

SCENARIO:

Ezimbala Coffee Roastery imports coffee beans from different countries. They roast the beans and supply coffee in different size packages to individuals and coffee shops / restaurants.

QUESTION 1

The database **CoffeeRoasteryDB** is supplied. Three tables are used to store data related to products and orders. The fields in the database are described in the following tables together with some sample data. The first 10 rows of data are shown for each table, but the tables do contain more data.

tblProducts contains details of each product.

tblProducts design:

Field Name	Data Type	Description (Optional)
ProductID	AutoNumber	Unique ID of the product
ProductName	Short Text	Name of the province
CountryOfOrigin	Short Text	The country where the beans of the product comes from
Roast	Short Text	The degree of roast of the beans of the product: Dark, Medium, Light
SizeInGrams	Number	The weight of the product
CostPrice	Currency	The cost to buy and produce this product

tblProducts sample data (first 10 records):

ProductID	ProductName	CountryOfOrigin	Roast	SizeInGrams	CostPrice
1	Gold	Ethiopia	Dark	250	R38.00
2	Gold	Ethiopia	Dark	1000	R140.00
3	Blue	Limu	Medium	250	R31.00
4	Blue	Limu	Medium	500	R58.00
5	Blue	Limu	Medium	1000	R114.00
6	Blue	Limu	Medium	2000	R200.00
7	Green	Kenya	Dark	500	R60.00
8	Green	Kenya	Dark	1000	R112.00
9	Red	Malawi	Light	250	R40.00
10	Purple	Rwanda	Medium	250	R36.00

tbOrders contains the basic order details of the order and the client who placed the order.

tbOrders design:

Field Name	Data Type	Description (Optional)
OrderNumber	Short Text	Unique number for the order
OrderDate	Date/Time	The date the order was placed
ClientName	Short Text	The name of the client who placed the order
ClientSurname	Short Text	The surname of the client who placed the order. When a restaurant places an order, this field will be blank
AddressLine1	Short Text	The first address line of the client who placed the order
AddressLine2	Short Text	The second address line of the client who placed the order
Suburb	Short Text	The suburb where the the client who placed the order, lives
AreaCode	Short Text	The area code of the suburb where the the client who placed the order, lives
Paid	Yes/No	Indicates if the client has paid or not

tbOrders sample data (first 10 records):

OrderNumber	OrderDate	ClientName	ClientSurname	AddressLine1	AddressLine2	Suburb	AreaCode	Paid
2019_02112	2019/07/29	Amantha	Naidoo	52 Bay Heights	Morningside	Durban	4001	<input checked="" type="checkbox"/>
2019_02113	2019/07/29	William	Ockers	87 Canyon street	The Willows	Pretoria	0184	<input checked="" type="checkbox"/>
2019_02114	2019/07/30	Betty's Coffee shop		3 Hlabakoe street	Johannesburg	Johannesburg	1807	<input checked="" type="checkbox"/>
2019_02115	2019/07/31	Mandla	Kumalo	92 Murray street	Brooklyn	Pretoria	0181	<input checked="" type="checkbox"/>
2019_02116	2019/07/31	Tranquillity Diner		85 Long street	Cape Town	Cape Town	8012	<input checked="" type="checkbox"/>
2019_02117	2019/07/31	Simpfiwe	Mhulangu	12 Regent Mews	Lytelton	Pretoria	0157	<input checked="" type="checkbox"/>
2019_02118	2019/08/01	Ellen	Smith	7812 South street	Arcadia	Pretoria	0083	<input checked="" type="checkbox"/>
2019_02119	2019/08/02	Laura	Adebayo	12 Falcon Heights	Lytelton	Pretoria	0157	<input checked="" type="checkbox"/>
2019_02120	2019/08/02	Carl	van Rensburg	1352 Leopard street	Bloemfontein	Batho	9307	<input checked="" type="checkbox"/>
2019_02121	2019/08/02	Wholesale Dealers		174 Lillian Ngoyi street	Pretoria	Pretoria	0002	<input type="checkbox"/>

tbOrderItems contains details about what products and quantities were ordered for each order.

tbOrderItems design:

Field Name	Data Type	Description (Optional)
ProductID	Number	The ID of a product ordered
OrderNumber	Short Text	The order number of the order this item is part of
Quantity	Number	The quantity that the client ordered of a product for this order

tbOrderItems sample data (first 10 records):

