dles Blockchain

Case Study | Uhuru

Whatsapp Chat bot and web application development to avail various services like bill payment, recharge etc.

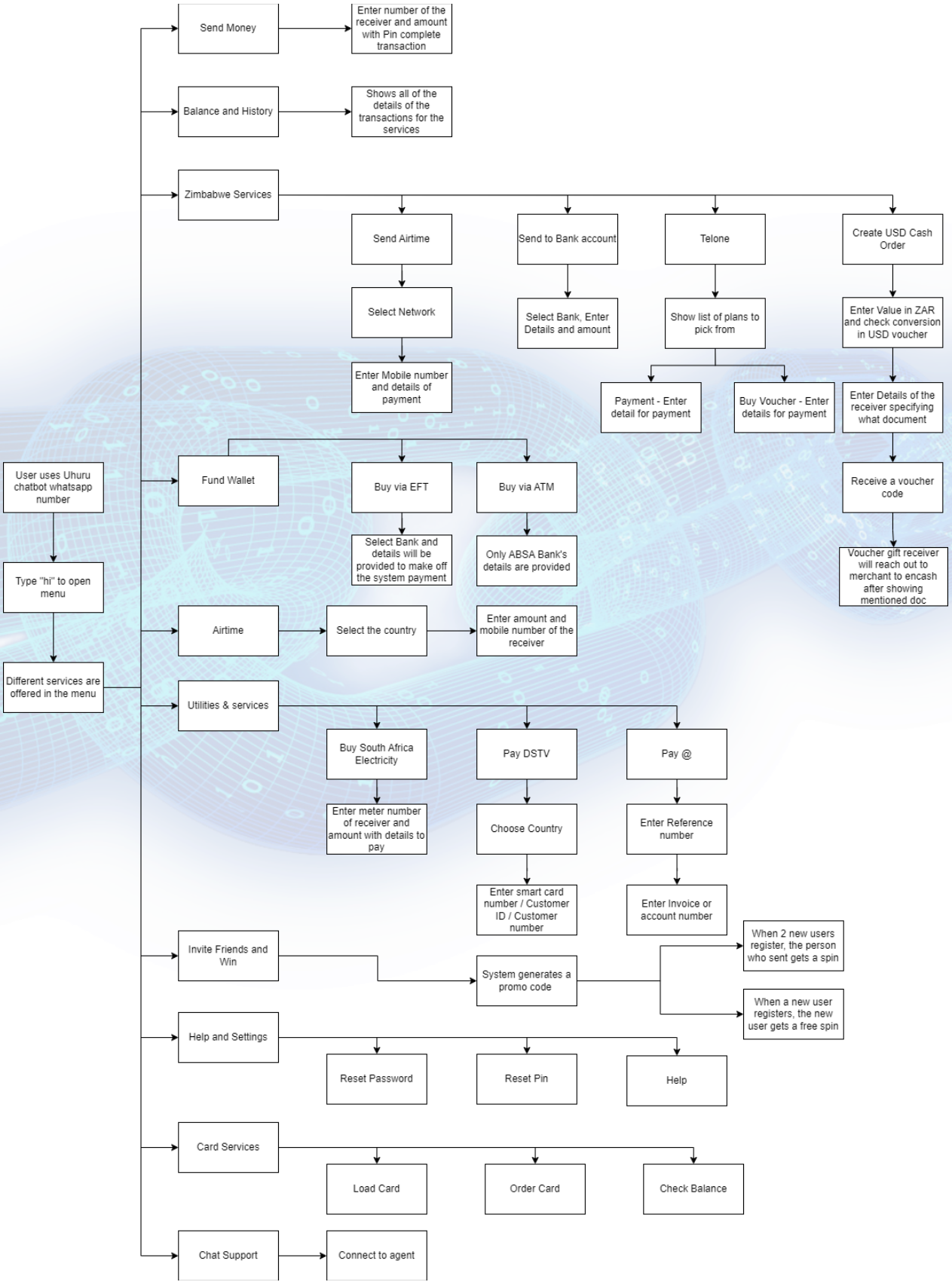
About the application **3**
Whatsapp and Merchant's Web panel to avail services **4**
Balance and History (Whatsapp chat bot & Merchant Panel) 5
Send Money/Tokens (Whatsapp chat bot & Merchant Panel) 5
Zimbabwe Service - Send Airtime (Whatsapp chat bot & Merchant Panel) 6
Zimbabwe Service - Send to Bank account (Whatsapp chat bot & Merchant Panel) 6
Zimbabwe Service - TelOne (Whatsapp chat bot & Merchant Panel) 7
Zimbabwe Service - Create USD Cash order (Whatsapp chat bot & Merchant Panel) 8
Fund Wallet - Whatsapp chat bot 8
Airtime (Whatsapp chat bot & Merchant Panel) 9
Utility and Services - Buy South Africa Electricity (Whatsapp chat bot & Merchant Panel) 9
Utility and Services - Pay DSTV (Whatsapp chat bot & Merchant Panel) 10
Invite Friends and win (Whatsapp chat bot) 10
Help and Setting (Whatsapp chat bot) 11
Result **12**

