this time was the groin vault used in complex arrangements for portals. Often doorways would be covered by a

complex groin vault with a small dome in the centre forming a half-star shape.

The Ottoman Period (1517–1914)

The Ottoman conquest of Egypt marks a fundamental change in the architecture of Cairo. Most noticeably, new architectural forms were introduced from Istanbul and Anatolia, whilst several types of Mamluk buildings, such as domed mausoleums or khanqahs ceased to be built.

One of the earliest Ottoman buildings of Cairo is the mosque of Sulayman Pasha built in 1528. This building is almost entirely Ottoman in its construction and shows little relationship to the pre-existing Mamluk architecture. The mosque consists of a central prayer hall flanked by three semi-domes and opening on to a central courtyard enclosed by domed arcades.

In addition to new layouts and forms the Ottomans also introduced new types of buildings such as the takiyya which performed a similar function to the khanqa and madrassa.

Unlike the khanqa or madrassa the takiyya was built separate from the mosque. This was characteristic of Ottoman institutions which were built separately from mosques rather than as buildings with several functions like the madrassa, khanqa, jami combination of the late Mamluk period.

Despite the new styles and forms introduced by the Ottomans many buildings continued to be built in Mamluk architectural style. A good example of this is the mosque and mausoleum of Mahmud Pasha built in 1567 which in many ways resembles the mosque of Sultan Hasan, with a large domed mausoleum behind the prayer hall. The minaret, however, is built in the classic Ottoman style with a tall thin fluted shaft.

Probably the most famous building of Ottoman Cairo is the mosque of Muhammad Ali Pasha built between 1830 and 1848. This building has a classical Ottoman design consisting of a large central domed area flanked by semi-domes and a large open courtyard surrounded by arcades covered with shallow domes. On the west wall of the courtyard is a clock tower including a clock presented by Louis Philippe, King of France. The mosque was designed by an Armenian and is said to be based on the Sultan Ahmet Mosque in Istanbul.

Domestic and Secular Architecture

The continuous development of Cairo has meant that apart from the major monuments very few secular buildings have survived from before the Ottoman period. The earliest evidence for Cairo's houses comes from excavations at Fustat where Iraqi-style four-iwan plan houses were discovered. This style consists of four iwans, one on each side of a central courtyard with a fountain. In each house the main iwan was divided into three, a central area and two side rooms. There are also descriptions of early Islamic Cairo which describe multi-storey apartments.

During the Fatimid period we have the first evidence for the living unit known as the qaca which became the typical living unit of Cairo. This consists of a small courtyard area with two iwans opposite each other. The iwans could be closed off with folding doors whilst the courtyard could be covered over with an awning. On the upper floor overlooking the courtyard were wooden galleries. In Mamluk times the qaca was developed so that the central courtyard became smaller and was covered by a wooden dome or lantern. The central hall or courtyard would often be decorated with coloured marble and finely carved mashrabiyya doorways and screens. The central fountain was usually octagonal and was sometimes fed by a stream of water running from the back wall of the main iwan.

In the late Mamluk and early Ottoman period a particular type of sitting room known as the maqad became popular. This consisted of an arcade on the upper floor level which overlooked the main public courtyard of an important residence. From the sixteenth century onwards important residences would also incorporate an extra kitchen for the preparation of coffee.

In addition to private houses there were from a very early period blocks of houses or apartments which would have been rented by the occupiers. These buildings were known as 'rabc' and consisted of rows of two-storey apartments usually built above shops or khans. One of the earliest examples is the rabc of Sultan al-Ghuri at Khan al-Khalili.

It is known that many of the larger houses had private bathrooms although these would not have included all the facilities available in a public bath house or hammam. Cairo is known to have had a large number of hammams although many of these

have recently disappeared. In general the rooms of a bath house were fairly plain with the exception of the maslakh (reception hall) which was often domed and sometimes was supported with columns.

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camī

Turkish term for a congregational or Friday mosque as opposed to the smaller mescit.

caravanserai

Roadside building which provides accommodation and shelter for travellers.

The term caravanserai is a composite Turkish term derived from caravan (i.e. a group of travellers) and serai (palace). Generally it refers to a large structure which would be capable of coping with a large number of travellers, their animals and goods. The term first seems to have been used in the twelfth century under the Seljuks and may indicate a particularly grand form of khan with a monumental entrance. During the Saffavid period in Iran (seventeenth to eighteenth century) caravanserais are often huge structures with four iwans.

See also: khan

çarşı

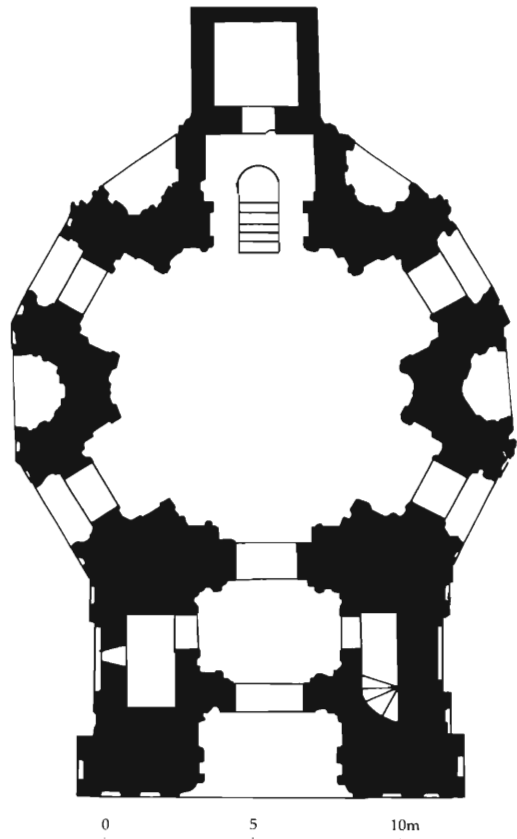
Turkish term for a market.

Central Asia

Central Asia comprises the modern independent republics of Khazakstan, Turkmenistan, Khirgiziya and Uzbekistan.

In pre-Islamic times Central Asia was the home of several important Turkic dynasties the most important of which were the Kushans who ruled over most of the area in the fifth century CE. By the seventh century the western part of the Kushan Empire had been conquered by the Sassanians whilst the eastern part fractured into a number of independent principalities. One of the most important principalities was that of the Sogdians whose art and architecture seem to have been an important influence on Islamic architecture of the ninth century and after.

During the Islamic period the cities of central Asia continued to control the Silk Route and cities



Plan of Tutabeg Khatun Tomb, fourteenth century, Urgench, Uzbekistan

çeşme

such as Samarkand, Bukhara and Merv rose to great prosperity.

See also: Turkmenistan, Uzbekistan

çeşme

A Turkish term for a fountain or tap used to provide drinking water. These were often attached to Ottoman monuments to fulfil a charitable purpose.

chahar bagh or char bagh

Iranian and Mughal term for a formal garden laid out in four plots of equal size and divided by axial paths.

See also: gardens, Mughals

chajja

Mughal and Hindu term for projecting eaves or cover usually supported on large carved brackets.

char-chala

Indian roof form with curved eaves and curved surfaces. Derived from Bengali architecture.

See also: bangala, Bengal, do-chala

Char Minar

Ceremonial gateway in Hyderabad which is one of the best examples of south Indian Islamic architecture.

When it was built in 1589 the Char Minar (literally four towers) formed the centre of the city and with the charkaman (four gates) was part of the ceremonial approach to the royal palaces (now destroyed). The building is a square structure with arched gateways in the centre of each side which intersect at the centre. At each of the four corners is a tower or minaret nearly 60 m high and crowned with an onion-shaped bulbous dome. The first storey above the arches contains a circular cistern whilst on the second storey there is a small domed mosque.

See also: Deccan, Hyderabad, India

char su or char taq

Iranian and Mughal term for the intersection of two market streets where there is usually an open square with four arched entrances. (Roughly equivalent to the classical tetra pylon.)

chatri

Mughal and Hindu term for a domed kiosk on the roof of a temple, tomb or mosque. The domes are usually supported on four columns.

chauk

Indian term for an open square or courtyard.

