

Kirana Khata

Btech Project Presentation

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AIM of the Project

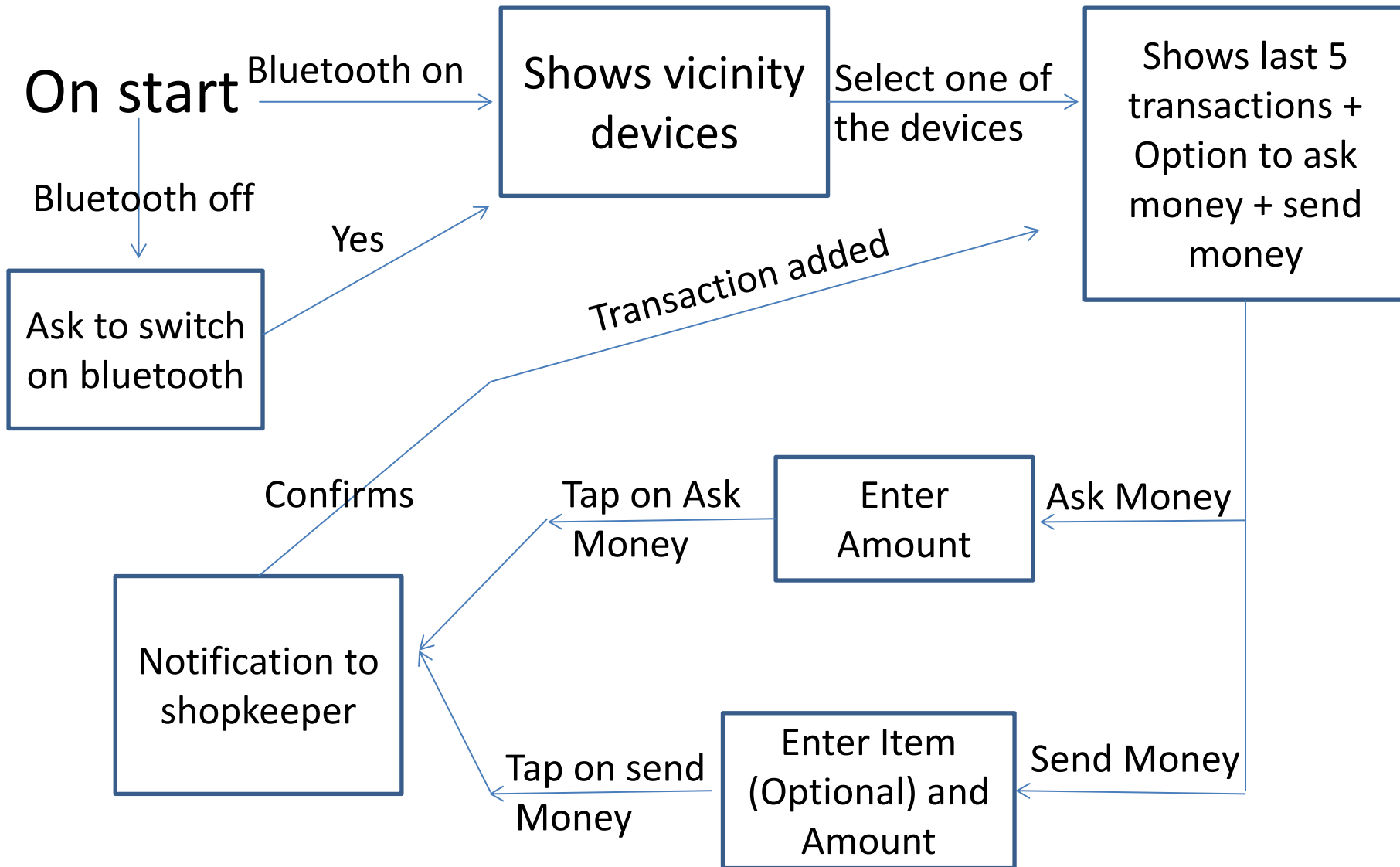
Smoothening the process of paying change either from shopkeeper side or customer side.