About the application

Uhuruwallet is primarily a WhatsApp-based digital wallet that enables people to perform transactions such as person to person, person to merchant, cash-in, cash-out, utility bill payments, airtime purchases, and Dstv payments amongst other functionality.

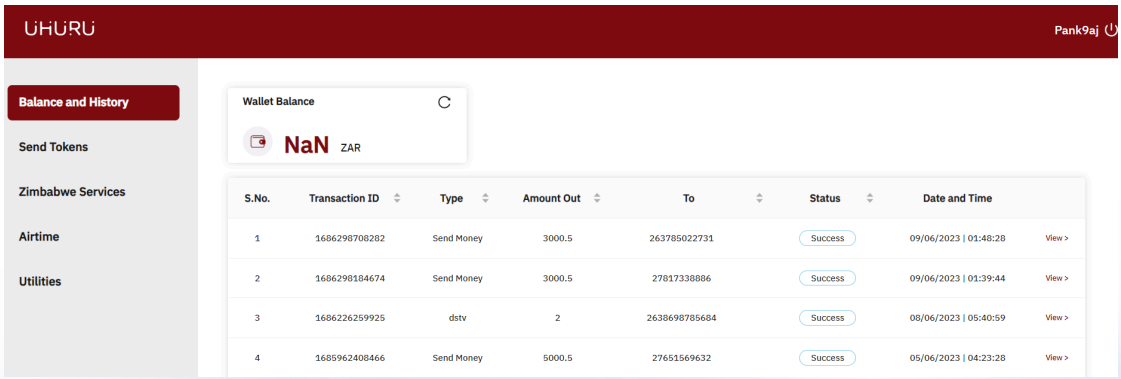
The mission is to develop innovative solutions that promote the concept of money without borders for individuals and businesses from Africa. Solutions that are simple to use, convenient, time efficient, cost effective and inclusive. And also to become an interoperable, peer-to-peer platform with a borderless currency, that empowers people and enterprises from Africa to transact from anywhere, anytime.

Whatsapp and Merchant's Web panel to avail services



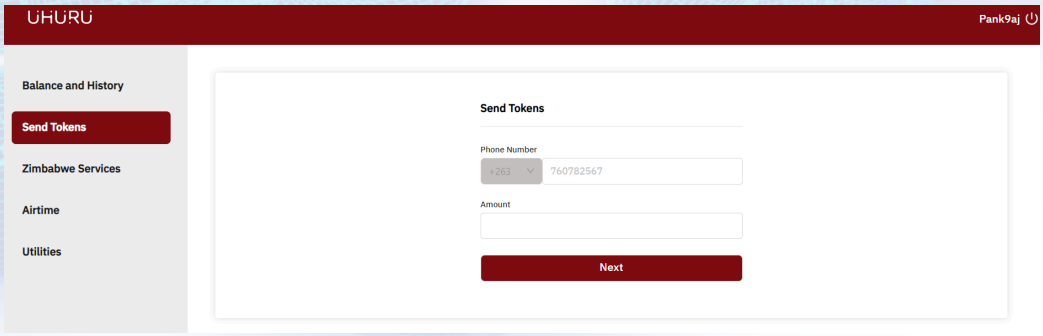
Balance and History (Whatsapp chat bot & Merchant Panel)

