

## **Project Prototype:**

# **BankEase: User-Friendly and Secure Banking App**

Puja Shah

CSIT-335 Human Computer Interaction

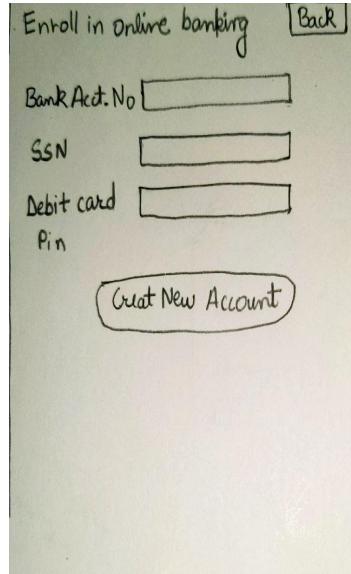
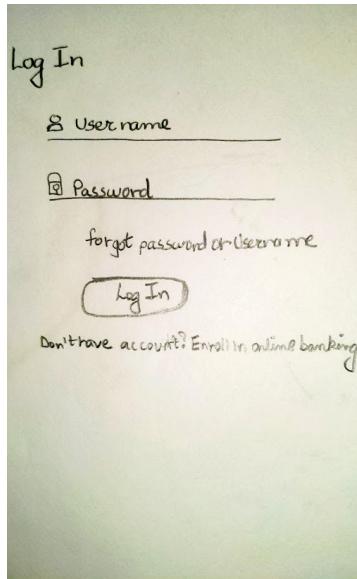
Spring 2023

Dr. Hongbo Zhou

## Step 1 Design:

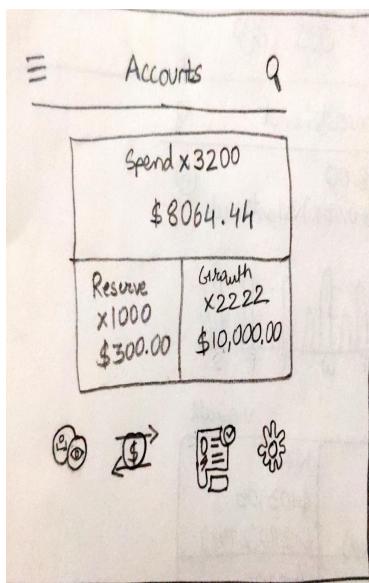
### Prototype 1

#### Prototype 1 Login Screen:

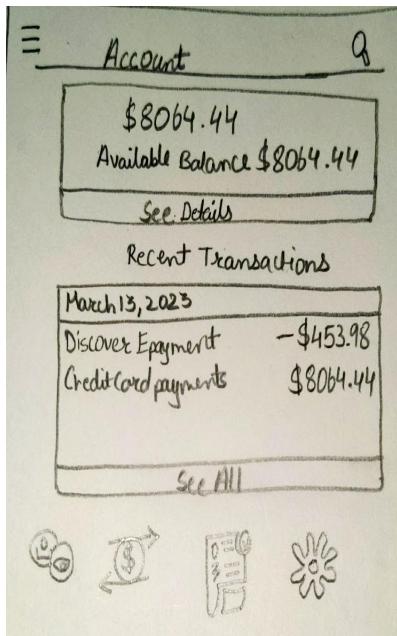


The login screen is the first screen that the customer sees when they open the app. The customer can enter their username and password to access their account. There is also an option for customers to reset their password if they have forgotten it. And there is an option to enroll in online banking for new customers by using their bank account details.

#### Prototype 1 Home Page:

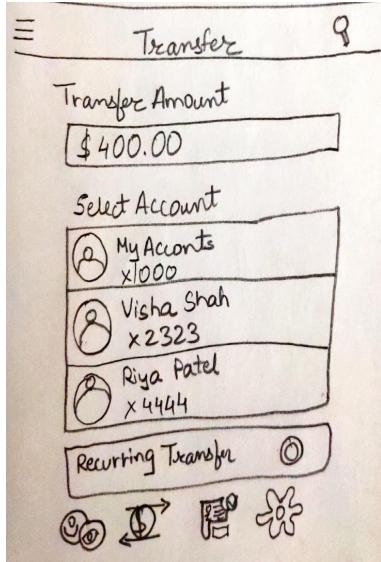


After logging in, the customer is taken to the home page. The home page displays the customer's account balance, with the option to view transaction history or recent activity by clicking on the account balance. There is a menu button on the left side of the screen which includes investment and Budgeting options. At the bottom of the screen, there are four icons that lead to the main features of the app: Account Overview, Transfer Funds, Bill Pay and Settings.

**Prototype 1 Account Overview Screen:**

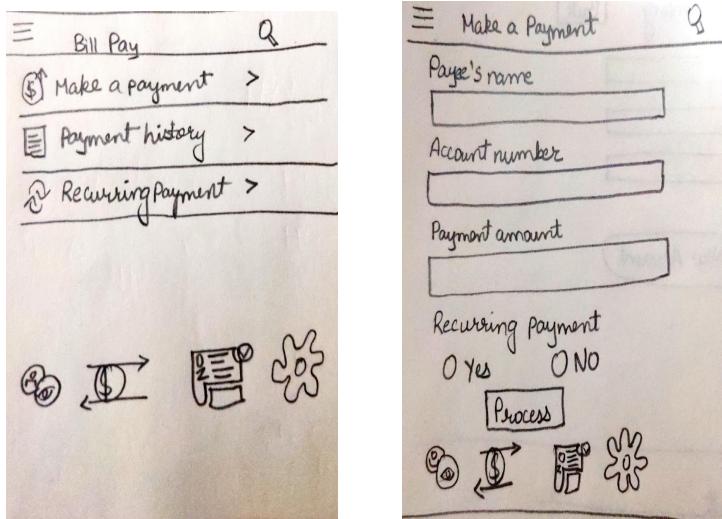
The Account Overview screen displays all of the customer's account balances, along with the option to view transaction history and recent activity for each account. This screen also displays the customer's routing and account number, as well as the bank's contact information.

