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Practical 2: Project Proposal
Digital Wallet

Objective:

- The main objective of the project proposal is to develop a Smartphone application that enables the users to perform any sort of transaction securely through their bank accounts connected to the application over the internet.
- This system is hassle free and more convenient for current modes of transactions which are performed physically.
- Improve wallet apps with more security features like roll-backing a transaction and reporting a transaction as fraud.

Overview:

- The project proposal is aimed to provide the user with an option to perform all sorts of transactions over the internet.
- Users can perform all transactions and the transactions will be done over users bank accounts which he/she can connect with the application.
- This will help the user to perform these transactions easily and is hassle free.
- This application allows users to make in-store payments without having to carry cash or physical credit cards.

Problem Statement:

- In today’s date most of the transactions are done over the internet.
- There are very few Digital Wallets available at today's date and very less awareness.
- Normally to do any transaction one has to go to the nearest bank or ATM to perform the transaction. Or while doing any type of shopping one needs to carry the hard cash to buy or sell the goods. This is time consuming and also extremely hectic.
- The project proposal aims to develop a new payment method for all sorts of transactions over the Smartphone.

- You can perform bank transactions and also can do shopping and perform transactions over the internet. This not only saves time but also is a seamless and easy process.
- In present digital wallets there are many limitations like Number of transactions we can made in a day are very less and for each transaction the digital wallet deducts some extra processing fee which is the same for different amounts.

Purpose:

The purpose of this project is to increase the usability of digital wallets and make transactions securely. Most of the current wallets have difficult and complex systems designs and User Interfaces. The aim of this project is to create a prototype of a mobile wallet app and make the UI/UX simpler

A background of electronic transactions and Digital wallet-

A number of electronic commerce applications allow end-users to purchase goods and services using digital wallets. Once a user decides to make an online purchase, a digital wallet should guide the user through the transaction by helping him or her choose a payment instrument that is acceptable to both the user and the vendor, and then hide the complexity of how the payment is executed. A number of wallet designs have recently been proposed, but we will argue they are typically targeted for particular financial instruments and operating environments. In this paper, we describe a wallet architecture that generalizes the functionality of existing wallets, and provides simple and crisp interfaces for each of its components.

What is a Digital Wallet?

A digital wallet is a software component that provides a client with instrument management and protocol management services. It is a software-based system that securely stores users' payment information and passwords for numerous payment methods and websites. By using a digital wallet, users can complete purchases easily and quickly with near-field communications technology. They can also create stronger passwords without worrying about whether they will be able to remember them later. Digital wallets can be used in conjunction with mobile payment systems, which allow customers to pay for purchases with their smart phones. A digital wallet can also be used to store loyalty card information and digital coupons.

They are capable of executing an operation using an instrument according to a protocol. A digital wallet presents its client with a standard interface of functions; in the case that the client is a human user, this standard interface of functions may be accessed through a graphical user interface (GUI). A digital wallet is linked into an end-user, bank, or vendor application and provides the application with instrument management and protocol management services. The digital wallets that are linked into vendor and bank applications provide these management services in the same way that end-user digital wallets do. A vendor's digital wallet, however, may be part of a much larger software application that is integrated with order and fulfillment systems. Furthermore, a wallet is not limited to being a plug-in or applet or some other extension of a web browser. A digital wallet with a graphical user interface may also run as an application on its own. A digital wallet may also run on computers that are not connected to the Internet such as smart cards or personal digital assistants. The user interface to the digital wallet may vary in such

Proposed System:

There are many applications in a smart phone which have their own e- wallets. So when you make any purchase of goods or services through these applications you get various options for making payment. Generally people add money to their e-wallet and pay them. In other words, it is handling separate wallets for different applications which is an overhead. So if we have money in our e- wallet but we cannot use it for other application Therefore, money in the e-wallet of earlier application will be of no use until you make any payment or transaction through it.