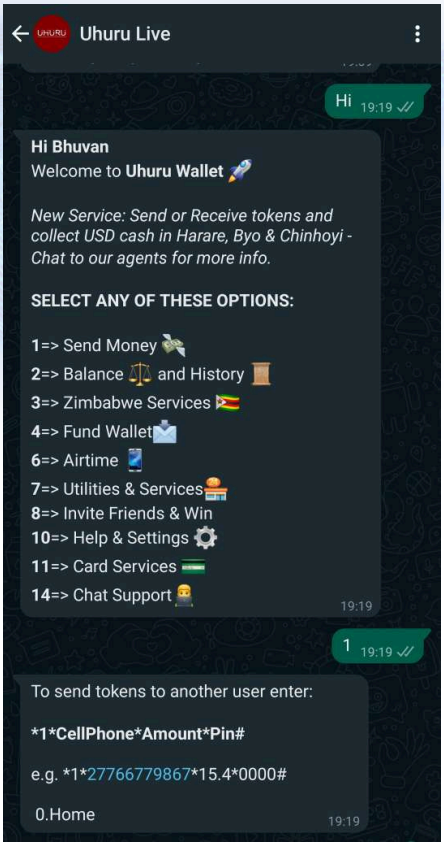
Shows the history of the transactions that have been made against the services consumed on Uhuru application.



Send Money/Tokens (Whatsapp chat bot & Merchant Panel)

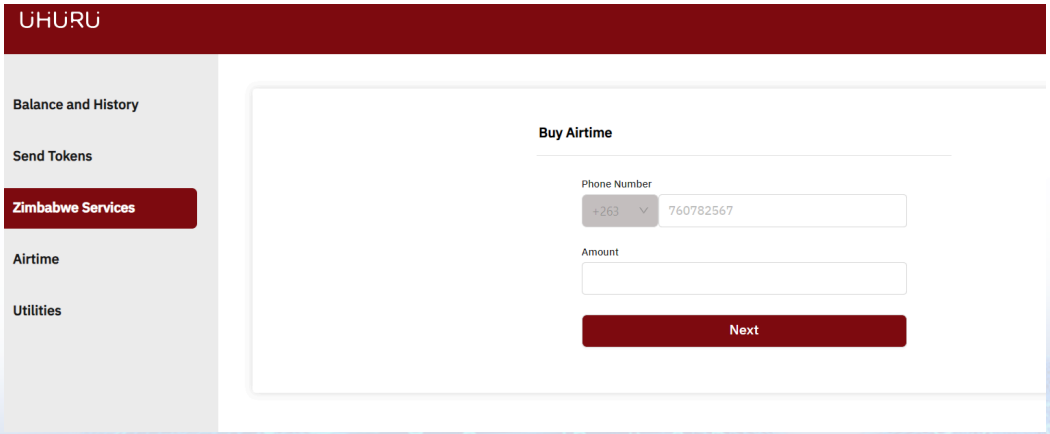
Users of this application will be able to send money or a token to another user via entering the receiver's mobile number. In whatsapp chat bot, the user will make the transaction by entering the pin, and the money will be deducted from the user's balance, but in the merchant panel, the user will not have to enter the pin each time to make the transaction.

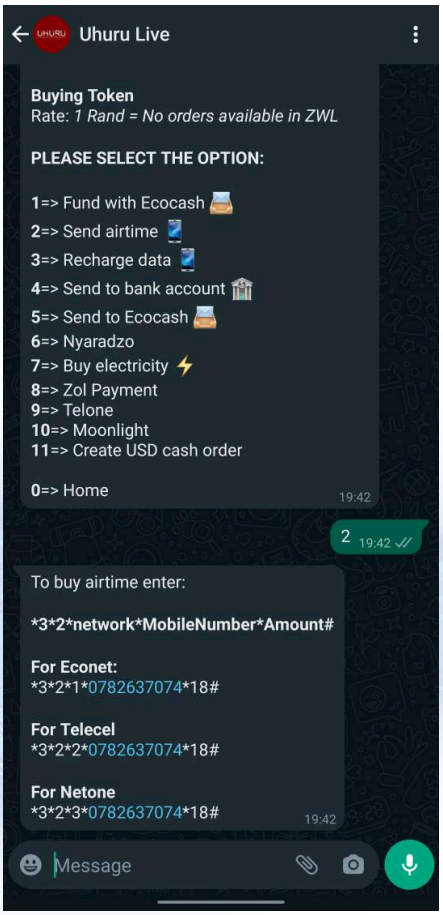




Zimbabwe Service - Send Airtime (Whatsapp chat bot & Merchant Panel)