**Prototype 1 Transfer Funds Screen:**



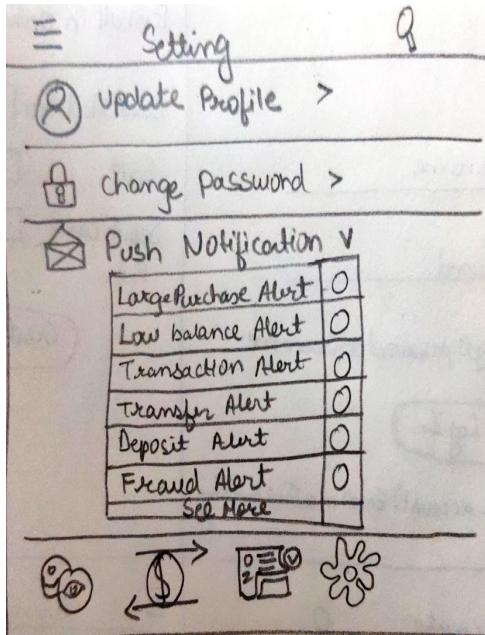
The transfer funds screen allows customers to transfer funds between their accounts or to other accounts within the same bank. The customer selects the account they wish to transfer the funds to. The customer can also set up recurring transfers, such as monthly transfers to a savings account.

#### Prototype 1 Bill Pay Screen:



The bill pay screen enables customers to pay bills, view payment history, and set up recurring payments. The customer enters the payee's name, account number, and payment amount, and can select a one-time or recurring payment. The customer can also view their payment history and edit or delete upcoming payments.

### Prototype 1 Settings Screen:

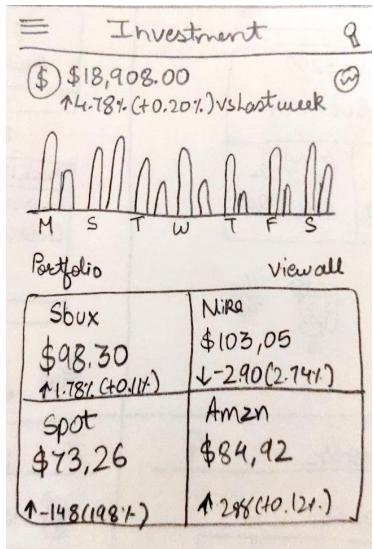


The setting screen allows customers to manage their account settings, such as updating personal information or changing their password. The customer can also enable push notifications for account activity, set up automatic transfers or payments, and view the app's terms and conditions.

### Prototype 2

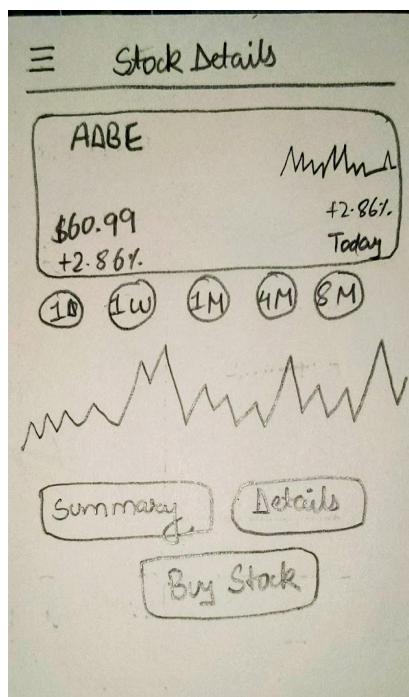
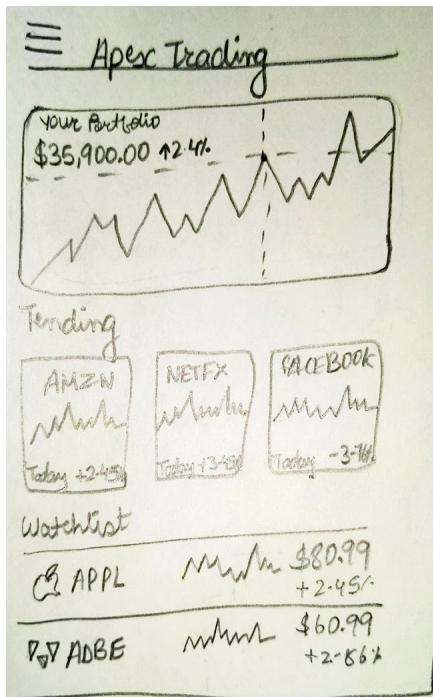
Investment Banking is designed to provide customers with more advanced banking services such as investment management, trading and financial planning. This feature is located in the menu option on the left side of the home screen.

### Prototype 2 Investment Portfolio Screen:



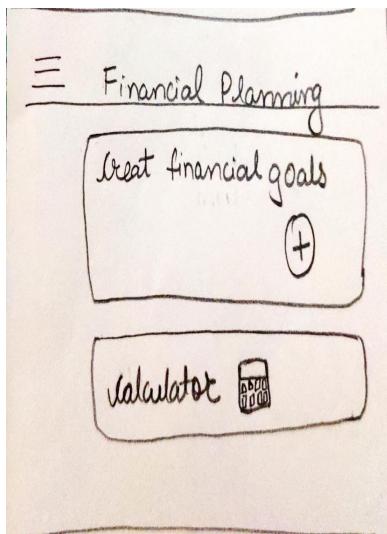
The Investment Portfolio screen provides customers with an overview of their investment portfolio, including the performance of their investments, asset allocation, and risk level. This screen may also display a chart or graph to show the performance of the customer's investments over time. Customers can view their investments by type, such as stocks, bonds and mutual funds and can also view their transaction history and investment statements.