- Using Mobile application (Smart Phones)
- Work without net connectivity

Features

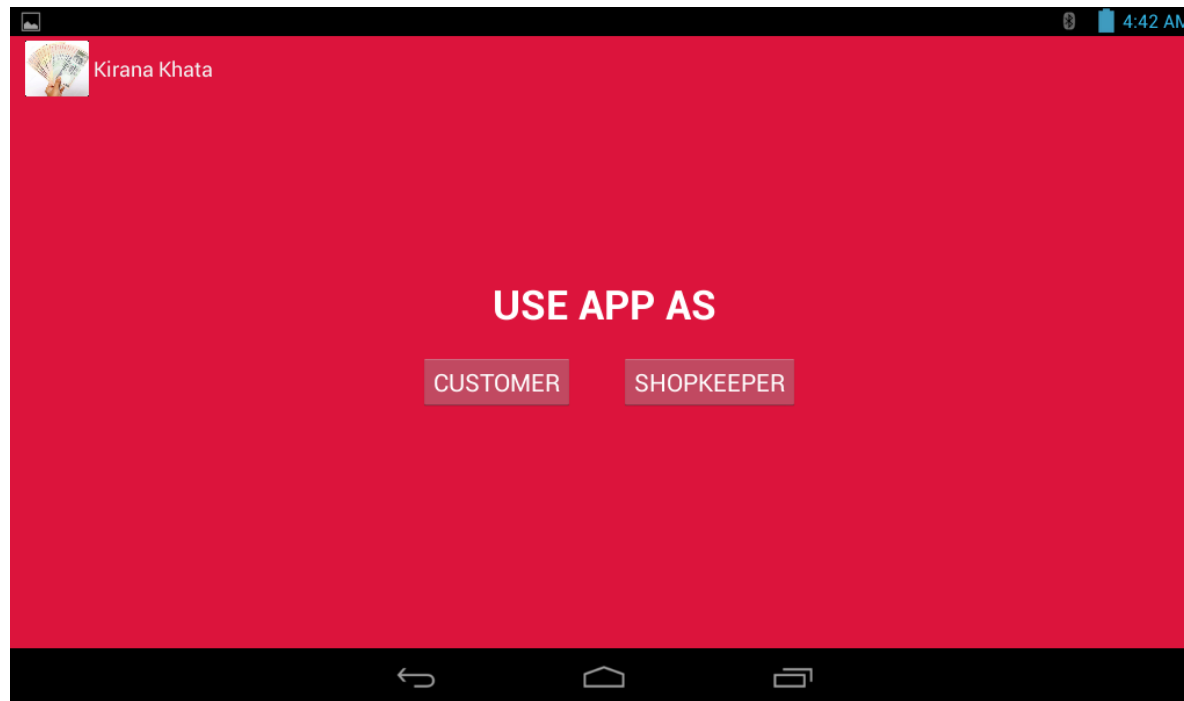
- Easy interface with last 5 transaction on the screen
- Facility for online debit or credit to both customer and shopkeeper
- Bluetooth connectivity
- Secured from shopkeeper, customer and any third party
- One touch transaction on shopkeeper side
- Shopkeeper can see the list of all the customers on one screen

Work Flow

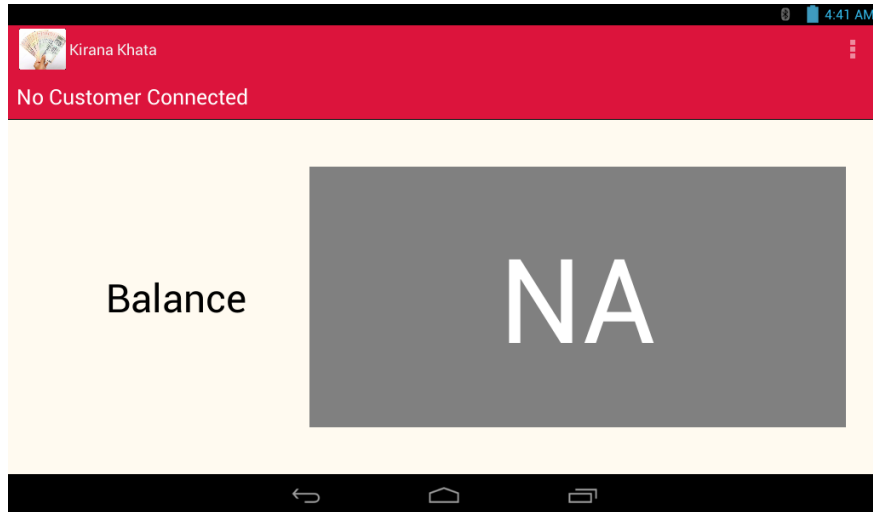


How does Kirana Khata Work?