ProductID	OrderNumber	Quantity
9	2019_02112	2
4	2019_02113	1
10	2019_02113	2
14	2019_02113	1
2	2019_02114	2
6	2019_02114	1
15	2019_02114	1
11	2019_02115	1
2	2019_02116	1
5	2019_02116	2

- 1.1 Write a query that will display the basic order details from tblOrders of the orders that have not been paid yet. (Note that the date format might differ on your system). (3)

OrderNumber	OrderDate	ClientName	ClientSurname	AddressLine1	AddressLine2	Suburb	AreaCode	Paid
2019_02121	2019/08/02	Wholesale Dealers		174 Lilian Ngoyi street	Pretoria	Pretoria	0002	<input type="checkbox"/>
2019_02123	2019/08/05	Stepwell	Mensah	53 Park street	Ferndale	Randburg	2160	<input type="checkbox"/>
2019_02125	2019/08/07	Ashton House Guesthouse		421 Beach road	Cape Town	Cape Town	8012	<input type="checkbox"/>
2019_02126	2019/08/07	Betty's Coffee shop		13 Hlabakoe street	Johannesburg	Johannesburg	1807	<input type="checkbox"/>
2019_02127	2019/08/07	Amantha	Naidoo	52 Bay Heights	Morningside	Durban	4001	<input type="checkbox"/>

- 1.2 The cost price of the 250g Purple product (ProductID 10) has changed to R40. Write a query to update this information. (3)

- 1.3 Write a query that will display the clientname, product name, roast, size in kilograms (1000g = 1kg), the cost price and selling price of products that are part of order number 2019_02121. There is a 100% markup on all products, thus the selling price is double the cost price. (7)

ClientName	ProductName	Roast	SizeInKg	CostPrice	SellingPrice
Wholesale Dealers	Blue	Medium	1	R114.00	R228.00
Wholesale Dealers	Blue	Medium	2	R200.00	R400.00
Wholesale Dealers	Green	Dark	1	R112.00	R224.00
Wholesale Dealers	Purple	Medium	2	R196.00	R392.00
Wholesale Dealers	Yellow	Dark	1	R150.00	R300.00
Wholesale Dealers	Yellow	Dark	2	R240.00	R480.00

- 1.4 Write a query that will display the size in grams and average cost price for products of the same size. Only show records where the average cost price is more than R100. (5)

SizeInGrams	Average Cost Price
1000	R124.80
	R212.00

- 1.5 Write a query that will show the order date, client name, client surname and whether the order has been paid for all orders placed in August 2019. (Note that the date format might differ on your system). (3)

OrderDate	ClientName	ClientSurname	Paid
2019/08/01	Ellen	Smith	<input checked="" type="checkbox"/>
2019/08/02	Laura	Adebayo	<input checked="" type="checkbox"/>
2019/08/02	Carl	van Rensburg	<input checked="" type="checkbox"/>
2019/08/02	Wholesale Dealers		<input type="checkbox"/>
2019/08/05	Philip	Stadler	<input checked="" type="checkbox"/>
2019/08/05	Stepwell	Mensah	<input type="checkbox"/>
2019/08/06	Anne	Edwards	<input checked="" type="checkbox"/>
2019/08/07	Ashton House Guesthouse		<input type="checkbox"/>
2019/08/07	Betty's Coffee shop		<input type="checkbox"/>
2019/08/07	Amantha	Naidoo	<input type="checkbox"/>

- 1.6 Write a query that will display a product code, the product name, country of origin and cost price of all products. The query must generate the product code. The product consists of:
- The first letter of the product name
 - The first letter of the country of origin
 - A random number between 1 and 50 (including these values) that differs for every product. (Note that the numbers will be different in your output as they are randomly generated).
- (6)

ProductCode	ProductName	CountryOfOrigin	CostPrice
GE28	Gold	Ethiopia	R38.00
GE21	Gold	Ethiopia	R140.00
BL4	Blue	Limu	R31.00
BL23	Blue	Limu	R58.00
BL35	Blue	Limu	R114.00
BL25	Blue	Limu	R200.00
GK21	Green	Kenya	R60.00
GK48	Green	Kenya	R112.00
RM50	Red	Malawi	R40.00
PR30	Purple	Rwanda	R40.00
PR27	Purple	Rwanda	R108.00
PR31	Purple	Rwanda	R196.00
YK5	Yellow	Kenya	R42.00
YK10	Yellow	Kenya	R79.00
YK15	Yellow	Kenya	R150.00
YK1	Yellow	Kenya	R240.00