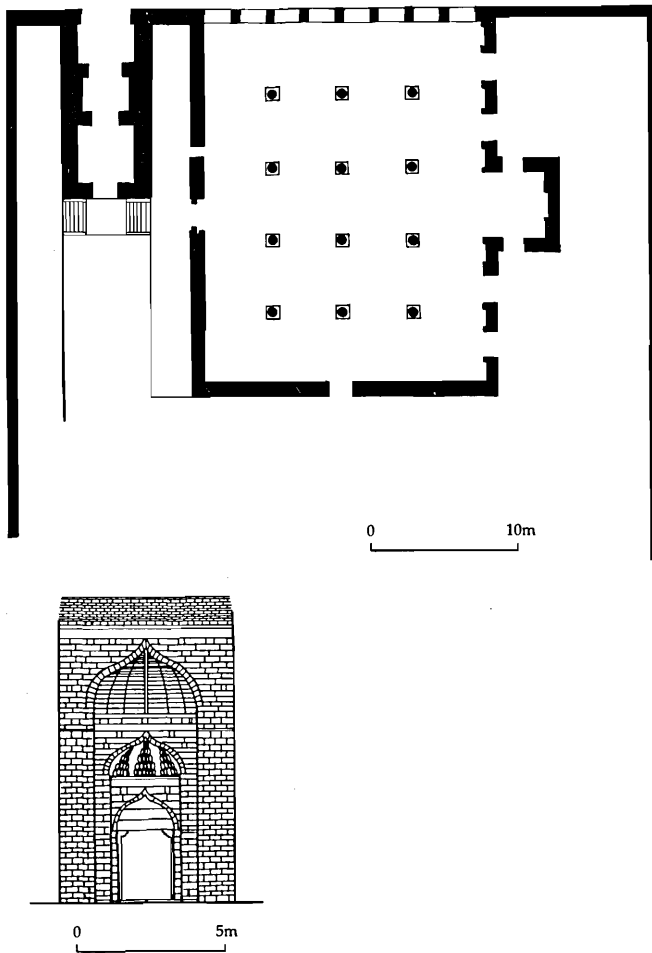
China

There are three main Muslim groups within the Republic of China, these are the maritime communities of the great ports, the urban communities of northern China and the predominantly Turkic people of Central Asia.

Maritime Communities

The development of maritime Muslim communities in China is less well documented than the conquests of Central Asia or the inland settlements of northern China. The first coastal settlements seem to have been mostly in southern and eastern ports and include the cities of Canton, Chuan Chou, Hang Chou in Chekiang Province and Yang Chou on the lower Yangtze. The descendants of these early Muslims are known as Hui (a term also applied to the Muslims of the northern inland cities) and through intermarriage have become culturally Sinicized. This was partly as the result of increased intermarriage and also missionary activity. The prominence of the Muslim communities grew under the Yuan and Ming dynasties so that in the fifteenth century the Chinese navy was commanded by Muslims, the most famous of whom was Cheng Ho, who cleared the China sea of pirates and led an expedition to East Africa.

According to Islamic tradition the first mosques in China belong to the maritime community and were located in the coastal ports. Historical sources suggest that they may have been established in the seventh century by Sa'd bin Abi Waqqas and several other companions of the prophet. There is little archaeological evidence for mosques of this period although there are several mosques which may have been founded at an early date. Probably the oldest of these is the Huai-Shang Mosque in Canton which is referred to as early as 1206, although a mosque probably existed on the site in T'ang times (618–906). The oldest part of the building is the 36-m-high minaret with a thick tapering shaft. As minarets are rare in China it has



Plan and doorway of the mosque of Chuan Chou, China

been suggested that the minaret functioned as a lighthouse. The rest of the mosque was built in the fourteenth century and is built in Chinese style with green tiled wooden roofs. The Sheng Yu Mosque at Chuan Chou is surrounded by massive granite walls and is the last of seven mosques which once stood in the city. The building was founded in 1009 although most of the building seems to date from the fourteenth century or later. Another early mosque is the Feng-Huan Mosque at Hang Chou which is locally attributed to the T'ang period (according to a seventeenth-century inscription) although it seems more likely that it was established during the Yuan period.

Inland Communities

Away from the coast the Muslims of China may be divided into two main groups, the Turkic- and Persian-speaking peoples of Xinjiang (formerly Chinese Turkestan) and the Chinese-speaking Hui people of Yunnan, Ningxia and Gansu. Initially both these groups were less integrated into Chinese society than their maritime counterparts and their early history is one of conflict rather than acculturation. The first direct confrontation between Arabs and Chinese occurred in 751 at the battle of Talas and resulted in a victory for the Arabs. During the Yuan period (1279–1368) there

was increased Muslim presence in central China due to the large numbers of Muslim soldiers introduced by the Mongols. The growth of Muslim communities continued during the Ming period (1368–1644) when there was also a certain amount of Sinicization of the Muslims which is reflected in the architecture. These communities established many of the usual Islamic institutions, including mosques, madrassas and caravanserais although the methods and techniques of construction appear to have been predominantly Chinese.

Traditionally the oldest inland mosque in China is the mosque of Ch'ang-an which is supposed to have been founded in the T'ang period although a Sung or Yuan foundation is now thought more likely. The Great Mosque of Xian at the eastern end of the Silk Route was founded by the Muslim Admiral Cheng Ho in the fourteenth century. Contained within a huge enclosure wall measuring 48 by 246 m this is the largest mosque in China. The layout of this building with its succession of courtyards, green tiled pavilions and tiered pagoda-like minarets resembles a Buddhist temple rather than any traditional mosque form. However, there are many subtle deviations from typical Chinese forms including the east–west orientation (temples were normally oriented east–west) and the wooden dome which is built into the flared pitched roof of the ablutions pavilion. The flat wooden mihrab is contained within a small room which projects from the centre of the west side of the prayer hall. Other historical mosques in central China include the recently renovated Nui Jei Mosque in Beijing which is reputed to have been founded in the tenth century although there is no archaeological evidence for this.

In Central Asia the Muslims retained their ethnic identity so that the Xinjian region has the largest number of Muslims composed of several groups including Uighurs, Khazaks, Khirgiz and Tajiks. The architecture of this region is similar to that of the former Soviet Republics to the west and has little in common with the rest of China. One of the most famous mosques of this region is the Imin Mosque of Turfan built in 1779. The main features of the mosque are the prayer hall and next to it the huge minaret. The minaret is a cylindrical brick-built structure over 44 m tall and decorated with fifteen bands of geometric brickwork. The large prayer hall is built of mud brick and entered through a large iwan flanked by shallow arched niches. Other mosques in Turfan are more modest in scale and usually consist

of a rectangular brick prayer hall with arcades supported on wooden columns. In the city of Urumqui there is a mixture of architectural styles reflecting the cosmopolitan nature of a city on the Silk Route. One of the largest mosques in the city is the Beytallah Mosque which has traces of Persian and Mughal influence. The building consists of a rectangular prayer hall with engaged minarets at each corner and a tall bulbous dome in the centre. Perhaps more unusual is the Tartar Mosque which is a small wooden building with a short square minaret capped with a pointed wooden spire.

See also: Central Asia, Indonesia, Java, Malaysia, Philippines, Uzbekistan

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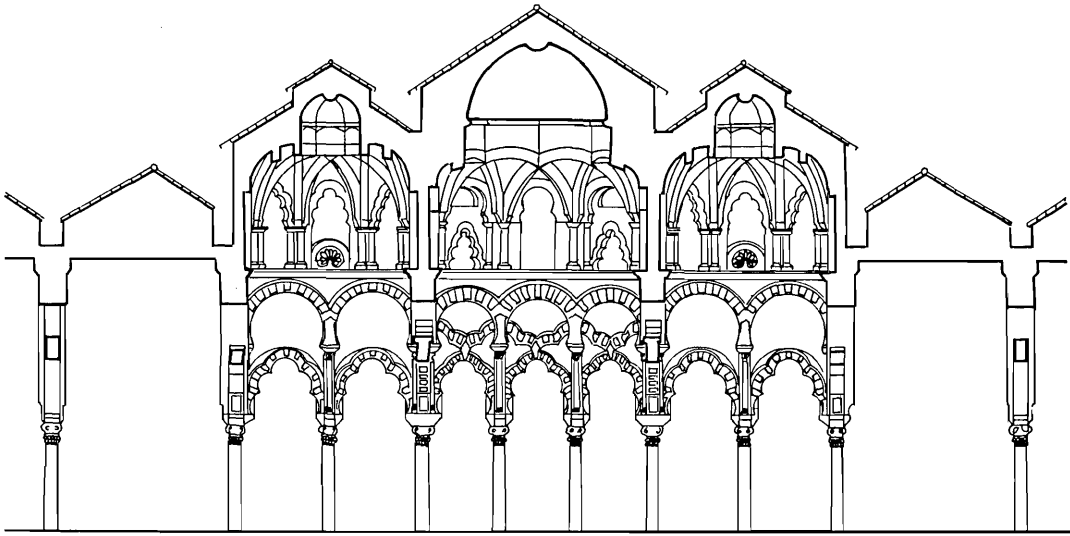
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coral

Coral is used as a building material for coastal settlements throughout the Indian Ocean, Arabian/Persian Gulf and the Red Sea.