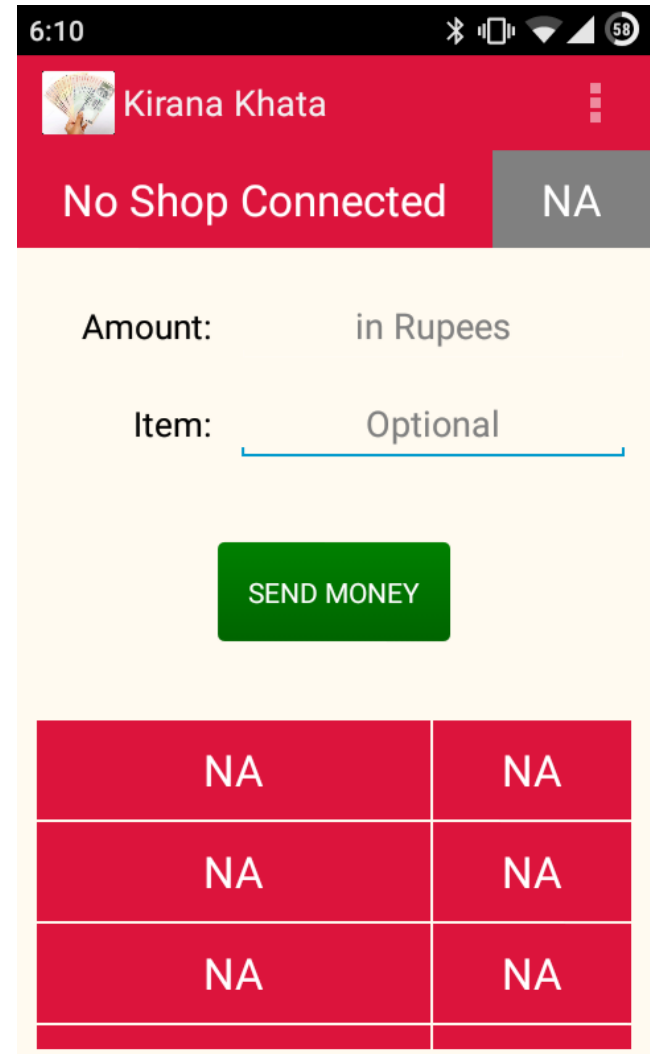
On Start



Shopkeeper's Tablet

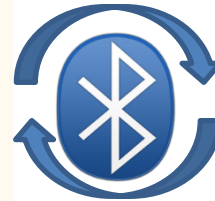
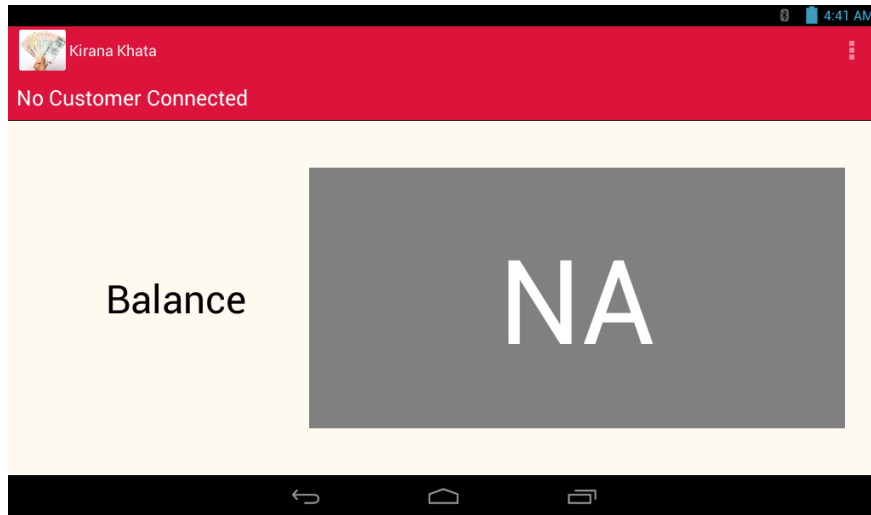