### Prototype 2 Trading Screen:



The Trading screen allows customers to buy and sell stocks, bonds and other securities. Customers can view the current market prices of various securities, select the securities they want to buy or sell, and enter the amount they want to invest. This screen may also provide options for customers to set alerts for price changes or place limit orders to buy or sell securities at a specific price.

### **Prototype 2 Financial Planning Screen:**

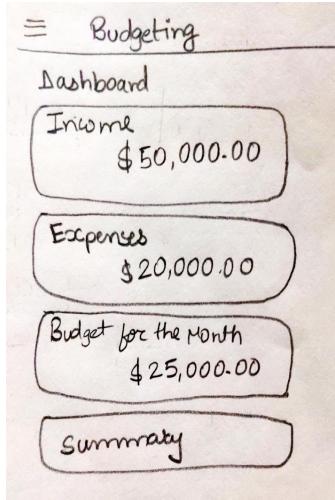


The Financial Planning screen enables customers to create financial goals and develop a plan to achieve them, including retirement planning, college savings and estate planning. Customers can enter their financial goals, such as saving for retirement or paying off debt. This screen may also provide calculators.

### **Prototype 3**

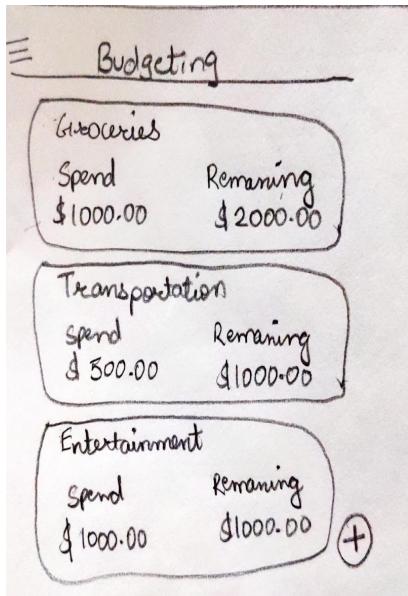
The Budgeting prototype is designed to help customers track their income and expenses, set budgets, and monitor their spending habits.

### **Prototype 3 Dashboard Screen:**



This screen provides an overview of the customer's income, expenses and budget for the month. It also shows a summary of their spending habits, such as the percentage of income spent on different categories.

### Prototype 3 Budgeting Screen:



This screen allows customers to set budgets for different categories of expenses, such as groceries, transportation, or entertainment. The app will notify customers when they are close to reaching their budget limit for a particular category.

## Step 2 Evaluation:

In order to evaluate each prototype, we need to analyze them in terms of their feasibility, usability, and potential to meet the users' needs. Prototype 1 seems to be a standard banking app, providing basic functionalities such as account overview, transfer funds, bill pay, and settings. The login screen and account overview screen are straightforward and easy to use, and the other features are also user-friendly. Overall, this prototype seems to be feasible and implementable. However, there is not much innovation or unique features that would set it apart from other banking apps.

Prototype 2, on the other hand, provides more advanced banking services such as investment management, trading, and financial planning. The Investment Portfolio Screen, Trading Screen, and Financial Planning Screen seem to be useful and provide valuable information for customers who are interested in investment banking. However, this prototype may not be suitable for customers who do not have any investment experience or knowledge. It may also be more complex and require more effort to implement compared to Prototype 1.

Prototype 3 provides budgeting functionalities to help customers track their income and expenses, set budgets, and monitor their spending habits. The Dashboard Screen and Budgeting Screen seem to be easy to use and provide valuable information for customers who want to manage their finances better. However, this prototype may not be suitable for customers who do not have a clear understanding of budgeting or financial planning.

Based on these evaluations, it seems that all three prototypes are feasible and implementable. However, Prototype 2 and Prototype 3 may require more effort and resources to implement compared to Prototype 1. Moreover, Prototype 1 may be more suitable for customers who are looking for basic banking functionalities, while Prototype 2 and Prototype 3 may appeal to customers who are interested in investment banking and budgeting functionalities, respectively.

In terms of potential issues, Prototype 2 and Prototype 3 may require more training and support for customers who are not familiar with investment banking or budgeting. Prototype 1 may not be attractive enough for customers who are looking for more innovative or unique features. Therefore, it may be necessary to provide more guidance and support to customers who use Prototype 2 and Prototype 3, and consider adding more features to Prototype 1 to make it

more appealing to customers. In conclusion, all three prototypes seem to be feasible and implementable, but each has its strengths and weaknesses.

### **Step 3 Choice and Refinement:**

After analyzing the three prototypes in step 2, I have decided to choose Prototype 1 for future development. I chose this prototype because it provides the basic functionalities that most customers would expect from a banking app, such as account balance overview, transaction history, transfer funds, bill pay, and account settings.

Compared to previous versions, the prototype has been refined by adding more detail to each screen, such as displaying routing and account numbers on the Account Overview screen and providing options for one-time or recurring payments on the Bill Pay screen. The design has also been streamlined to make it more user-friendly, with clear icons and menus to navigate between screens.