Two main types of coral stone are used for construction: fossil coral quarried from the coastal foreshore, and reef coral which is cut live from the sea bed. Fossil corals are more suitable for load-bearing walls whilst reef corals such as porites are more suitable for architectural features such as door-jambs or mihrab niches. Fossil corals are mostly from an order of coral known as Rugosa which is now extinct. When quarried this coral forms rough uneven blocks known as coral rag. Although this can be cut into rough blocks it cannot be dressed to a smooth finish and therefore has to be used in conjunction with another material to produce an even surface.

Living coral from the reef is easier to cut and dress to a smooth finish although it does require hardening by exposure to the air. The preferred type of reef coral for building is porites because of its compact vascular structure which means it is both strong and easy to carve. However, this is



Section through the Great Mosque of Córdoba, Spain (after Barucand)

not the only type used and, at the eleventh-century site of Ras al-Hadd in Oman, at least seven different types were noted. In the Maldives and Bahrain platy corals such as *oxypora* and *montipora* are used for partitions.

The origins of coral-building are not well understood although it is generally believed that the technique originated on the coasts of the Red Sea. The earliest example was discovered at the site of al-Rih in the Sudan where a Hellenistic cornice made of coral was found re-used in an Islamic tomb. From the Red Sea the technique spread to the East African coast of the Indian Ocean where it was established as the primary building material for monumental buildings. In the Arabian/Persian Gulf there is another tradition of coral stone construction although the antiquity of this tradition is in doubt as suitable coral has only grown in the area within the last 1,000 years. At the present time the use of coral stone extends over large areas of the Indian Ocean and includes the coastline of India (Gujarat), the Maldives and Sri Lanka. The origins of coral-building in these areas has not been investigated although it generally seems to be associated with Islamic traders.

See also: Bahrain, East Africa, Maldives, Qatar, Saudi Arabia, Sudan, United Arab Emirates

Córdoba

Capital of Islamic Spain (al-Andalus) from 717 until the eleventh century although it continued to be in Muslim hands until its capture by Ferdinand III of Castile.

In Arabic the city was known as Qurtabat al-Wadi al-Kabir and together with Madinat al Zahra' represented the centre of Islamic Spain under the Umayyad dynasty of Spain. It is located on a plateau next to the Guadalquivir river (from Arabic Wadi al-Kabir) which was navigable from the sea in Islamic times. Abd al-Rahman I made it the capital of al-Andalus and laid out the famous Great Mosque of Córdoba (known in Spanish as 'La Mezquita') next to the river. The Great Mosque became the centre of the city which was said to have had fifty mosques in the tenth century. Few of these mosques have survived although the convent of Santa Clara and the church of San Juan are both converted mosques. Santa Clara has fine marble columns and the remains of a minaret whilst San Juan has a minaret which retains its original paired window. In the tenth century Córdoba was famous as the wealthiest city in Europe with paved streets illuminated by street lighting. Some of the atmosphere of the medieval Islamic city can still be recalled in the Jewish quarter to the north of the Great Mosque next to the

Córdoba Great Mosque

Umayyad city walls. Outside the walls Umayyad remains can be seen along the river bank. The bridge known as the Puente Romano was rebuilt in 720 and is 250 m long and rests on sixteen arches. Also alongside the river are remains of water mills which date from Muslim times.

See also: Córdoba Great Mosque, Madinat al-Zahra', Spain.

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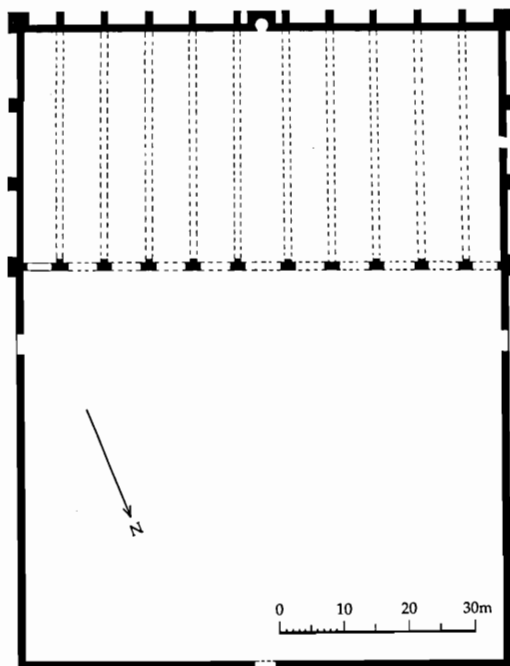
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Córdoba Great Mosque

Principal mosque of Spain under the Umayyads.

The Great Mosque was laid out in 786 by Abd al-Rahman I who built it on the site of a Christian church which the Muslims had previously shared with the Christians. The mosque was supposedly built by a Syrian architect to recall the Great Mosque at Damascus although it has more in common with the Aqsa Mosque in Jerusalem. Less than fifty years later Abd al-Rahman II extended the mosque to the south adding eighty new columns. In 964 al-Hakim II also extended the mosque further south. Towards the end on the tenth century the mosque was once more enlarged by adding fourteen aisles to the east thus balancing the length with the width. Each of these extensions meant building a mihrab further south, each of which was successively more grand. Two of these mihrabs have survived. The earlier, ninth-century mihrab is the size of a large room and has now been converted into the Capilla Villaviciosa; it is roofed by a large dome supported on ribs resting on cusped arches. Next to this mihrab is the maqsura or royal enclosure which is equally grand with carved stucco decoration and interlaced cusped horseshoe arches. The tenth-century mihrab consists of an octagonal chamber set into the wall with a massive ribbed dome supported on flying arches. The interior of the dome is decorated with polychrome gold and glass mosaics which may be a gift of the Byzantine emperor. This mihrab suggests the change in status of the Umayyad rulers from amirs to caliphs.

The most remarkable feature of the Great



Reconstruction of the Great Mosque, Córdoba (after Creswell)

Mosque are the two-tier free-standing horseshoe arches resting on columns. It is thought that this arrangement is a structural solution to the problem of achieving a high roof with only short columns. The roof of the mosque consists of aisles arranged perpendicular to the quibla wall, a feature elsewhere encountered only in the Aqsa Mosque in Jerusalem.

The appearance of the mosque was ruined in the sixteenth century when a cathedral was built in the middle of the sanctuary, the minaret of the Great Mosque is now encased within the belfry of the cathedral. Diagonally opposite the Great Mosque is the caliph's palace which has now been converted into the archbishop's palace.

See also: Córdoba, Spain

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Crusader architecture

European architecture of the Christian states established in Syria and Palestine during the Middle Ages; also architecture associated with those states in other parts of the Middle East or Europe.

The largest concentration of Crusader architecture is to be found in Palestine although Crusader strongholds were also built further afield from the Gulf of Aqaba to Anatolia. The main territories comprising the Crusader dominions were: the kingdom of Jerusalem (roughly equivalent to modern Palestine), the county of Tripoli (centred on the Lebanese port of Tripoli), the principality of Antioch (on the north coast of Syria) and the county of Edessa (with its capital at Urfa).

Although the Crusades continued up until the sixteenth century, the main period of Crusader architecture was from the beginning of the twelfth century to the end of the thirteenth, the period during which the Crusaders occupied Palestine.

Crusader architecture is characterized by high quality ashlar masonry, massive construction and the frequent use of masonry marks. Sculptural decoration and the extensive use of vaulting are other characteristic features. Although the Crusaders built a variety of buildings, including hospices, mills and harbours, their most distinctive work is found in castles and churches.

Generally Crusader castles were a developed form of European fortification with additional features learnt from Byzantine and Islamic military technology. The most common form of fortification was the tower (*tour*) which is equivalent with the Arabic burj. Typically these had two or three vaulted storeys which would provide protection and a good view of the surrounding countryside. The larger castles were all designed for a specific location so that each building has a different plan. Nevertheless each castle would be composed of a number of common features which could include a rock-cut fosse or ditch, a glacis or stone revetment and one or more sets of curtain wall linked by towers, with possibly a keep in the middle. Loop-holes tended to be very large with wide reveals.

The churches were often as strongly built as the castles as they were an integral part of Crusader rule. The importance of Jerusalem is notable in the fact that out of 300 churches in Palestine 66 were in Jerusalem. Most Crusader churches were small barrel-vaulted single-cell buildings with an apse at

the west end. The larger churches were mainly built on a cross-in-square plan, although it is noticeable that domes were rarely used.

As in other areas it is difficult to assess the relative effects which Crusader, Byzantine and Islamic architecture had on each other. It is, however, possible to see specific areas where there was influence, thus the Muslim castle at Ajlun is obviously similar to Crusader castles. However, the most significant way in which the Crusades influenced Islamic architecture was indirect, through the Venetians who provided the Crusaders with ships.