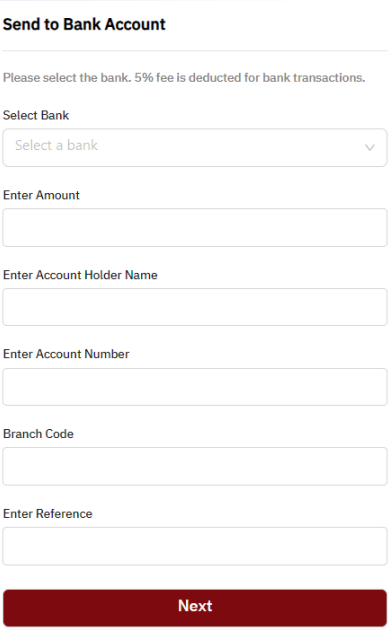
Users of the application will be able to send airtime top up to any other user or even themself simply by entering the phone number of the receiver and entering the airtime amount.

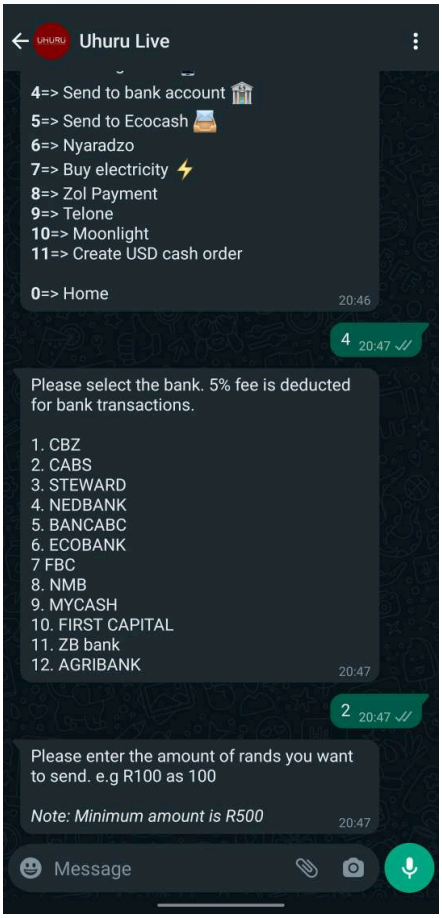




Zimbabwe Service - Send to Bank account (Whatsapp chat bot & Merchant Panel)

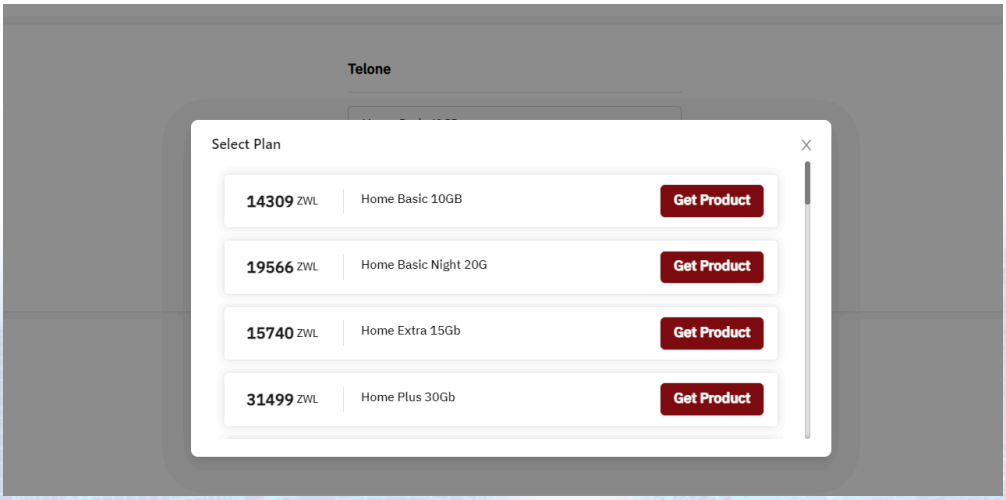
Users are given the option to send money directly in the bank account by entering details of the account. Note that a fee is also deducted for the services offered.