In response to this problem, we propose a technique which makes the separate e-wallets of different applications centralized. One can use the money on any platform without any restrictions. There are some apps that might charge you for doing a transaction.
Generally, provide all the offers that are cash backs that can only be transferred to the bank after paying a fee. In all current digital wallets there are many limitations like Number of transactions we can made in a day are very less and for each transaction the digital wallet deducts some extra processing fee which is the same for different amounts Whether we transfer a hundreds or thousands of money.

In most wallet apps there are limitations like a fixed number of transactions but in this system that won't be the case. In our app, there will be no limitations of number of transactions.

Specifications/Modules:

1) Send/Receive Money-

   This is the main task of this app. Users can send and receive money from their contacts who're using this application. The system will create a transaction for each money transfer operation.

2) Request Money-

   Users can request for money to their contacts and the receiver user will get a message to send the request amount or not. If yes then the requested amount will be deducted from the user.

3) View Past Transactions-

   User can view all the passed transaction they've made along with the transaction details like transaction id, timestamp, sender, amount etc.

4) Pay Later Function-

   If the user is having insufficient money in his wallet and they're making a transaction then that transactions will be added to Pay later transactions history and the equivalent amount will be deducted after a person adds money in their the wallet

5) Rollback Transactions-

   If the user sees some transactions that are not made by them or if they see any malicious activities with their account (password change emails, otps etc) they can request for a rollback transaction in the support.

6) User Profile-

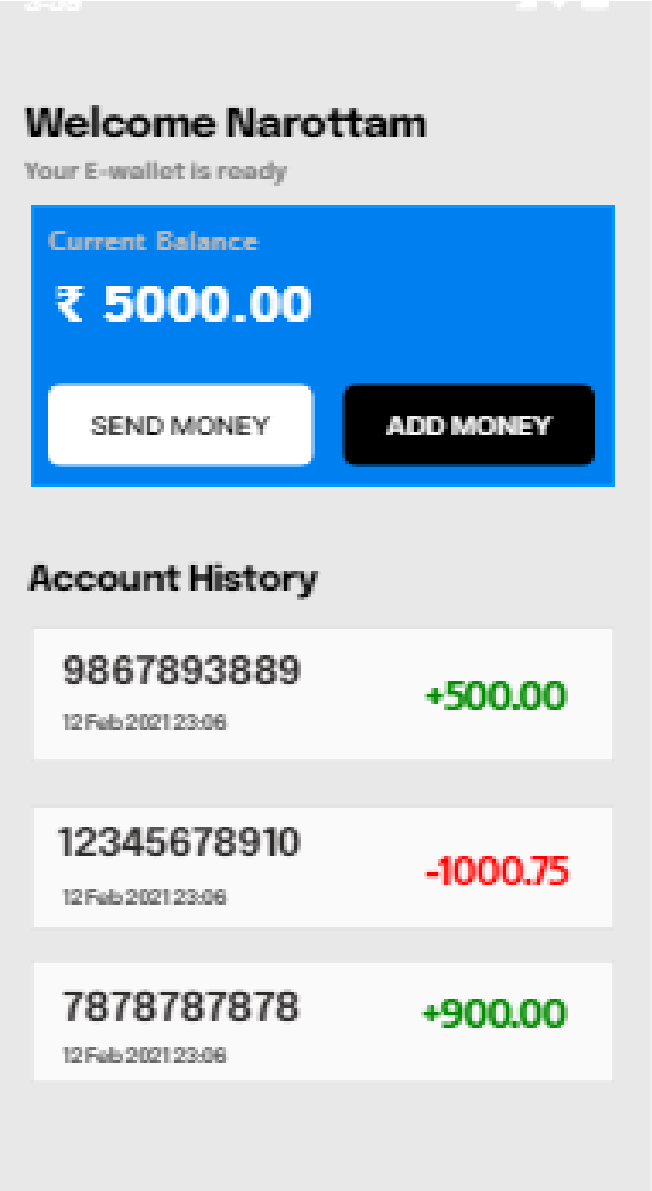
   User can update their profile details like email, phone number and change their password

7) Add/Remove Bank Account-

   User can add and remove new bank accounts from the app.