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Cyprus (Turkish: Kibris; Arabic: Qubrus)

Large island off the southern coast of Turkey and east coast of Syria with a mixed Greek- and Turkish-speaking population.

The first Islamic conquest of Cyprus was led by the Arab general Mu'awiya as part of the naval war against the Byzantines who had previously controlled the island. In 653 Abu al-Awar established a garrison on the island which remained until it was withdrawn by the caliph Yazid in 680–83. Cyprus remained nominally under the control of Islam until it was retaken by the Byzantine emperor Nicephorus Phocas in 965. For the next 600 years Cyprus was under a succession of different, mostly Christian rulers, thus in 1189 Isaac Comnenus, governor of the island, seceded from direct Byzantine control. In 1191 the island was captured by Richard I of England and came under western (Frankish) control under the house of Lusignan. Between 1424 and 1426 the island briefly came under the control of the Mamluks of Egypt but was restored to Lusignan control through Venetian intervention. From 1489 to 1570 Cyprus was under direct Venetian rule which was terminated by the Ottoman conquest of 1571. The Ottoman invasion, under Lala Mustapha Pasha, marks the real beginning of Cyprus's long engagement with Islam. However, in many ways the Ottoman conquest had simply replaced one group of rulers with

another, leaving the Greek Orthodox population largely intact. This situation was understood by the Ottoman emperor, Selim I, who after the conquest tried to improve the prosperity of the island by populating it with Greek families from the Kayseri region. Ottoman rule ended with the First World War and from 1918 the island was under British rule until it became independent in the 1950s.

The main building material on Cyprus is dressed limestone although baked brick is also used. Also Cyprus differs from its other near-eastern neighbours in having a rich source of high quality timber, enabling buildings to be built with pitched wooden roofs covered with tiles. Although it is known that the early Arab conquerors of Cyprus built several mosques in Nicosia most of these were dismantled or destroyed when Yazid withdrew the garrison in 683. The only Islamic building in Cyprus connected with this period is the tomb of Umm Haram who died near Larnaca during the early Arab invasion. However, the earliest reference to the tomb is 1683 and the main structure on the site today is a tekke (Hala Sultan Tekke) built in 1797. Thus the Islamic architecture of Cyprus is all from the Ottoman period and is closely linked to the Ottoman architecture of Anatolia. There are, however, distinctive features in Cypriot Islamic architecture which may be traced to the fact that the Ottomans converted many of the existing Gothic buildings into mosques or palaces leaving the Greek Orthodox churches untouched. The most spectacular examples of this are the Selimiye Cami in Nicosia and the Lala Mustapha Pasha Cami in Famagusta which are both converted Gothic cathedrals. The Selimiye in Nicosia was a thirteenth-century cathedral (Ayia Sofia) which was converted to a mosque in 1570 by removing the choir and altars and changing the arrangement of windows and doors so that the main entrance was

from the north. At some later date a cylindrical Ottoman minaret was built on to the projecting corner buttresses. The Lala Mustapha Mosque on Famagusta was built in the fourteenth century as the cathedral of St Nicholas, it was badly damaged during the conquest of 1570 and converted into a mosque in 1571 after being stripped of all its internal decoration. Like the Selimiye, the Lala Mustapha Mosque had a minaret added to its west end at a later date. The same procedure was adopted with the Lusignan Palace which was converted into the governor's palace by the addition of a new Ottoman reception room (diwan). Some buildings were converted for different uses, thus the fourteenth-century church of St George of the Latins was converted into the Büyük Hammam of Nicosia by adding an Ottoman-style porch with niches and thickening the walls.

In addition to converting Gothic churches the Ottomans constructed new buildings with Gothic details – thus the minaret of the Cami Kebir (Great Mosque) at Larnaca is built with trefoil panels. Elsewhere Gothic influence on Ottoman buildings can be seen in the use of round windows and the dog-tooth pattern on balcony supports.

See also: Ottomans

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Damascus

Capital city of Syria and one of the chief cities of the Middle East.

Damascus is located in southern Syria on the banks of the Barada river. The area of Damascus forms an oasis on the edge of the Great Syrian desert. The name Damascus is pre-Semitic and is mentioned in Egyptian texts of the second millennium BCE. The oldest standing remains date from the Roman period and include parts of the city wall, columns marking the lines of street, and the enclosure on which the Umayyad mosque is built. During the Umayyad period Damascus was established as capital of the Islamic world which stretched from Spain to Central Asia. With the establishment of the Abbasid caliphate based in Iraq and later the Fatimid caliphate in Egypt the status of the city declined. In 1154 Nur al-Din established it as his capital, and under his successors the Ayyubids it was once again one of the principal cities of the Islamic world. The Mongol raids of the second half of the thirteenth century reduced the city to a secondary role with Cairo established as the Mamluk capital. The Ottoman conquest in 1516 restored the prosperity which was reinforced by its position as starting point of the Ottoman Hajj caravans. During the eighteenth century the city was eclipsed by the commercial prosperity of Aleppo, though Damascus remained the political capital. With the collapse of the Ottoman Empire in 1918 Damascus was re-established as an Arab capital.

Mud brick and wood are the principal materials of construction for traditional houses. The lower parts of houses have thick walls made out of mud brick which are strengthened at the corners with wooden stakes laid horizontally. The upper parts of the houses are often cantilevered over the street on wooden beams. The walls of the upper part are made out of a wooden framework with bricks laid in between often in a herringbone pattern. The more important monuments are made of stone

with baked brick or stone rubble used for domes and vaulting. A characteristic of the monumental masonry of Damascus is the use of ablaq (alternating courses of dark and light masonry) made out of white limestone and black basalt.

There are few standing remains from the Umayyad period with the exception of the Great Mosque which is the oldest major mosque still preserved in its original form. Little was done to alter the pre-Islamic plan of the city and many of the Byzantine buildings were simply converted; thus the caliph's palace, behind the Great Mosque, was formerly the residence of the Byzantine governors. The plan of the city at this time formed a roughly rectangular shape along the banks of the Barada river, a shape which was retained until the expansion during the sixteenth century.

In the three centuries following the fall of the Umayyads Damascus suffered a state of near anarchy. In 1076 strong rule was restored by the Turkoman chief Atsiz ibn Uvak and for the next eighty years the city was ruled by Turkish chiefs or Taabegs. During this period a hospital was built and seven madrasahs were established.

With Nur al-Din's capture of Damascus in 1154 the city became the centre of activity directed against the Crusaders who had seized Palestine. During this period there was a great deal of military and religious building. The walls of the city were strengthened with new gateways such as the Bab al-Seghir whilst the older gateways were reinforced. The citadel was also remodelled with a new gate and a large mosque. The number of mosques and madrasahs were increased in order to promote orthodox Sunni Islam against both Shi'is and the Christianity of the Crusaders. Other important buildings included the maristan, or hospital, of Nur al-Din and the madrasah and tomb of Nur al-Din. The hospital, which also functioned as a medical school, has a magnificent portal which is a mixture of Roman, Iranian and Mesopotamian styles. Directly above the door is a classic Roman pediment above which there is an arch with a



*Entrance to the Hospital of Nur al-Din (built 1154),
Damascus, ©Rebecca Foote*

muqarnas archway. The top of the structure is crowned with an Iraqi-style conical dome. Inside the hospital is built like a madrasa with four iwans opening on to a central courtyard with a fountain in the centre. One of the iwans is a prayer hall whilst the other is a consultation room. The tomb of Nur al-Din is located on the corner of his madrasa and comprises a square chamber covered with a muqarnas dome resembling that of the hospital and ultimately the conical domes of Iraq.

Under the Ayyubids the madrasa became the main form of religious building with more than twenty examples recorded by Ibn Jubayr in 1184. Most of these tombs were commemorative structures which usually had the tomb of the founder attached. The standard form of Ayyubid tomb was a square room covered with an octagonal zone of transition made up of squinches and blind arches; above this there was usually a sixteen-sided drum which was pierced with windows and arches. The domes are usually tall, slightly pointed structures

with broad fluting. The interior of the tombs was usually decorated with painted stucco designs. Important examples include the tomb of Badr al-Din Hassan and the mausoleum of Saladin in the Madrasa Aziziya. The cenotaph of Saladin is made of carved wooden panels whilst the walls were covered with polychrome tiles by the Ottomans in the sixteenth century. Another feature of Ayyubid architecture was the introduction of ablaq masonry.