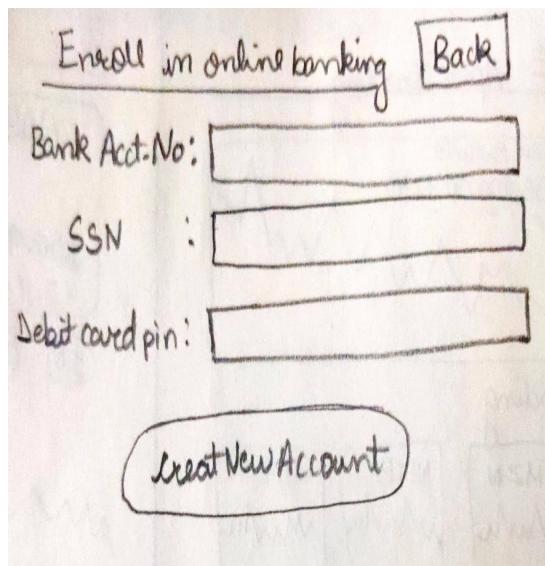
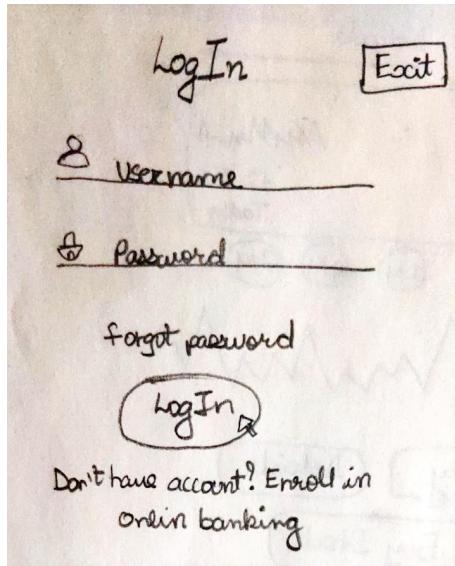
The user base has not changed from the previous prototypes, as the app is still designed for individual banking customers. However, I have modified the planned tasks for the interface to ensure that they are as efficient and user-friendly as possible. For example, I added the option for customers to enroll in online banking on the login screen, making it easier for new customers to sign up. Additionally, I added the option for customers to view recent activity by clicking on their account balance, providing a quick and easy way to access transaction history. Therefore, I believe that Prototype 1 provides a solid foundation for a banking app that meets the basic needs of most customers. By refining the design and adding more detail to each screen, I believe that the app will be both easy to use and functional, providing a positive user experience for banking customers.

## Step 4 Finalized Design:

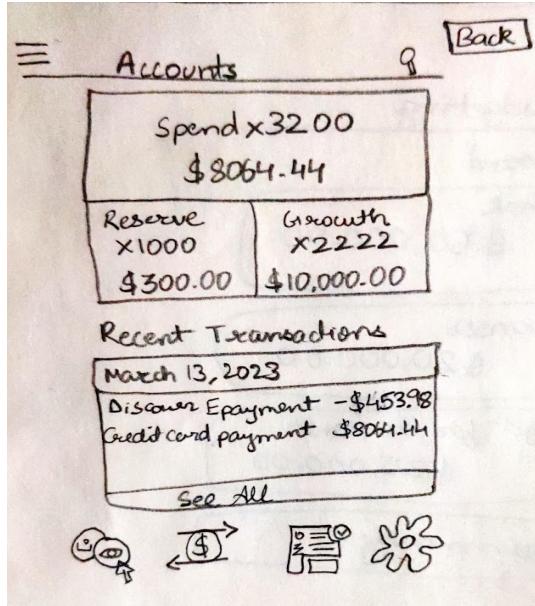
### Storyboard

Final physical paper prototype for my banking app.

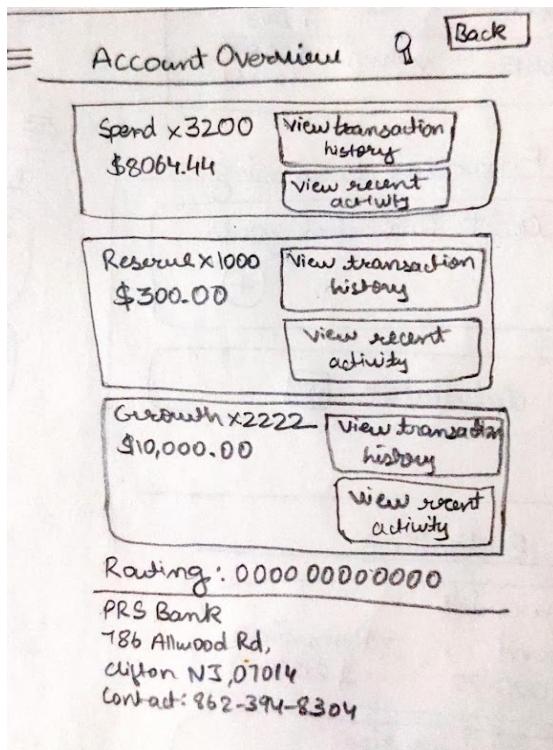
1. User opens the app and is presented with a login screen. They can enter their username and password or reset their password if they have forgotten it.



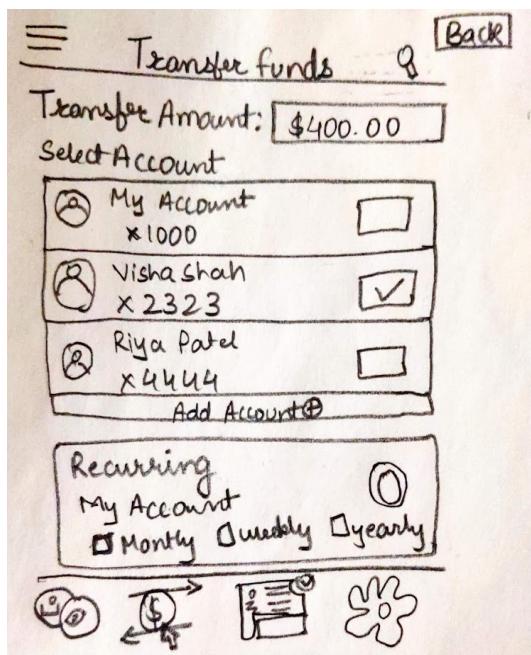
2. After logging in, the user is taken to the home page. The home page displays the user's account balance and shows their recent transactions. There is a menu button on the left side of the screen which includes investment and budgeting options. At the bottom of the screen, there are four icons that lead to the main features of the app: Account overview, Transfer funds, Bill pay and settings.