System Design:

Created using Framer



Home Screen

Flowchart:

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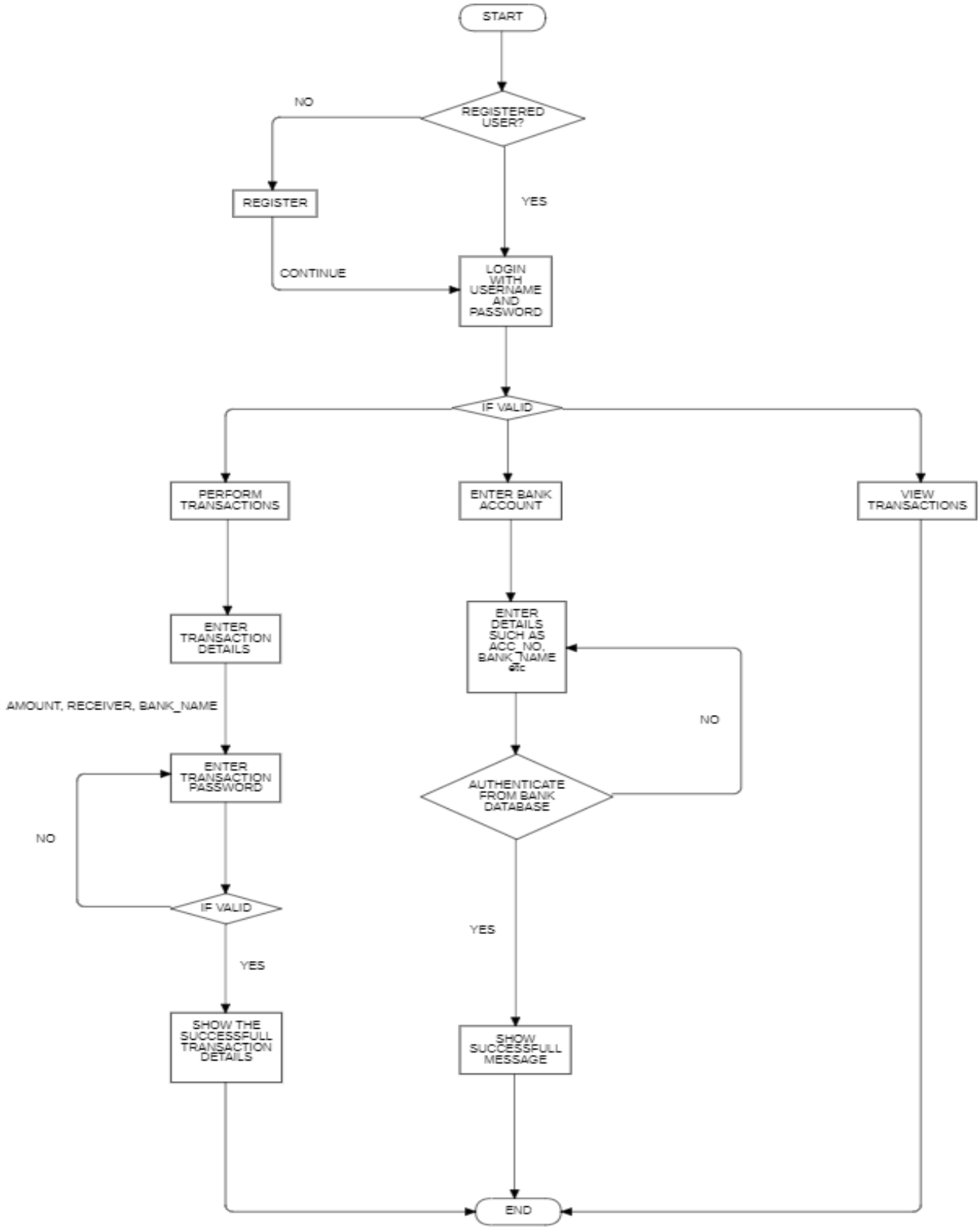

Conclusion: We have successfully created and submitted the project proposal.