The Mongol invasion of 1260 put an end to the most brilliant period of Damascus's post-Umayyad history. Although the Mamluks continued to develop the city it was no longer the foremost capital in the region. Baybars, the first Mamluk sultan, was particularly fond of the city and refurbished the citadel as a royal residence for himself. To the west of the city he built another palace known as the Qasr Ablaq which was built out of alternating courses of black and ochre-coloured masonry. Madrassas continued to be built although not on the same scale as before. There was a proliferation of mausoleums and to this period may be ascribed the invention of the double mausoleum where two mausoleums were included within a single complex. Examples of this type of building include the tomb of the Mamluk sultan Kit Bugha and the tomb of the Muhajirin commemorating a Mamluk who had fought the Mongols. The form of these double mausoleums was of two symmetrical domed tombs, with a monumental portal between them which would lead to the madrasa or memorial mosque.

In the later Mamluk period there was a development in the outward appearance of buildings characterized by the growth in the number of decorative octagonal minarets. These towers were decorated with blind niches, muqarnas corbelling elaborate finials and stone inlays. There was also a development of the markets outside the city centre and to this period may be ascribed the development of the suqs known as Taht Qal'a (below the citadel).

The Ottoman conquest of the early sixteenth century re-established Damascus as a regional capital, a position which was reinforced by its position at the start of the Hajj (pilgrimage) route to Damascus. New facilities both religious and practical were built to accommodate the vast numbers of pilgrims coming from Anatolia, Syria and even from Iran. The most important monument was the Tekiya of Sulayman the Magnificent designed by his architect Sinan and completed in 1555. The

Tekiyya is built on the river bank on the site of the old Mamluk palace, Qasr Ablaq. The Tekiyya comprises a mosque, kitchens and a camping ground for pilgrims. The mosque is built in the classical Ottoman style with a prayer hall covered by a large dome and a double arcade running round it on three sides. The twin minarets are tall pencil-like structures with sharp pointed roofs. The pure Ottoman appearance of the building is modified by the use of alternating black and white (ablaq) masonry. Other Ottoman mosques of the period also display a mixture of local and Ottoman features, thus the Sinaniya (after Sinan Pasha the governor of Damascus, not the architect) mosque has a large central dome in the Ottoman style but the use of ablaq masonry and the monumental muqarnas portal resemble earlier Mamluk buildings.

The Ottoman conquest also brought a fresh impetus to the trade of the city with the establishment of numerous khans. One of the earliest Ottoman examples is Khan al-Haria built in 1572 around a square courtyard with stables and store rooms on the ground floor and accommodation above. In eighteenth-century khans the central courtyard was often smaller and covered with domes. The most famous example of this later type is the As'ad Pasha Khan which is a square building covered with eight small domes and a large central dome supported on marble columns. The eighteenth century also saw the development of domestic architecture influenced by buildings such as the Azzam palace which was built around a courtyard in the traditional Syrian manner but with decoration that recalls the mansions of Istanbul.

See also: Aleppo, Ayyubids, Mamluks, Syria

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Damascus Great Mosque

Principal mosque of Damascus founded by the Umayyad caliph al-Walid in 706 CE.

The Great Mosque stands in the centre of the old city of Damascus on the site of the Roman temple

platform, or *temenos*. The outer walls of the *temenos* still survive and are distinguished as large blocks of dressed masonry with pilasters set at intervals into the side. At the four corners of the *temenos* there are large square towers and around the edge there were arcades which opened into a large rectangular courtyard. There were four axial doorways to the *temenos*, that on the east being the principal entrance. At the time of the Islamic conquest the Byzantine church of St John stood in the middle of this platform. Immediately after the conquest the Muslims shared this space with the Christians with the Christians retaining possession of their church and the Muslims using the southern arcades of the *temenos* as a prayer area.

In 706 al-Walid destroyed the church and built a mosque along the southern wall of the *temenos*. The layout of the mosque comprised three aisles running parallel to the south (qibla) wall cut in the centre by a raised perpendicular aisle or transept. At the south end of this transept there was a mihrab set into one of the blocked doors of the south façade. Walls were inserted on the west and east sides between the corner towers, and new two-storey arcades were built around the east, north and west sides of the courtyard. The arcades and prayer hall were covered with pitched wooden roofs covered with tiles except for the centre of the transept which had a wooden dome. In the north-west of the courtyard there is an octagonal chamber raised up on eight columns with a pool beneath. This structure functioned as the bayt al-mal or treasury and is found in other early mosques such as Harran and Hamma.

Since the Umayyad period the mosque has been rebuilt several times because of fires (1069, 1401 and 1893) although its basic plan has remained the same. Originally the arcade of the sanctuary façade comprised one pier alternating with two columns but this was subsequently changed to piers only. A range of different arch forms is used in the arcades including round, semi-circular horseshoe and slightly pointed arches. The walls of the mosque are decorated with glass mosaics similar to those in the Dome of the Rock, with depictions of palaces and houses next to a river (possibly the Barada river in Damascus). The long rooms in the east and west sides were lit by marble grilles with geometric interlace patterns based on octagons and circles.

The form of the mosque, particularly the sanctuary façade, was probably derived from Byzantine

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palatial architecture, possibly the Chalci palace in Constantinople. Later mosques in Syria such as the Great Mosques of Aleppo, Hamma, Harran and Córdoba. The Great Mosque of Diyarbakir built in the Seljuk period is also of this form.

See also: Damascus, Diyarbakir, Harran, Syria, Umayyads

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dam

Dams have always been an important factor in Islamic civilization as a means of harnessing scarce or fugitive water supplies. Famous examples of pre-Islamic dams in the Middle East include the Macrib dam in Yemen and the Shallalat dam in northern Iraq. The advantages of dams over cisterns or reservoirs is that a large volume of water can be stored with a relatively small amount of construction work. The simplest forms of dam are made of earth with a clay core whilst more imposing masonry dams are built to contain larger volumes of water. Most dams are associated with irrigation works and are sometimes linked to water mills. However, some of the largest dams are built to provide drinking water for cities; one of the best examples is the Birket al-Sultan in Jerusalem which consists of a large masonry dam built across the wadi Hinnon in the sixteenth century. On top of the dam in the centre is a drinking fountain or sebil which supplied water to travellers. One of the greatest examples of Ottoman engineering is the Valide Bend, a large masonry dam constructed in the Belgrade forest in 1769 to supply water to Istanbul.

dar

House or residence. Often implies a house of high status and may be roughly equivalent to mansion.

dar al-imara

Governor's palace. In early Islamic architecture this was usually located at the qibla end of the mosque (i.e. behind the mihrab). This was a safety measure to enable the governor (or caliph) to enter the mosque without having to pass through other worshippers.

See also: Kufa

dargah or dukka

Covered courtyard in traditional Cairene houses.

Deccan

Region of southern India famous for its distinctive pre-Mughal Islamic architecture.

The Deccan includes the modern Indian states of Maharashtra, northern Andhra Pradesh, northern Karnataka and Goa. Physically the Deccan comprises a plateau bordered by the Arabian Sea to the west and the Bay of Bengal to the east. Each of these coasts is bordered by a range of hills known as the western and eastern Ghats. The central plateau is watered by the Krishna and Godavari rivers which flow eastwards into the Bay of Bengal. The region has a long history of monumental religious architecture with Buddhist cave art at Ajanta and numerous medieval Hindu shrines. Although the coastal regions were exposed to Islam from an early period it was not until the thirteenth century that there were any significant Islamic conquests in the area. In the early fourteenth century the Tughluq ruler of Delhi destroyed the power of the Hindu Hoysala kingdom and for the first time a major Muslim presence was established in the area. In 1338 after his victories in the region Muhammad Tughluq Shah II decided to move his capital from Delhi to Daulatabad, and although the transfer was unsuccessful and most of the population returned to Delhi the conquest established permanent Muslim rule in the region.

Muslim rule in the Deccan was complex and fragmentary, with dynasties established at various capitals gaining the upper hand at different times, until the late seventeenth century when the area was brought into the Mughal Empire. From 1347 to 1422 the central Deccan was ruled by the Muslim Bahmani kings from the newly established fortress city of Gulbarga. In 1424 Sultan Ahmad Shah Bahmani moved the capital to another fortress city Bidar. In 1487 the Bahmani kings were overthrown by the Barid Shahi dynasty who ruled the city until the seventeenth century. However, in 1512 real power passed to the Qutb Shahi sultans who ruled from their capital of Golconda. Although the Mughal conquests effectively ended the independence of the Deccani sultans, the city of Hyderabad managed to survive into the twentieth century as an autonomous state.

The earliest Muslim architecture of the region

was derivative of local architecture, thus the mosque of Daulatabad incorporates many of the features of a Hindu temple. However, the architecture of the newly established fortress cities of Bidar, Golconda, Gulbaraga and Bijapur was a distinctive mixture of Indian and Middle Eastern styles. The defensive architecture of the cities was highly sophisticated using concentric planning and bent entrances. Decoration was in the form of coloured tiles imported from Kashan (Iran), and Persian calligraphers were used to decorate the façades of tombs and mosques. The area developed a distinctive bulbous dome form with petals around the base (or drum) and heavy tiered finials rising from a moulded lotus-shaped apex. Other distinctive architectural features are the use of huge decorative battlements and complex stucco forms. The standard tomb form was a domed square with engaged towers or minar at each corner the finest example of which is the Gol Gumbaz at Bijapur.