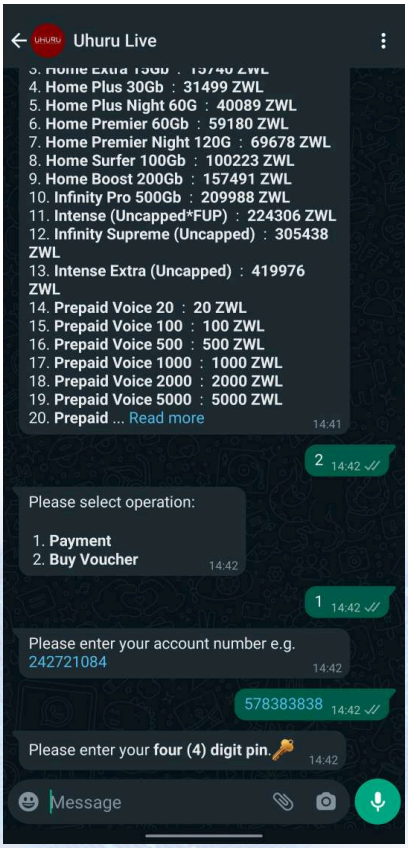




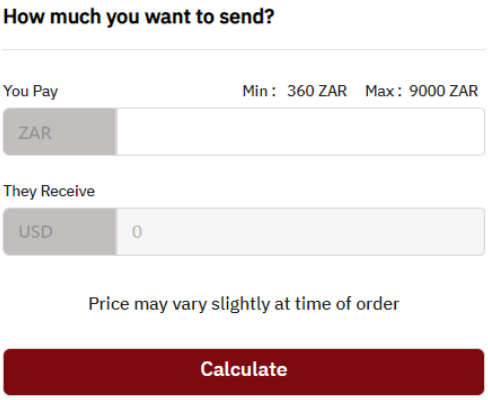
Zimbabwe Service - TelOne (Whatsapp chat bot & Merchant Panel)

Another one of many services offered by Uhuru on both chat bot and merchant panel is to get a recharge of TelOne. The user will have to select a plan and then make a payment for it.



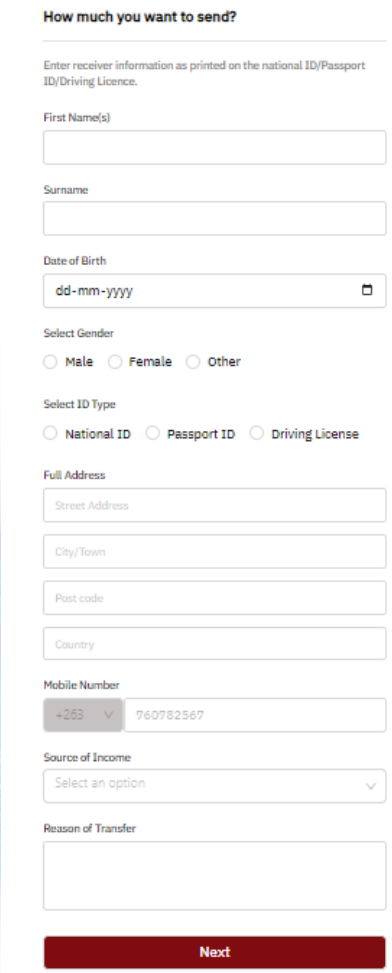


Zimbabwe Service - Create USD Cash order (Whatsapp chat bot & Merchant Panel)



Through this service, user will be able to generate a cash voucher which can be redeemed by another person. In order to achieve this, the user will have to first enter the ZAR that the person would like to send and the system will automatically convert the value into USD after reducing the fee.

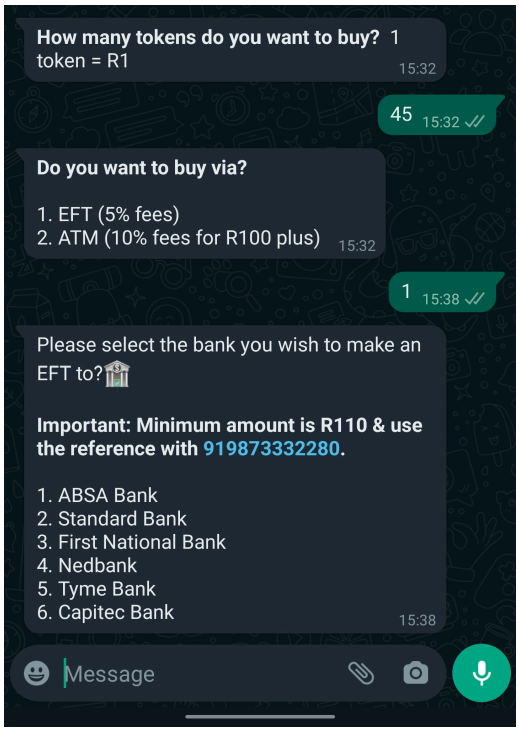
Now, the user will have to enter the details of the receiver, who is going to redeem the voucher. The details include what kind of document receiver will present at the time of redemption and other relevant details. After confirming the details, system will generate the coupon which the user will share with the receiver.
Now, the receiver on the other hand may use this code and document (for verification purpose) to the merchant for redemption.