Customer's Phone

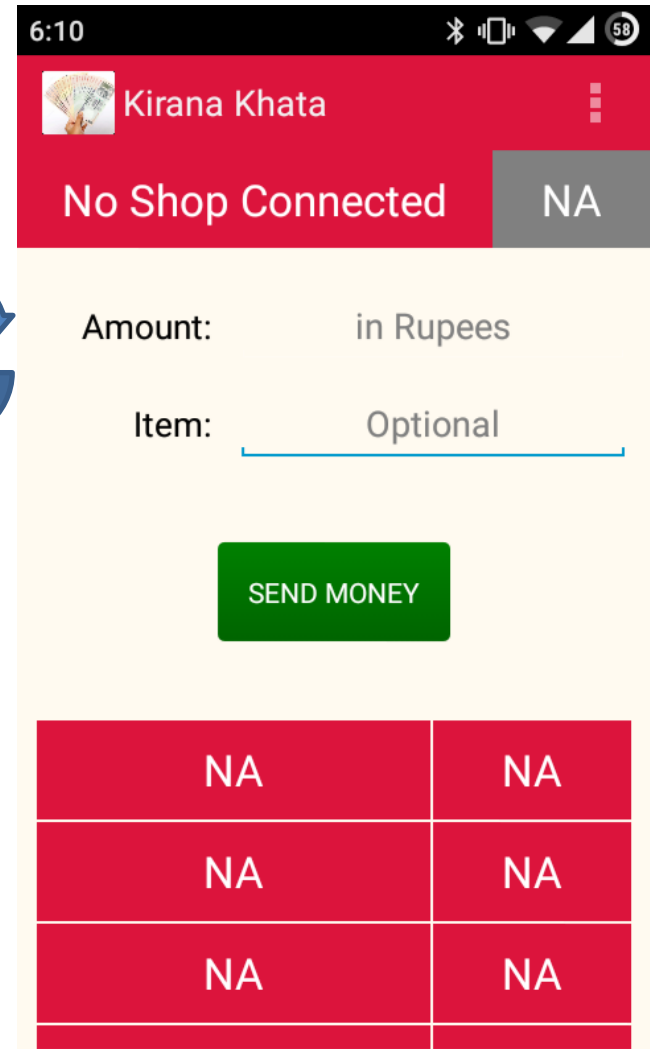


Bluetooth Connection

Shopkeeper's Tablet

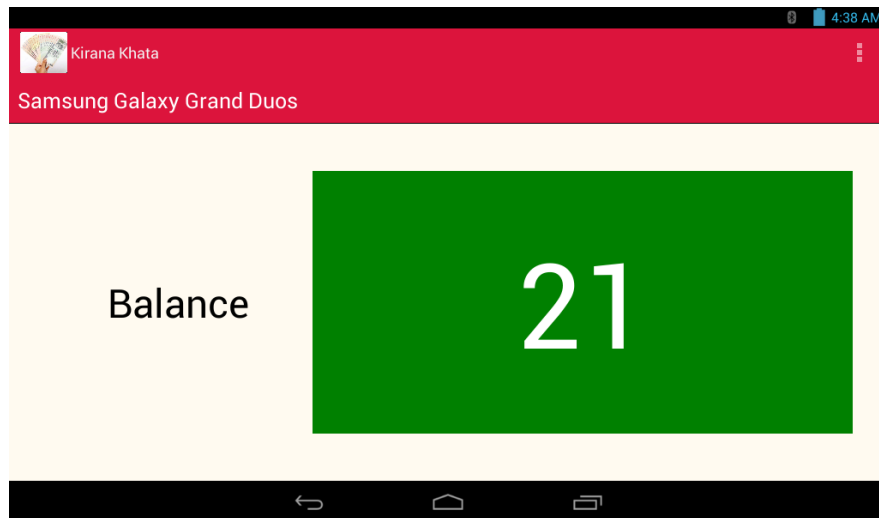


Customer's Phone

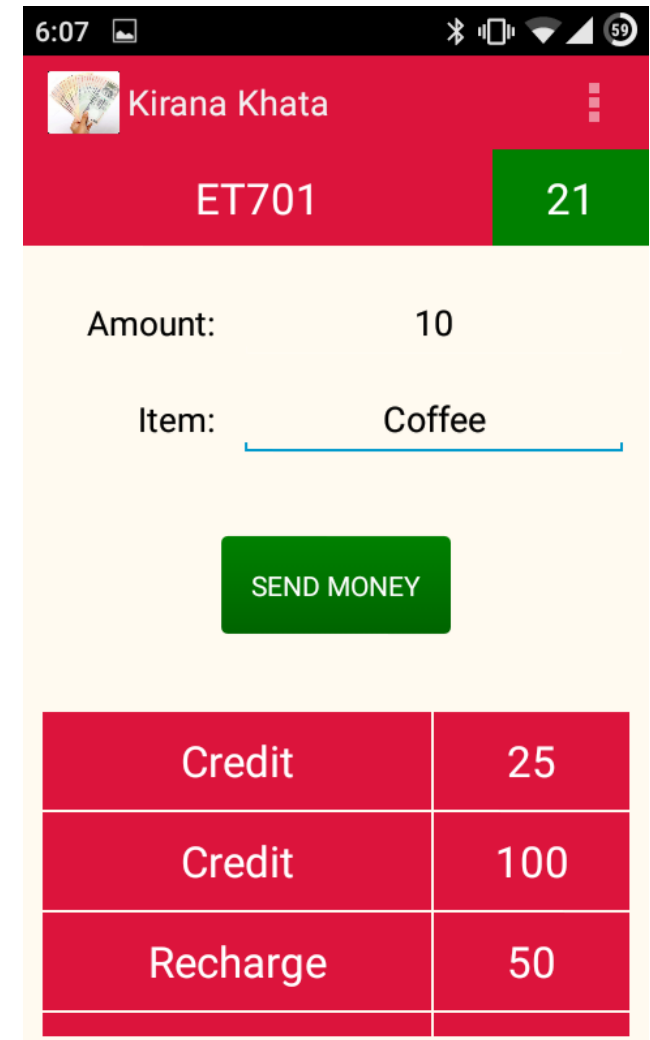


Connection Established