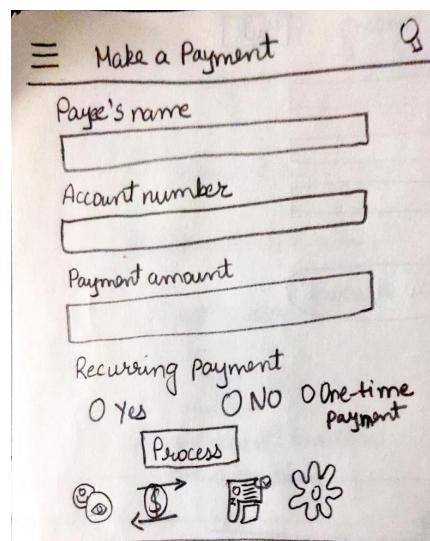
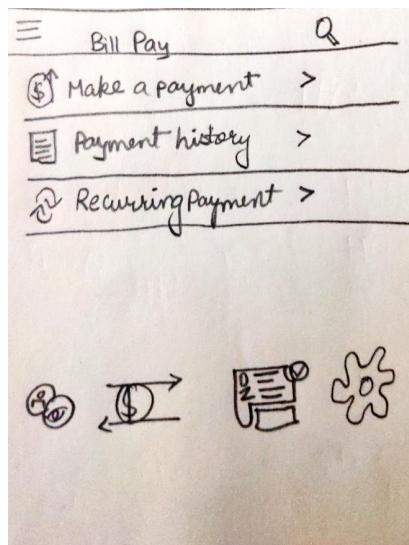
3. The user clicks on the Account overview icon and is taken to a screen that displays all of their account balances, along with the option to view transaction history and recent activity for each account. This screen also displays the user's routing and account number, as well as the bank's contact information.



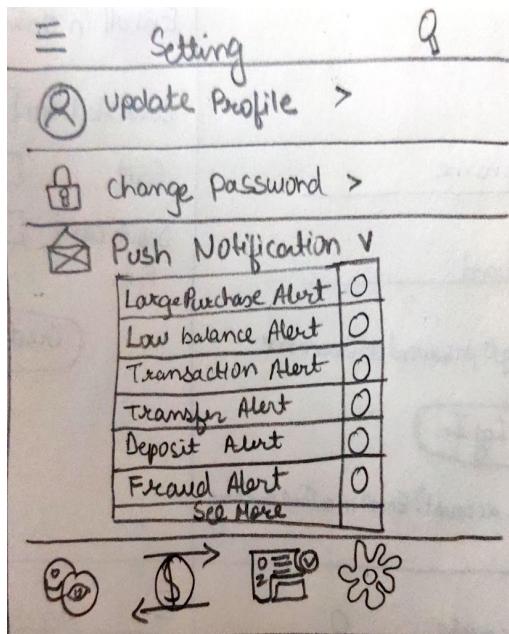
4. The user clicks on the Transfer funds icon and is taken to a screen that allows them to transfer funds between their accounts or to other accounts within the same bank. The user selects the account they wish to transfer the funds to. The user can also set up recurring transfers, such as monthly transfers to a savings account.



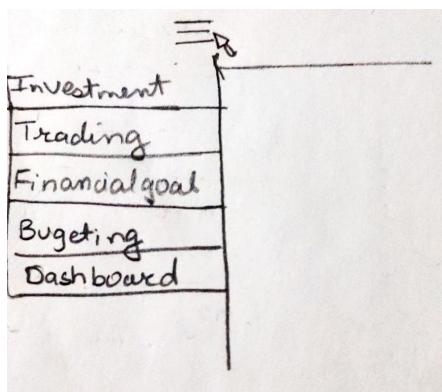
5. The user clicks on the Bill pay icon and is taken to a screen that enables them to pay bills, view payment history, and set up recurring payments. The user enters the payee's name, account number, and payment amount, and can select a one-time or recurring payment. The user can also view their payment history and edit or delete upcoming payments.