- 1.7 All orders should have order items. There is a bug in the system that results in orders being captured without the order items. Write a query that will display the order number, client name and whether the order is paid, for all orders with no order items. Show the data in alphabetical order of the client name.
- (6)

OrderNumber	ClientName	Paid
2019_02127	Amantha	<input type="checkbox"/>
2019_02125	Ashton House Guesthouse	<input type="checkbox"/>
2019_02126	Betty's Coffee shop	<input type="checkbox"/>

- 1.8 Write a query that will display all the data of products for which the beans originate from the following countries: Ethiopia, Kenya and Rwanda. Use the most effective way to filter the data. (2)

ProductID	ProductName	CountryOfOrigin	Roast	SizeInGrams	CostPrice
1	Gold	Ethiopia	Dark	250	R38.00
2	Gold	Ethiopia	Dark	1000	R140.00
7	Green	Kenya	Dark	500	R60.00
8	Green	Kenya	Dark	1000	R112.00
10	Purple	Rwanda	Medium	250	R40.00
11	Purple	Rwanda	Medium	1000	R108.00
12	Purple	Rwanda	Medium	2000	R196.00
13	Yellow	Kenya	Dark	250	R42.00
14	Yellow	Kenya	Dark	500	R79.00
15	Yellow	Kenya	Dark	1000	R150.00
16	Yellow	Kenya	Dark	2000	R240.00

- 1.9 The missing order items for the order of Ashton House Guesthouse (order number 2019_02125), should be the same as the items for the order of Tranquillity Diner (order number 2019_02116). Write ONE query that will insert the order items using the data from order number 2019_02116 for the new order 2019_02125 into tblOrderItems. (5)

40 marks



Tools

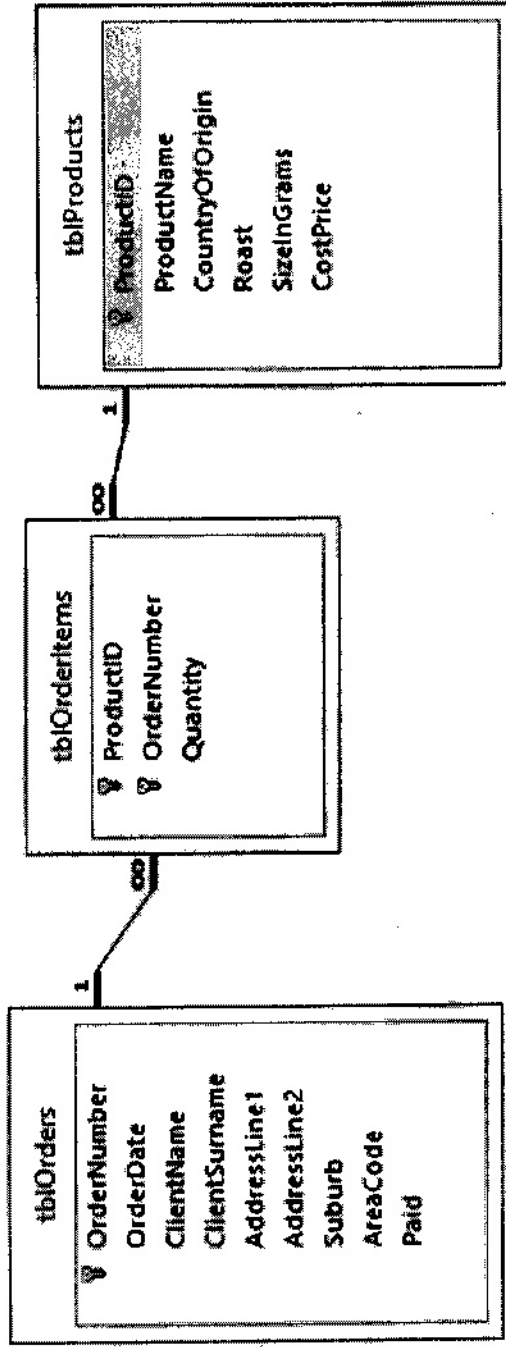
All Access Objects

Search...

Tables

- tblOrderItems
- tblOrders
- tblProducts

Relationships



Describing the join over the 3 tables —
 tblOrders.OrderNumber = tblOrderItems.OrderNumber and
 tblProducts.ProductID = tblOrderItems.ProductID