See also: Bijapur, Char Minar, Firuzabad (India), Gol Gumbaz (India), Hyderabad.

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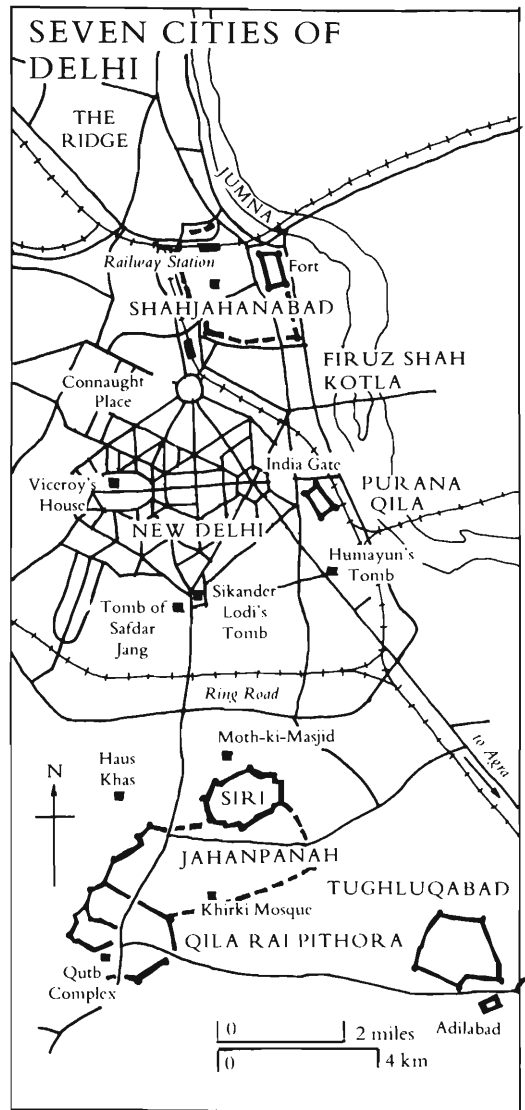
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Delhi

Capital city of India containing some of the finest examples of Indian-Islamic architecture.

Delhi is located approximately in the centre of northern India between the mountains of the Himalayas and the Rajasthan desert. More immediately the city is located on the banks of the Jumna river and near the Aravalli hills.

The modern city of New Delhi is only the latest in a series of eight cities which have occupied the area of Delhi. Although there were earlier settlements on the site the oldest architectural remains can be attributed to the eleventh-century city built by the Rajput Tomar king Anangpal. In 1193 the city (known as Lal Kot) was captured by the Afghan conqueror Muhammad of Ghur who left the city in charge of his deputy, Qutb al-Din Aybak. By the time of Muhammad of Ghur's death in 1206 Qutb al-Din Aybak had declared himself independent and established himself as the first Muslim ruler of Delhi. In 1304 Ala al-Din Khalji founded a second city known as Siri which was



The seven cities of Delhi

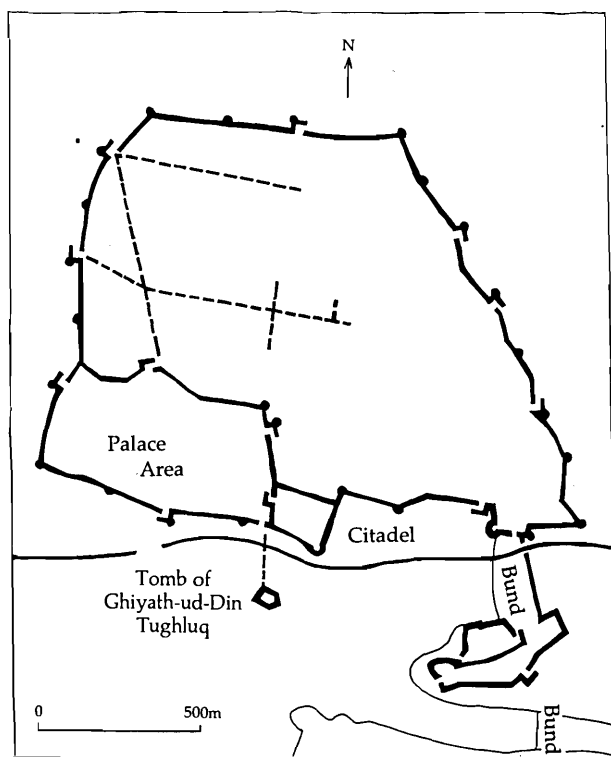
located to the north of the first city. Later on, in 1321, a third city known as Tughluqabad after its founder Ghiyath al-Din Tughluq was founded to the east of the first city. However, this city was only used for four years until Muhammad Tughluq founded a fourth city known as Jahanpanah which also only lasted a short time as it was abandoned in 1328 when the ruler moved the capital to Daulatabad in the Deccan. The move to Daulatabad

was disastrous and the sultan soon returned to Delhi. In 1354 Firuz Shah Tughluq established Firuzabad as the fifth city located by the river several kilometres to the north. For the next 150 years the area around Firuzabad was developed by successive dynasties although the central area fell into ruin. In 1534 the Bengali ruler Sher Shah founded the sixth city on the ruins of Firuzabad. This remained the centre of the city until 1638 when the Mughal ruler Shah Jahan established the city of Shahjahanabad. This was a huge new development to the north with the Red Fort at its centre. In 1911 Shahjahanabad became Old Delhi when the British laid out the present city of New Delhi.

Remains of all these cities have survived to present a cross-section of the development of Islamic architecture in India. The first city is known as Qila Rai Pithora after the Rajput ruler who built the fortifications. The most significant remains from the first city are the Qutb Minar and Mosque begun by Qutb al-Din Aybak in 1193. The Qutb Mosque complex stands inside the remains of

fortification walls which were built by the Rajputs in the twelfth century. Originally the enclosure walls had thirteen gates although only three have survived. Fragments of Hindu temples incorporated into the mosque complex demonstrate the abrupt transition from Hindu to Muslim rule.

Apart from fortifications there are few remains of Siri (the second city of Delhi) because much of the stone was taken in the sixteenth century for use in Sher Shah's city. However, the remains of the third city, Tughluqabad, are remarkably well preserved. The remains consist of a huge irregular four-sided enclosure 1.5 by 2 km which includes a palace area, seven large cisterns, remains of a Friday mosque, the citadel and a tomb complex. The enclosure walls are tapering structures up to 30 m high, pierced with arrow slits and crowned by massive crenellations. Outside the enclosure walls to the south is the tomb of Ghiyath al-Din Tughluq which was originally an island set in an artificial lake and approached via a causeway from the palace complex. The tomb is a square domed building set within its own enclosure



Plan of Tughluqabad, Delhi

and fortified with round bastions. To the east is a similar island structure known as Adilabad. Like the tomb complex this was a fortified area connected to the rest of the city by a causeway; within it was a huge audience hall on pillars built by Muhammad Tughluq.

The remains of the fourth city, Jahanpanah are located to the west of Tughluqabad between Siri and Qila Rai Pithora. Although much of this city has been destroyed the mosque is still standing and has an unusual plan consisting of four open courtyards. There are even fewer remains of the fifth city, Firuzabad, which was later built over by Sher Shah in the construction of the sixth city. The centre of the sixth city is the Purana Qila or 'Old Fort' initially built by the Mughal emperor Humayun and later developed by Sher Shah. The Purana Qila is a rectangular enclosure with huge corner bastions built on the supposed site of the city of Indraprastha mentioned in the Mahabharata. The interior of the fort is largely empty except for the Qala-i-Kuhna Mosque and the octagonal three-storey pavilion known as the Sher Mandal.

The seventh city, Shahjahanabad was founded by Shah Jahan in 1638 and was completed ten years later. Located on the banks of the Jumna river, the new city was dominated by the imperial palace known as the Red Fort. The street plan was based on two main avenues, the Chandni Chowk running east-west and the Faiz Bazar which runs south from the Red Fort. Near the intersection of these streets is the principal mosque of the city. This is one of the largest mosques in India and consists of a huge courtyard over 90 m square with three monumental gateways, a central rectangular cistern and a triple-domed sanctuary flanked by two minarets.

New Delhi is an Anglo-Indian city with few traditional Islamic buildings although the area occupied by the city includes some fine Islamic tombs the most famous of which is that of the second Mughal emperor Humayun.