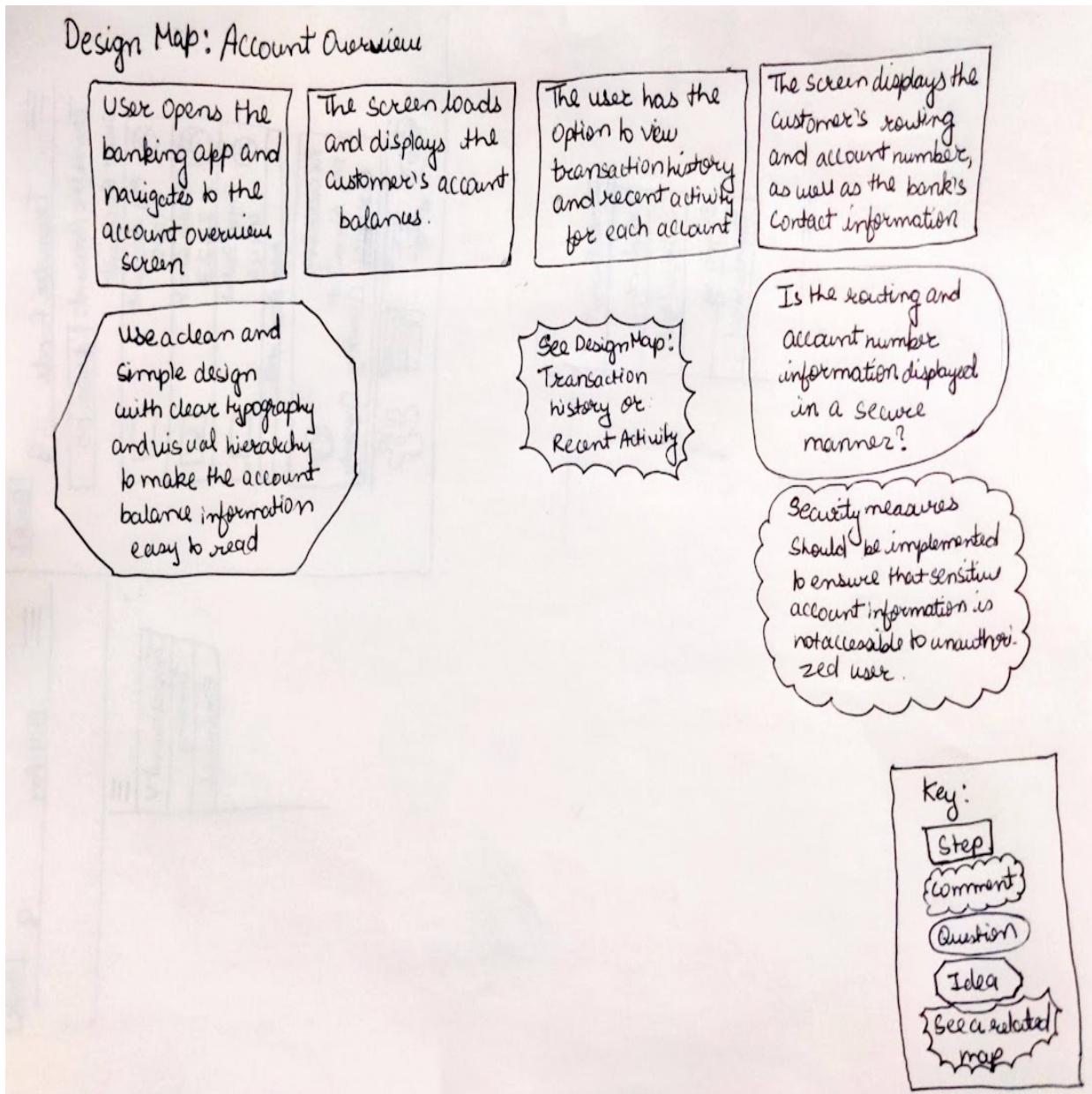
6. The user clicks on the Settings icon and is taken to a screen that allows them to manage their account settings, such as updating personal information or changing their password. The user can also enable push notification for account activity, set up automatic transfers or payments, and view the app's terms and conditions.