Shopkeeper's Tablet

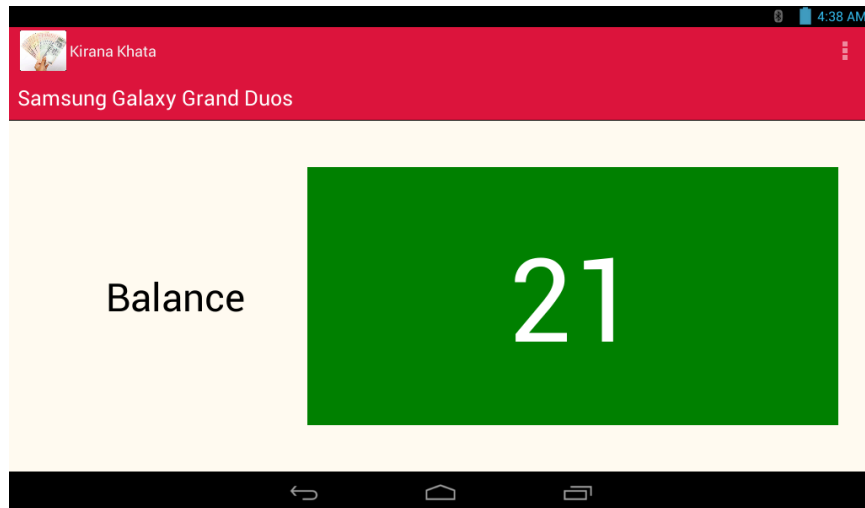


Customer's Phone

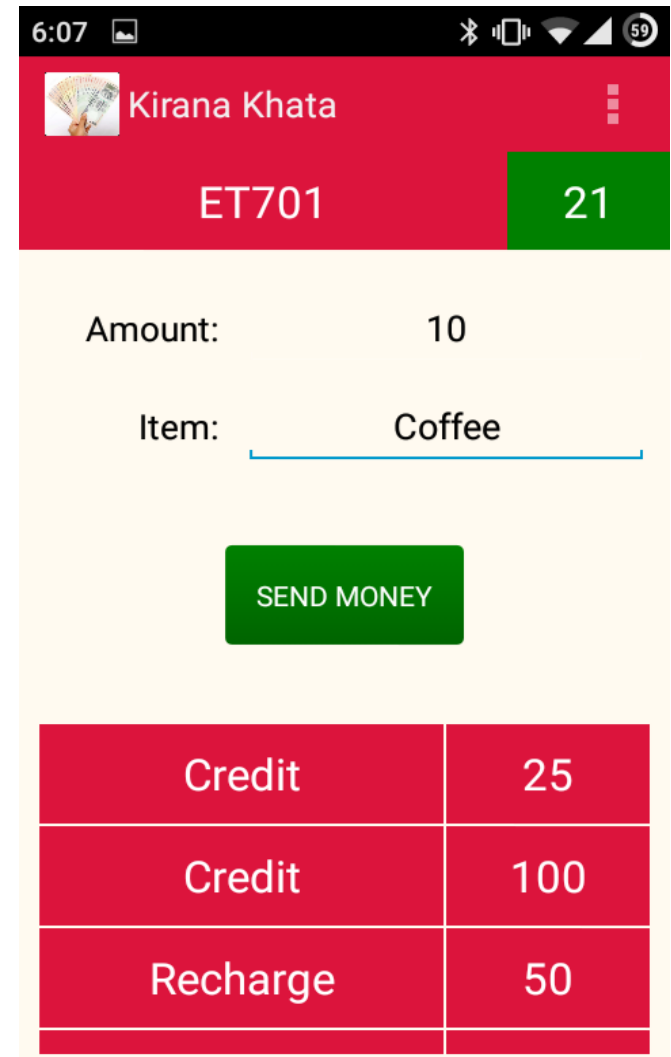


Adding Transaction

Shopkeeper's Tablet

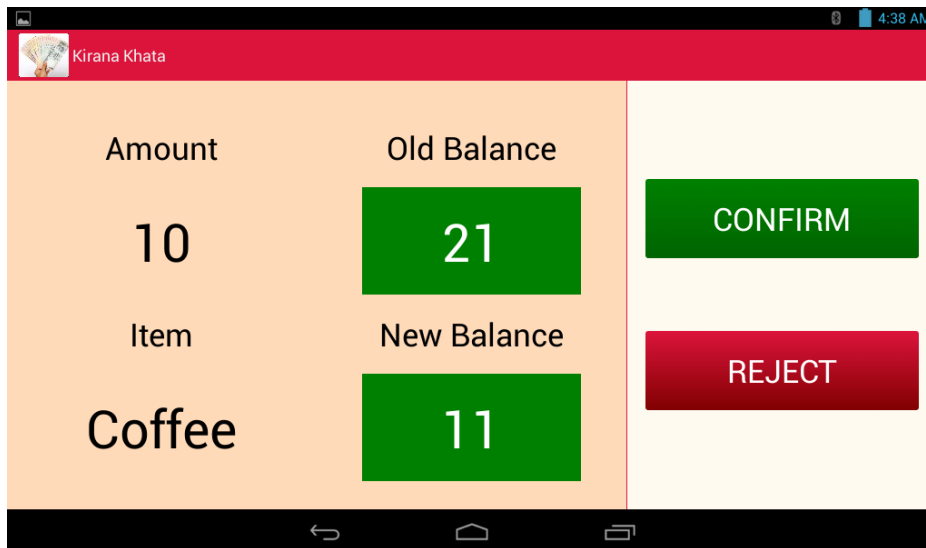


Customer's Phone



Verification

Shopkeeper's Tablet



The Shopkeeper's Tablet interface displays transaction details for a 'Kirana Khata'. It shows an amount of 10, an item of 'Coffee', an old balance of 21, and a new balance of 11. There are 'CONFIRM' and 'REJECT' buttons.