See also: India, Mughals, Qutb Minar and Mosque, Red Fort

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desert

The definition of desert varies with different authors, but it is generally agreed that any area with less than 50 mm annual rainfall may be counted as desert. For practical purposes, however, areas with less than 200 mm (the limit of dry farming) may reasonably be regarded as desert. Although deserts are a common feature of the Islamic world, most cities and areas of settlement are either outside this area or located next to large river systems such as the Nile, Tigris, Euphrates and Indus.

Until recently the majority of desert inhabitants have been nomadic pastoralists keeping either sheep and goats or camels and living in some form of tent. Important exceptions to this have been oasis trading settlements, Hajj routes and mining centres which are generally dependent on outside support for their survival. In certain periods, such as the early Islamic, political conditions, or more recently the exploitation of oil in Arabia, have made desert settlements more viable.

The architecture of the desert may be divided into three categories: permanent, semi-permanent and temporary. Temporary structures are either portable tents or made of expendable materials such as palm fronds, requiring minimum input of labour. Semi-permanent structures may be made out of a combination of portable and non-portable materials (e.g. a tent with stone walls) or may be made of perishable materials which need frequent renewal such as the palm-frond huts of the Tihama in Yemen. Permanent structures may be built of pisé, mud brick, baked brick, stone or, more recently, cement blocks and reinforced concrete.

Any desert settlement must make some provision for obtaining and storing water, usually from wells or seasonal rainfall, although occasionally sites are dependent on water brought from elsewhere (this was often the case with Hajj routes). The unpredictability of rain and the high evaporation rates in the desert (in many areas of the Middle East the rate of evaporation can exceed 2,000 mm annually) mean that elaborate water catchment and storage facilities are developed. Sites dependent on seasonal and sometimes erratic rain usually employ a system of dams, cisterns and run-off channels to maximize the catchment area. If water needs to be transported some distance, underground channels (qanats) are built to minimize evaporation.

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dershane

Turkish term for lecture hall or studying room, literally 'room for lessons'. Usually these are larger domed rooms or vaulted iwans on one side of an Ottoman madrassa.

diwan

Term of Iranian origin describing a reception hall, either in a house or a palace. Later on the word is also used to describe a government ministry.

diwan-i amm

Public reception hall.

diwan-i khass

Private reception hall.

Diyarbakir (Amida)

Prominent city on the banks of the Tigris in south-east Turkey famous for its massive black basalt walls which are still largely intact.

Diyarbakir was captured from the Byzantines by Arab armies in 693 and became one of the great Islamic frontier fortresses. On capturing the city the Byzantine cathedral was shared between Muslims and Christians, although by 770 it was again used as a church. Later a Great Mosque was built on the site of the present Ulu Cami which according to a contemporary description (Nasiri Khusraw, 1045) had arcades two tiers high. The Ulu Cami in its present form dates to between 1090 and 1155 according to two inscriptions in the name of the Seljuk leader Malik Shah. The prayer room or sanctuary of the mosque is three aisles wide and covered with a transept in the middle on the axis of the mihrab. This arrangement and the similarity with the Great Mosque in Damascus (once thought to have been a church) has given rise to the



Ulu Cami, Diyarbakir, Turkey

assertion that the building was once a church in spite of contradictory evidence. The similarity with the Great Mosque in Damascus is explained by the fact that Malik Shah also carried out work there and may have used this as a model for that of Diyarbakir.

During the fifteenth century Diyarbakir became capital of the Aq-qoyunulu Turkman dynasty which was given control of the city in return for its support of Timur at the battle of Ankara in 1492. Buildings of the Aq-qoyunulu period provided a model for those of the Ottoman period. Several mosques of this period survive, the most famous of which is that of Kasim Padişah with its large central dome. The minaret is detached and consists of a tall square structure raised on four columns.

After its capture from the Aq-qoyunulu the Ottomans developed Diyarbakir as a regional administrative centre with its own mint. There are several notable sixteenth-century Ottoman mosques in Diyarbakir all built in the ablaq style

(striped black and white masonry) with tall minarets with square shafts. Several of the mosques have fine tile decoration similar but inferior to that of Iznik which was probably produced within the city. The first of these is the Fatih Cami built between 1518 and 1520 which consists of a large dome supported by four semi-domes in a quatrefoil pattern. This plan, which is also used in the Peygamber Cami built in 1524, was probably the inspiration for Sinan's use of the plan in the Şehzade Cami in Istanbul. One of the more interesting mosques is the Melek Ahmet Pasha Cami which is built on first-floor level and is entered by a passage under the mosque which leads into a courtyard from which a set of stairs leads up into the prayer room.

Several nineteenth-century konaks (palatial houses) survive in Diyarbakir. One of the best examples is the Gevraniler Konak completed in 1819. The house is built around a courtyard on a vaulted sub-structure which contains cisterns, stables and a bath house. The apartments face north and are arranged as separate pavilions with their own terraces.

See also: Ottomans

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Djenné (Dienné)

City in central Mali known for its unique mud-brick architecture which is a blend of African and Islamic styles.

The city was founded sometime between 767 and 1250 CE and was converted to Islam by Koy Kunboro, the twenty-sixth chief of the city, between 1106 and 1300. The prosperity of the city was based on the long-distance trans-Saharan trade routes, the most important commodities being gold and salt. The city was conquered by the Moroccans in 1591 who ruled the town until 1780. In the nineteenth century it was incorporated into the theocratic state of Macina, and came under French control in 1898, after which it declined in importance.

The main building material used in Djenné is mud brick, locally known as ferey. The mud bricks are plastered with mud plaster giving buildings a smooth rounded organic look which is offset by the use of bundles of palm sticks projecting from

the walls (turon). These palm sticks have a dual function providing both decoration and a form of scaffolding for maintenance. Small cylindrical bricks were used until the 1930s when rectangular bricks were introduced. It is thought that the cylindrical bricks provided greater stability than modern ones, which is why so many older buildings have survived.

The city is built on a small hill between creeks and until recently was surrounded by a wall with eleven gates. The city was divided into quarters according to tribal divisions. More wealthy merchants lived in large monumental courtyard-houses, surrounded by open spaces. The houses were divided into male and female areas, with the men's area on the first floor at the front overlooking the street. The women's area by contrast was usually on the ground floor at the back of the courtyard. Traditionally these houses are decorated with a façade known as the 'Sudan Façade' which includes pillars and decorated entrances as its characteristic features.

The most famous building of the city is the Great Mosque which is said to have been originally built by Koy Kunboro who destroyed his palace to build it. The early mosque is known to have survived to the 1830s when it was destroyed. The present Great Mosque was built in 1909 on the foundations of the earlier structure. It stands on a raised platform approximately 75 m square reached six monumental staircases. The mosque consists of a large internal courtyard surrounded by a corridor, and a huge prayer hall, with a wooden roof supported by ninety rectangular piers. All four faces of the mosque are decorated with round pinnacles or cones, engaged pillars and bundles of palm sticks set into the side. The main entrances to the mosque are on the south and north sides (the east side is the qibla wall). The north side is more decorated than that of the south reflecting its proximity to the richer areas of the city. The east side or qibla wall is supported by three large rectangular towers. On the inside of the mosque a deep recessed mihrab is built into each one of these towers, and the central tower contains in addition a staircase to a platform on the roof, whence the speech of the imam could be relayed to the rest of the town.

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do-chala

Type of roof with curved eaves, derived from Bengali huts (bangala). Used first in Bengali and later in Mughal architecture.

dome

Circular vaulted construction used as a means of roofing. First used in much of the Middle East and North Africa whence it spread to other parts of the Islamic world, because of its distinctive form the dome has, like the minaret, become a symbol of Islamic architecture.

It seems likely that the dome originated as a roofing method where the absence of suitable timber meant that it was impossible to make a flat timber roof. The earliest domes in the Middle East were associated with round buildings and were produced out of mud brick placed in layers which tilt slightly inwards. Another early method of dome construction which can still be seen in northern Syria and Harran in Turkey is the corbelled dome where mud bricks are placed horizontally in circular layers of diminishing circumference producing a corbelled dome. When the Romans conquered the Middle East the dome was incorporated into Roman architecture and under the Byzantines it became the main method of roofing monumental buildings. The chief advantage of domes is that large areas can be roofed without the interference of columns. At this time the wooden dome was developed which combined the space of dome building with the flexibility and lightness of wood. By the seventh century wooden domes were a normal method of roofing churches so that when the Arabs came to build the Dome of the Rock a wooden dome was used as the most appropriate form for this major religious building. Wooden domes were usually covered with sheets of metal, either copper or lead, as protection against the weather. The exact construction of the domes of the Caliph's Mosque in Baghdad is not known although the fact that it was described as green suggests that it was covered in copper.