Fund Wallet - Whatsapp chat bot

In order to pay for the services, user must fund his/her wallet. The conversion to fund one token is equivalent to one Rand. User is given an option to either user EFT or ATM, each has its own fee, which is displayed to the user.

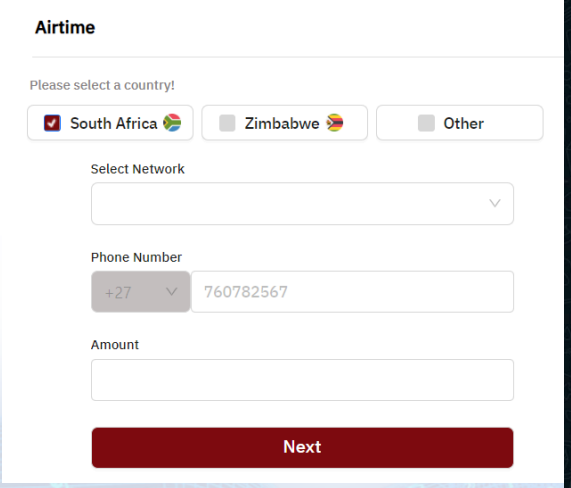
1. EFT (5% fee)
   - If this option is selected then show further options to select the bank that merchant would like to make the transaction from.
   - Based on the selected bank, the system will show the details of that bank, like account number, Branch code, etc.)
2. ATM (10% fees for R 100 plus)
   - If this option is chosen then directly show the details of ABSA bank only, not of any other bank.

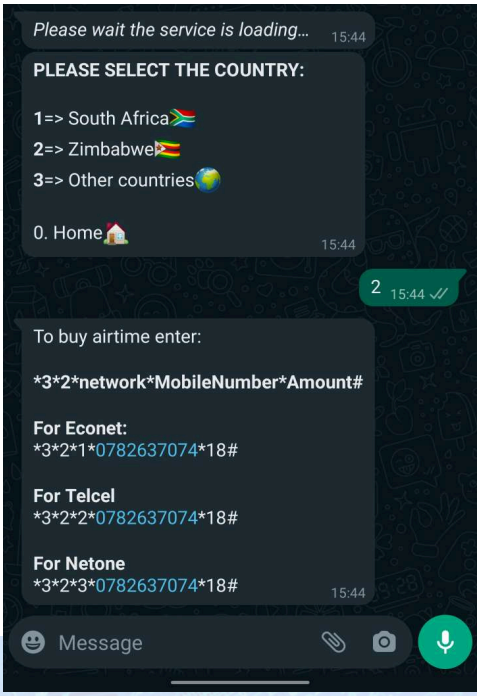


Airtime (Whatsapp chat bot & Merchant Panel)

Users can send airtime to a mobile number across border also.
Below are the details:

1. Select country (South Africa, Zimbabwe, and Others)
2. If South Africa or Zimbabwe is selected then show the below options:
    a. Econet
    b. Telcel
    c. Cell Netone
3. After selecting the above option, the user is required to enter the amount and cellphone number of the end person.
4. If Other is selected in country selection, then skip this step, and input the following:
    a. Enter cell phone number of the customer
    b. Shows option (radio button) about ZAR conversion eg. 1 ZAR = 1.40 ZAR
    c. Make the transaction by entering pin.