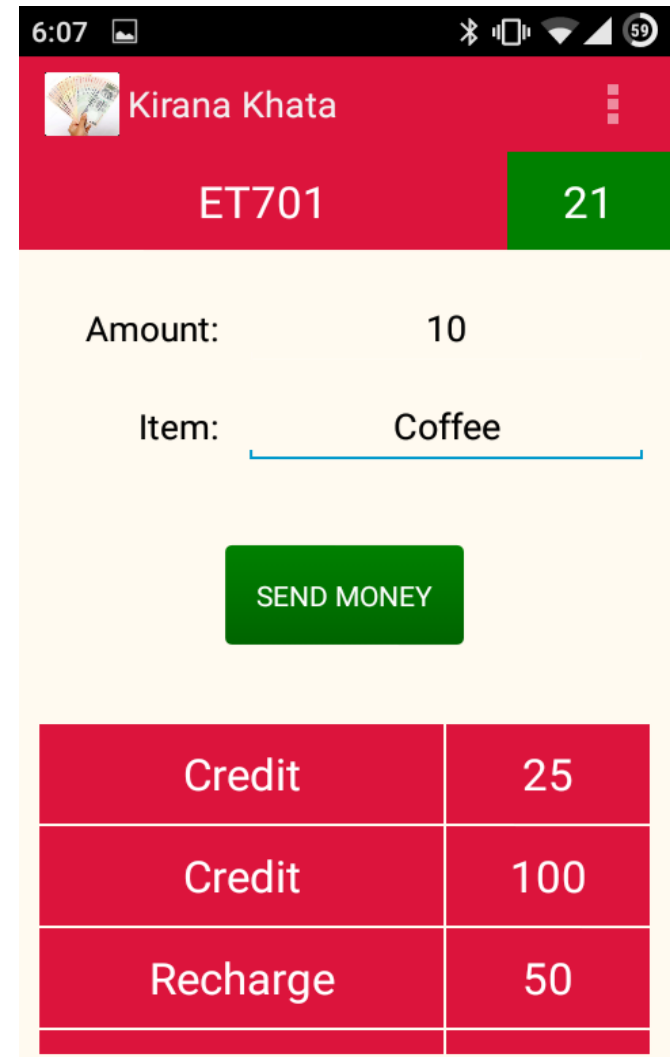
Amount	Old Balance
10	21

Item	New Balance
Coffee	11

CONFIRM

REJECT

Customer's Phone



The Customer's Phone interface shows the 'Kirana Khata' with ID 'ET701' and a balance of 21. It displays the amount (10) and item (Coffee) entered by the shopkeeper. There is a 'SEND MONEY' button and a list of options at the bottom.