Most domes, however, continued to be built of

less flexible materials such as stone, mud brick and baked brick. One of the main problems of dome construction was the transition from a square space or area into a circular domed area. Usually there was an intermediary octagonal area from which it is easier to convert to a circular area although there is still the problem of converting from square to octagon. Two main methods were adopted, which are the *squinch* and the *pendentive*. The squinch is a mini-arch which is used to bridge a diagonal corner area whilst a pendentive is an inverted cone with its point set low down into the corner and its base at the top providing a platform for the dome. Squinches are the main method of transition in pre-Ottoman architecture whilst pendentives are more common after the sixteenth century. In India, where there was no tradition of arches before the advent of Islam, domes rest on flat corbels which bridge the corners.

During the medieval period Islam developed a wide variety of dome types which reflect dynastic, religious and social distinctions as much as different construction techniques. One of the most extravagant dome forms is the muqarnas or conical dome which appears as early as the eleventh century in Iraq at Imam Dur. A conical dome consists of multiple tiers of muqarnas which blur the distinction between structure and decoration and between circular and square forms. Later on the idea of the double dome was introduced as it was recognized that there was a conflict between the external appearance of the dome and the aesthetics of the interior of the domed space. The result was tall external domes with shallower interior domes. Increasing emphasis on the exterior can be seen in Cairo and Egypt where masonry domes with intricately carved exteriors were developed. In Iran and Central Asia tall domes were covered in coloured (usually blue) glazed tiles, culminating in the huge bulbous fluted domes on a high circular drum which were characteristic of the Timurid period (fifteenth century). In pre-Mughal India the standard dome form was derived from Hindu architecture and consisted of a squat circular form with a lotus design around the apex and a characteristic bulbous finial. Ottoman architecture adopted the Byzantine dome form and developed it to produce vast domed areas such as that of the Seli-miye in Edirne.

Dome of the Rock (Qubbat al-Sakhra)

The third most important shrine of Islam. It is located on the Temple Mount in Jerusalem.

The Dome of the Rock was built by the early caliph Abd al-Malik in 691 and is generally agreed to be one of the oldest Islamic monuments. The building consists of a domed octagonal structure set in the middle of a raised plaza or enclosure known as the Haram al-Sharif or holy place. In the immediate vicinity of the Dome of the Rock are two other buildings of similar antiquity, the Qubbat al-Silsila and the Aqsa Mosque. The Qubbat al-Silsila is a smaller structure immediately to the east of the Dome of the Rock; it shares the same basic plan of an octagonal structure covered with a dome, although unlike the larger monument the sides of the structure are open. The purpose of the Qubbat al-Silsila is unknown although it probably had some ritual function. The Aqsa Mosque has been rebuilt several times so that its original form is difficult to determine although its basic form was probably similar to that of today. The Aqsa Mosque serves as the main place of prayer for the Haram and is located to the south of the Dome of the Rock.

The plan of the Dome of the Rock is based around a central dome resting on a circular drum supported by an arcade. This inner arcade is enclosed by an outer octagonal arcade and a solid octagonal wall which supports the shallow pitched roof around the dome. Both sets of arcades are carried on a mixture of piers and columns; the inner arcade is composed of four piers and twelve columns whilst the outer arcade consists of eight piers and sixteen columns. There are four entrances to the building, one on each of the sides facing the four cardinal points. Each of the eight sides of the outer octagon is divided into seven tall arches or bays, five of the arches on each side are open as doors or windows whilst the two nearest the corners are blind arches. There are twelve more windows in the circular drum below the dome. Directly below the dome is an exposed area of natural rock enclosed by a screen or fence, under-

neath this is a small cave with a mihrab reached by a set of steps.

Several forms of decoration are used including mosaics, marble, repoussé metalwork and coloured glass. The mosaics are particularly important examples of the combination of Sassanian and Byzantine motifs which is a characteristic of early Islamic art. Another important feature of the mosaics is that they carry an inscription dating the building to 691. At present only the interior mosaics survive although originally they also covered the outside.

The building has been restored many times in its 1,300-year history. One of the most important restorations was carried out during the sixteenth-century reign of the Ottoman sultan Suleyman the Magnificent. It was during this restoration that the exterior was covered with glazed ceramic tiles which covered the earlier mosaic coating. The tiles were the forerunners of Iznik tiles (q.v.) which became such a significant feature of Ottoman architecture. The present tiles covering the building were added in 1968. At the same time the Dome was covered with gold for the first time, although the present covering dates from 1993.

The Dome of the Rock is generally regarded as an attempt to provide a Muslim alternative to the Church of the Holy Sepulchre which had previously dominated the city of Jerusalem. The plan and design of the Dome of the Rock reflect this rivalry. In religious terms the building is significant because it commemorates the place where Abraham offered his son Isaac as a sacrifice and the place from which Muhammad made his night journey to heaven.

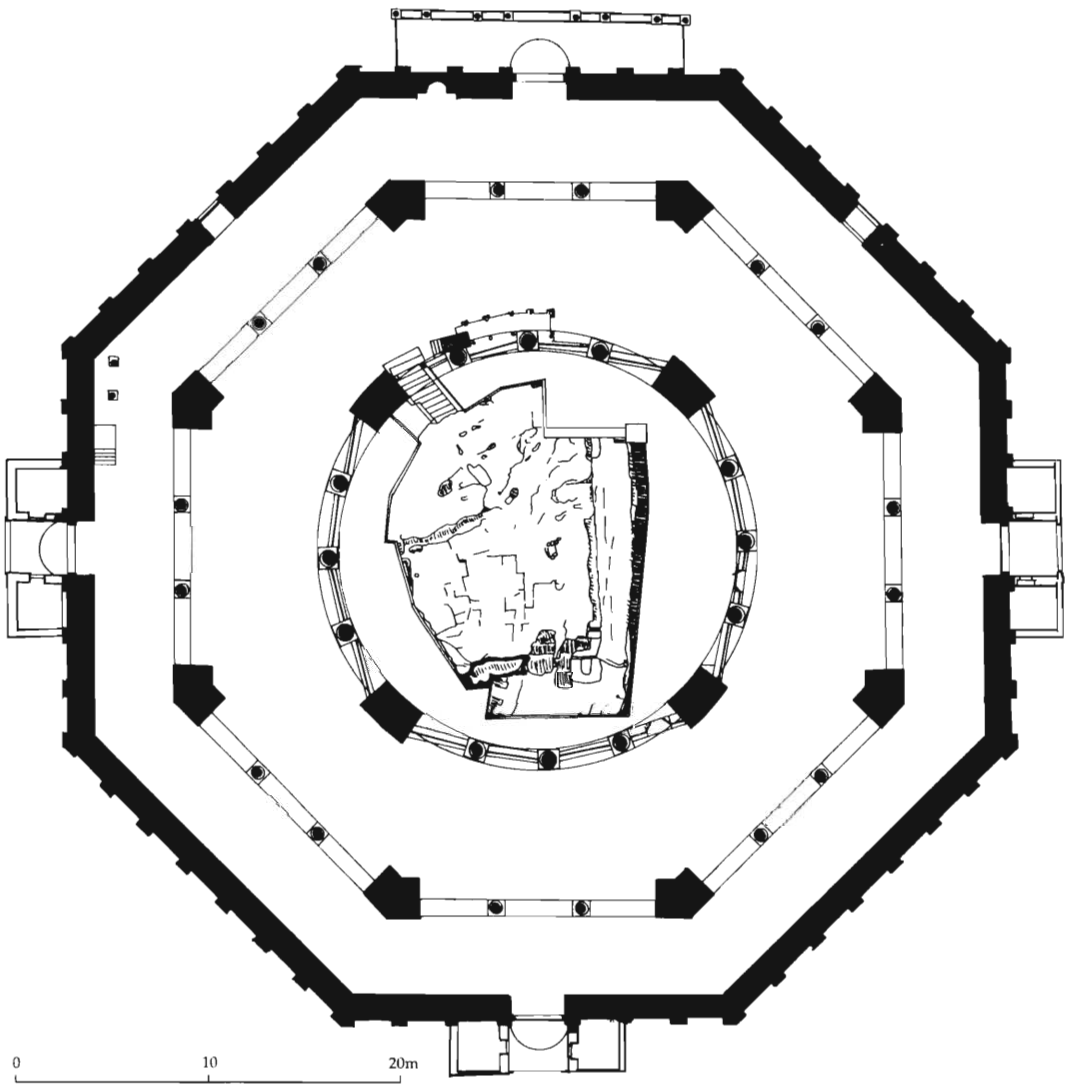
See also: Jerusalem

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domical vault

A dome which rises from a square or rectangular base without the intervention of a drum, squinches or pendentives.



Ground plan of the Dome of the Rock, Jerusalem. Note exposed rock surface in centre (after Creswell)