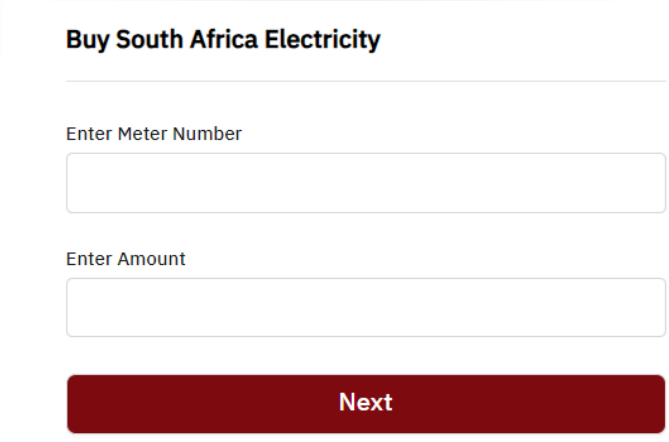


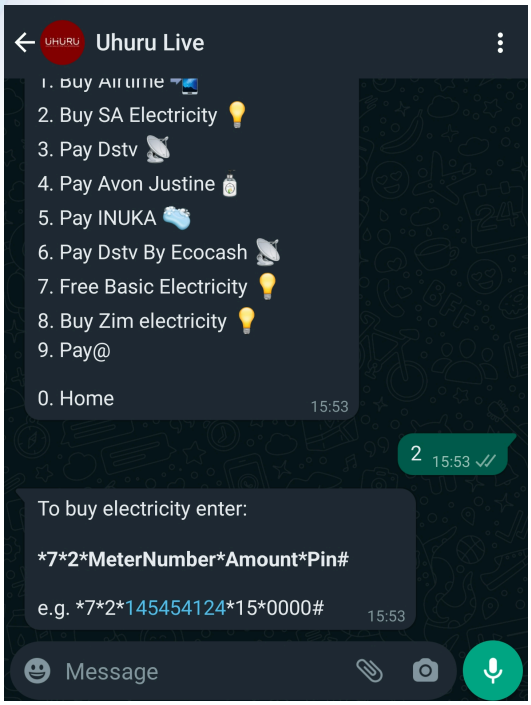


Utility and Services - Buy South Africa Electricity (Whatsapp chat bot & Merchant Panel)

Users are given a service through which they can buy electricity.

In order to do that, the user will have to enter the Meter number (of the end customer), amount and pin to finish the payment by wallet.

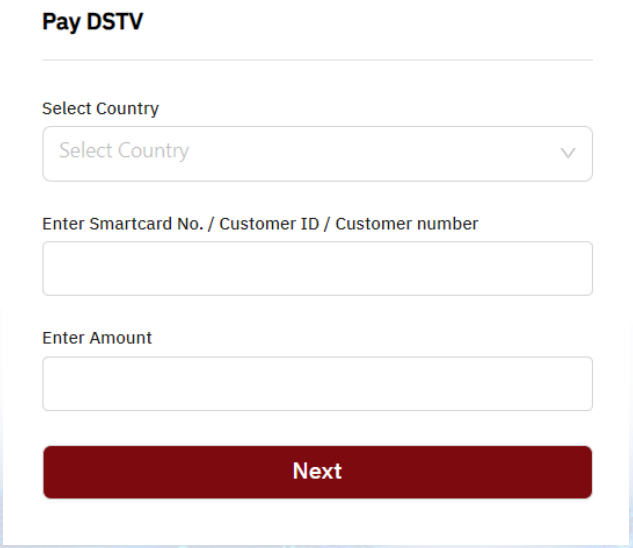


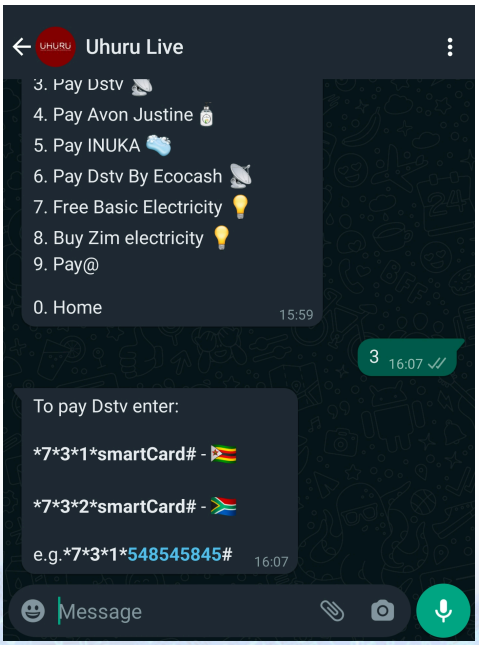


Utility and Services - Pay DSTV (Whatsapp chat bot & Merchant Panel)

Users can pay for their DSTV via chat bot or web panel (used by merchants), simply by entering the following details:

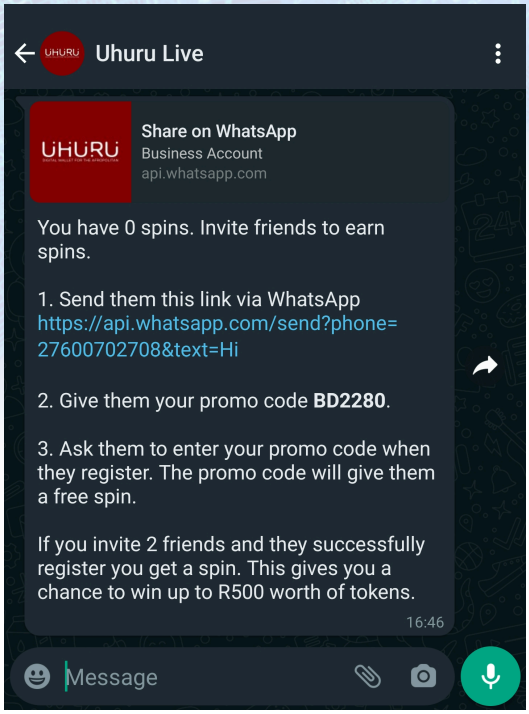
1. Selecting country
2. Enter smart card number / Customer ID / Customer number





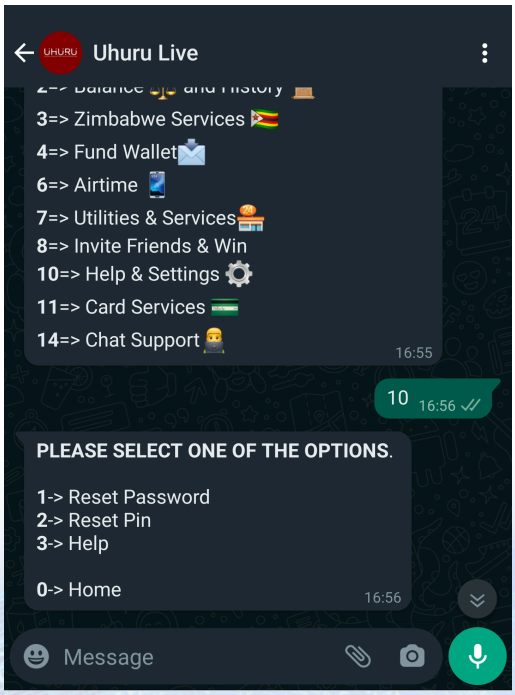
Invite Friends and win (Whatsapp chat bot)

System generates a shareable link for the chatbot along with a referral code. Users can share the link along with a referral code to another potential user of the chatbot. If two users registers on the chat bot with the referral code of the sender then the sender receives a spin and the new user gets a spin for the first time they register with the referral code.



Help and Setting (Whatsapp chat bot)

User can reset the password or change the pin through this option. The other option is to chat to an agent, see FAQs, send a feedback, or know more about Uhuru via this setting.



Tech stack used

We have utilized Twilio as whatsapp bot. For admin panel we have used Node.js for backend and Angular for front end development. In Merchant panel, we have used React for front end development.

Result

We successfully completed the project within the stipulated time frame and delivered value to our client with the following results:

1. Delivered a complete end to end chat bot with third party integration of Twilio which is robust enough to handle all services offered to the end user with the ability to chat to agents and more.
2. Delivered and completed merchant web application which gives the user ability to do more or less the same features of the whatsapp chat bot.
3. Delivered and completed admin panel through which the user can monitor the transactions of users who are availing the services provided.
4. The solution brought significant revenue growth to our client as a large number of users including merchants joined the network to use the services offered.
5. During the initial phase they were able to drive 5000+ user registrations and merchant enrolment.

About Oodles Blockchain

Oodles Blockchain is a blockchain development company that specializes in providing custom blockchain solutions for businesses. The company offers services such as blockchain development, smart contract development, decentralized application (DApp) development, cryptocurrency development, and blockchain consulting.

As a blockchain development company, Oodles Blockchain works with various blockchain platforms and technologies, including but not limited to Ethereum, Hyperledger, Corda, Stellar, and EOS. They cater to clients from diverse industries, including finance, healthcare, supply chain, logistics, and more.

Oodles Blockchain focuses on leveraging the potential of blockchain technology to help businesses streamline operations, enhance security, improve transparency, and facilitate efficient transactions. Their team of experienced blockchain developers, architects, and consultants work closely with clients to understand their specific requirements and deliver tailored solutions.

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