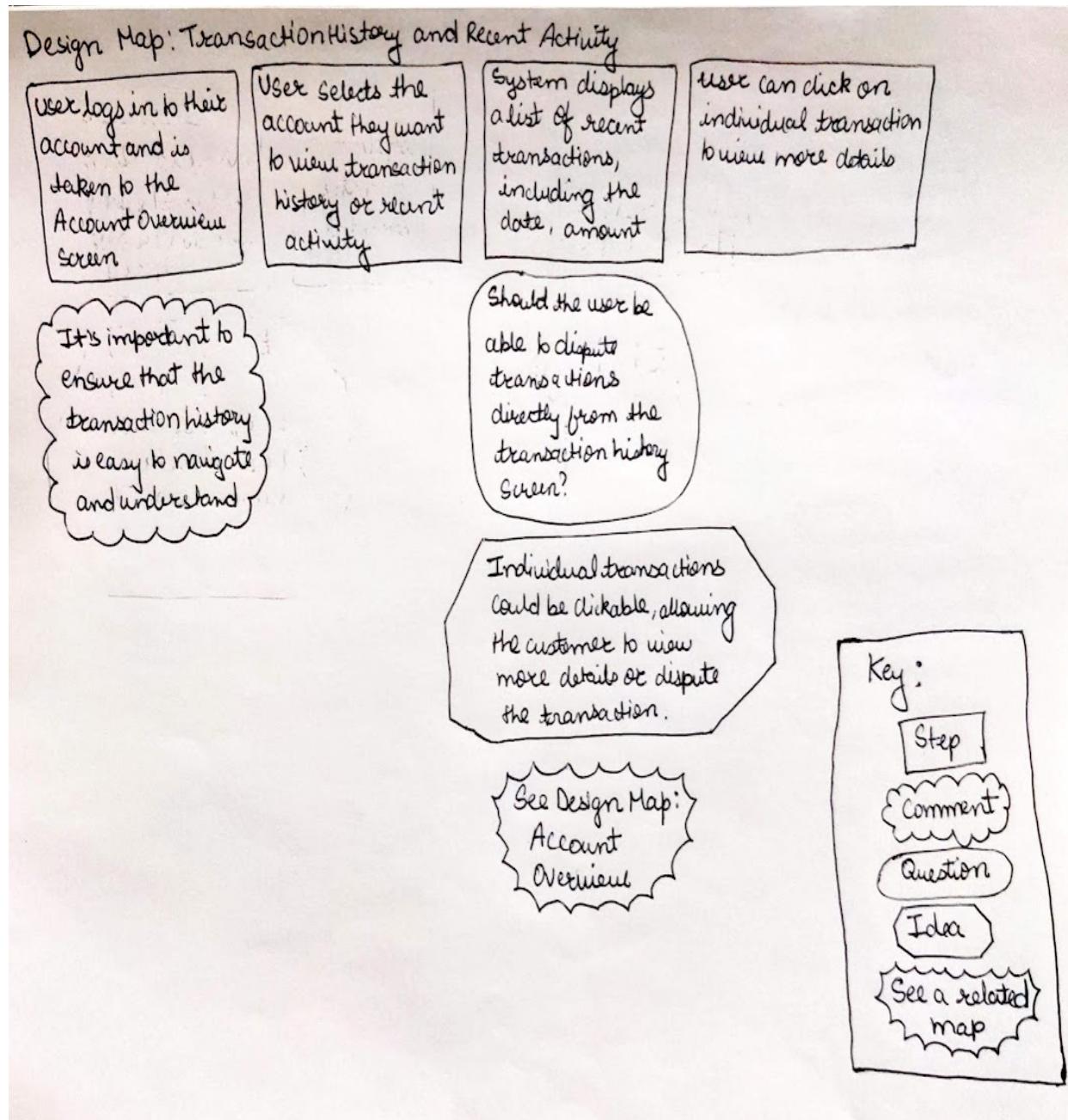


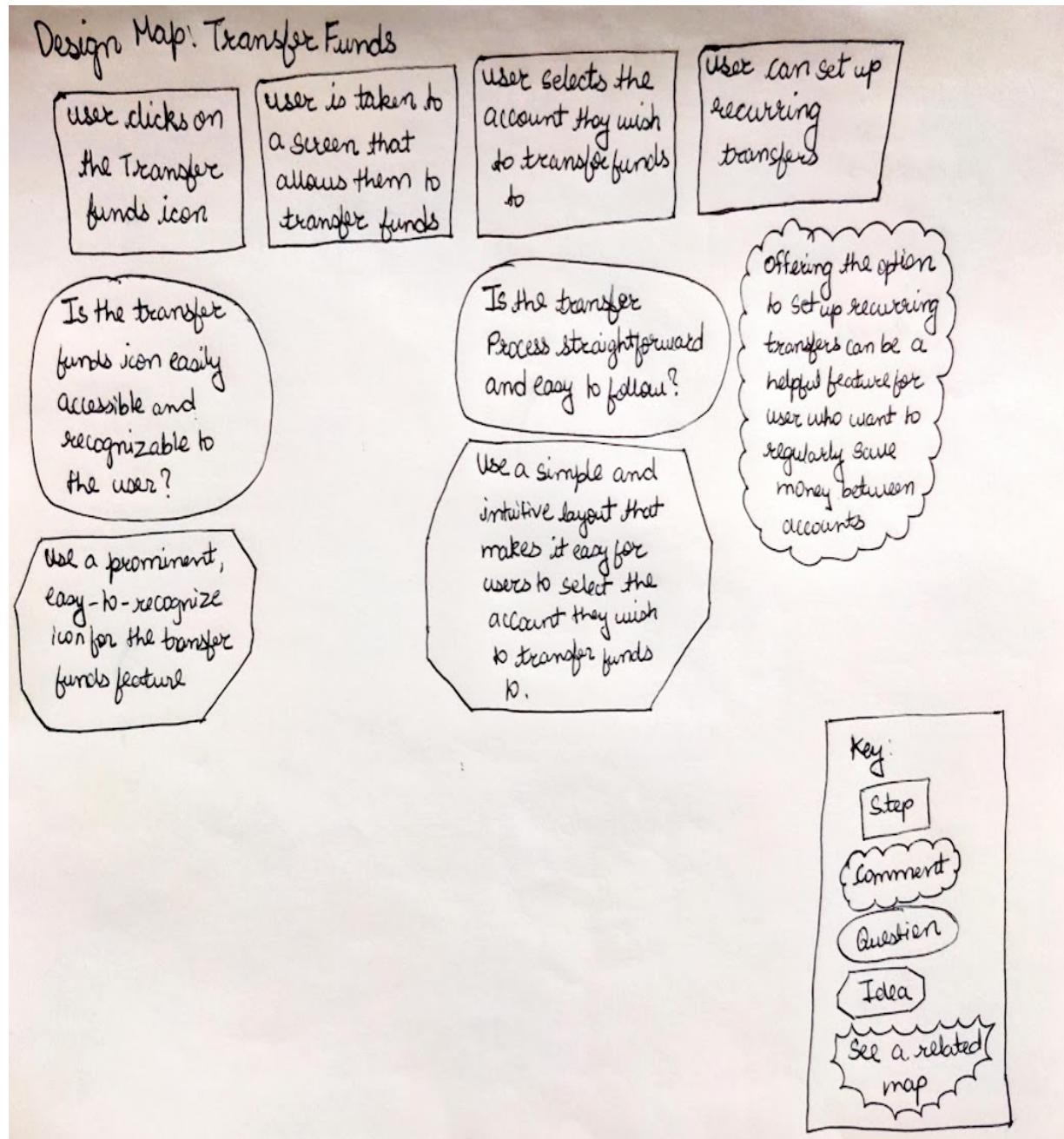
7. If the user wants to access investment banking features, they can click on the Investment button in the menu. This will take them to a screen that provides an overview of their investment portfolio, including the performance of their investments, asset allocation, and risk level. They can also buy and sell stocks, bonds, and other securities, view the current market prices of various securities, and set alerts for price changes or place limit orders to buy or sell securities at a specific price. Additionally, they can use the Financial planning feature to create financial goals and develop a plan to achieve them.



## User Experience Map:







### Design Map: Bill Pay

User clicks on the Bill pay icon on the home screen.

User is directed to a page where they can pay bills, view payment history and setup recurring payments.

User enters the payee's name, account number and payment amount.

User selects one-time or recurring payment option

User submits payment information

It's essential to make sure that user can easily find the Bill pay feature on the home screen.