Kirana Khata
ET701 **21**

Amount: 10

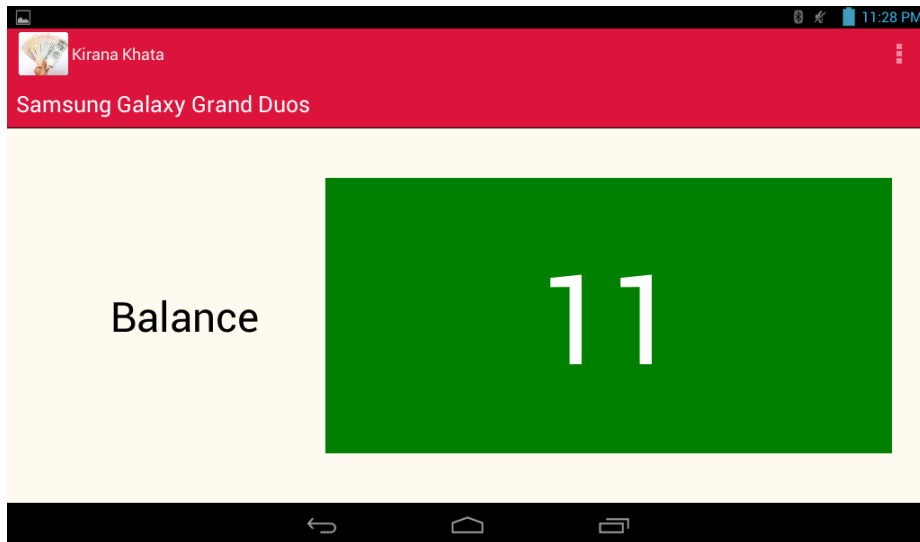
Item: Coffee

SEND MONEY

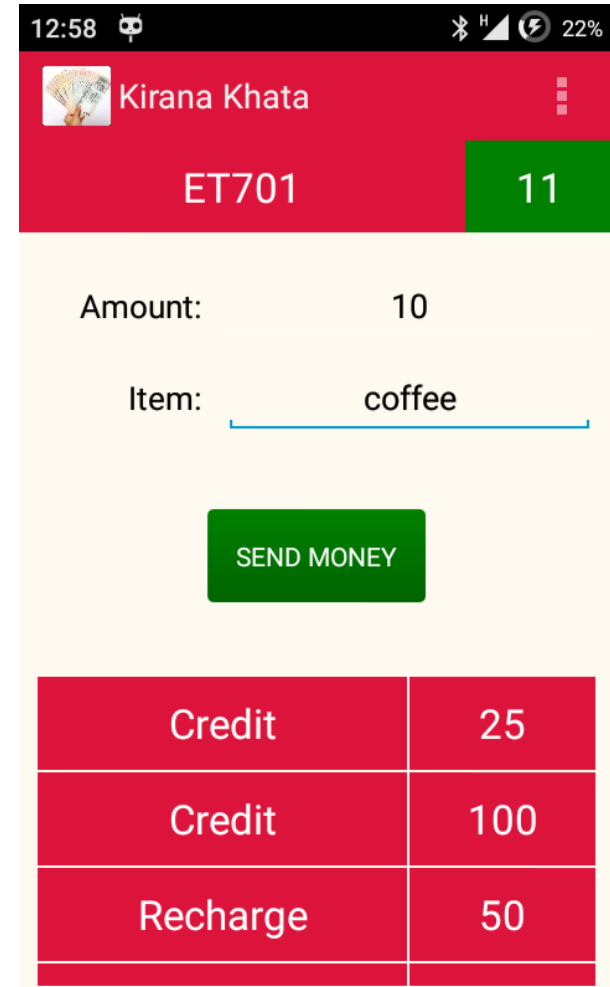
Credit	25
Credit	100
Recharge	50

Adding the transaction in the list

Shopkeeper's Tablet



Customer's Phone



How we started

- Defining the problem statement
- Coming up with a solution which is cheap, easy to implement and can be easily accessed by the common people
- Defining specifications for the application
- Came up with the work flow of the application
- Refining and optimising the steps involved in the transactions

How we started

- Creating a basic app
- Testing for bugs and connectivity issues alpha testing
- Implemented the project in a general store for beta testing
- Improved UI as suggested by the shopkeeper

Observations

- Average time taken to do a normal money exchange (having change issues) is over 30 seconds
- Average time taken for one transaction using Kirana Khata is less than 15 seconds (assuming the devices were already paired in the past)
- Shopkeeper preferred the app over maintaining a separate register for running accounts
- Simple interface of the app makes it easy for the shopkeeper to understand the system

Problems Faced

- Bluetooth connection issue – Connection lost after 1 transaction
- Database of shopkeeper's side updates but not from customer's side or vice versa
- Connection from one side but not from the other

Advantages

- Easy book keeping
- No change problem

Before

[illegible]

After

Disadvantages

- Shopkeeper needs to have a separate device for this system

Future Improvements

- More work can be done to replace the change system in a locality or college campus
- Password protected
- Alternate methods other than bluetooth since bluetooth is not very reliable in connectivity