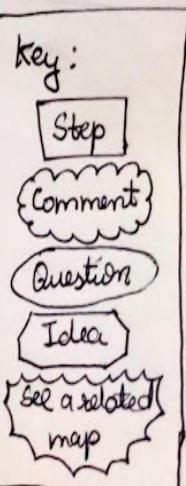
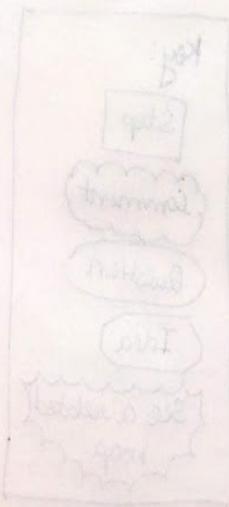
Use visual cues such as icons and graphics to help users navigate the payment process.

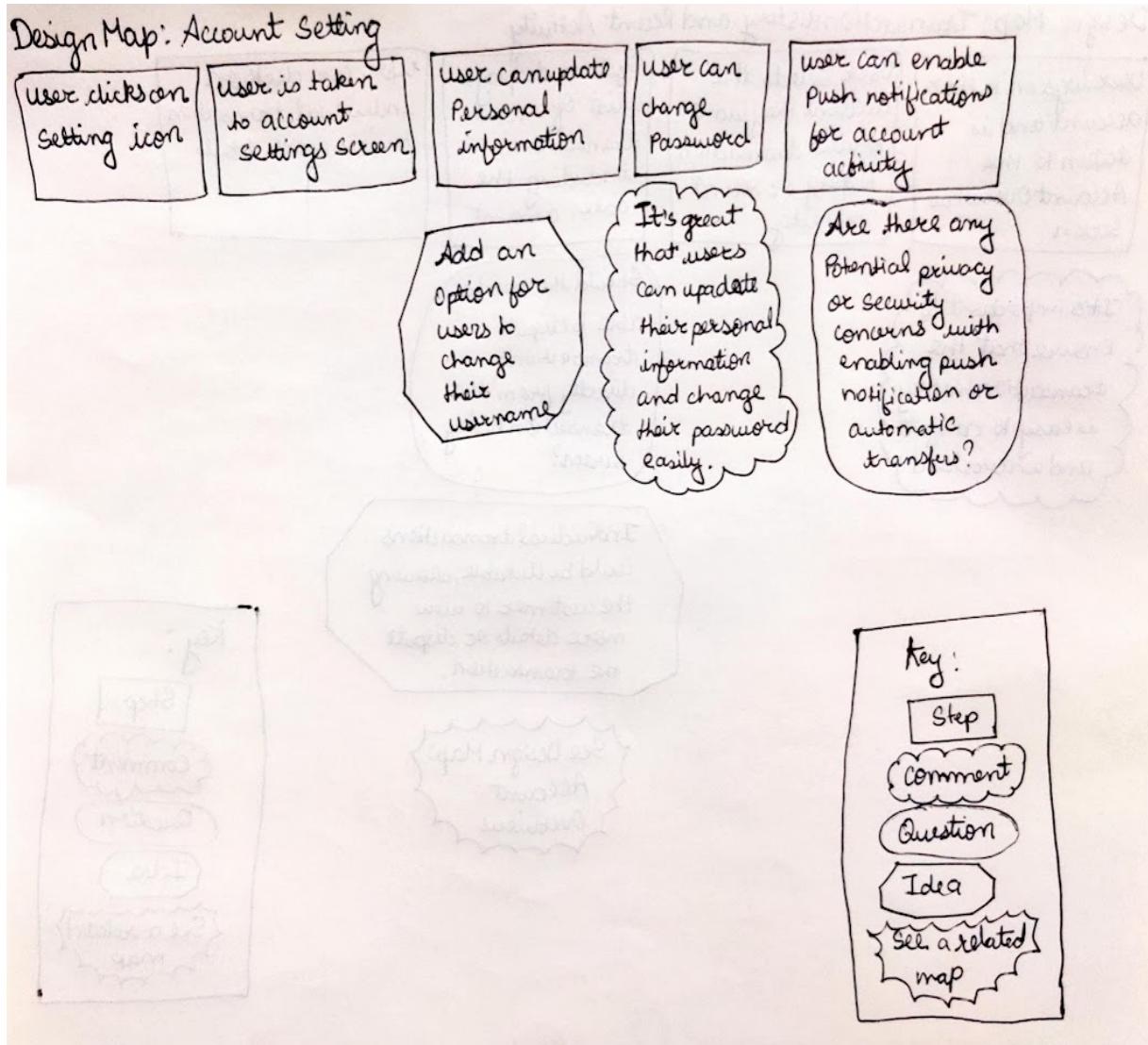
Is the payment process intuitive and easy to follow?

Are the payment options clear and straightforward?

The payment process should be designed to minimize user errors and ensure that user completes payments without any issues.

Include a search bar on the Bill pay page to help users find payee quickly.





## Step 5 Lessons Learned:

Throughout the design process, I analyzed several prototypes and evaluated them based on their usability and practicality. I learned that designing a user-friendly and intuitive interface requires a deep understanding of the users' needs and preferences. It is also essential to test the interface with real users and incorporate their feedback to refine the design further.

In terms of our perception of computer interfaces, I have come to appreciate the importance of simplicity and clarity in design. A cluttered or confusing interface can lead to

frustration and errors, whereas a streamlined and intuitive interface can enhance user experience and increase efficiency.

I also learned that it is crucial to prioritize the most critical tasks and features and ensure that they are easily accessible to the users. In addition, the design must be flexible enough to accommodate different user types and their unique needs and preferences.

In conclusion, the design process has taught me the importance of user-centered design and the iterative process of testing, evaluating, and refining. It has also given a newfound appreciation for the art and science of designing computer interfaces that enhance user experience and meet users' needs effectively.