



An Expense Tracker

Minor Project - VI sem - IS6C06

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INTRODUCTION →

The project titled **PennyWise** is an expense tracking web application which helps the user to track and analyze personal expenses & loans.

The basic idea is to fetch the expense data from the user manually and to provide meaningful insights { graphical representation } related to the user's expense data.

OBJECTIVES

- To Design and develop a Web Application that enables users to keep track of their expenses and loans.
- To provide an automatic categorization feature {by incorporating machine learning algorithms} that classifies expenses into various categories .
- To provide graphical visualizations which help the users to gain a better understanding of their spending patterns.

EXISTING SYSTEM →

The existing system for expense tracking typically involves manual methods such as pen-and-paper, spreadsheets, or basic note-taking applications.

Limitations:

- Time-consuming
- Hard to keep track of expense history
- Prone to errors
- Lack of features for analysis .

PROPOSED SYSTEM →

An online web application which is built to overcome all the previously mentioned limitations with features such as automatic categorization , graphical analysis.

Advantages:

- Not time consuming as expenses are automatically categorized and all kinds of analysis are made automatically.
- Easy to keep track of expense history as it is stored in the database.
- Users can avoid mistakes and errors in calculations as it is handled by the computer itself.

LITERATURE SURVEY→

[1.] "**eExpense**" : Research paper by Shahed Anzarus Sabab & Sadman Saumik Islam published in ICEEICT dated 31st January 2019 :

- An automated Android-based expense tracking system.
- Users can scan bills or receipts to extract expense details,
- the application monitors input through SMS tracking.

LITERATURE SURVEY →

[2.] "**Expense Tracker**" : Research paper by Prof Miriam Thomas & Lekshmi P published in IJAR SCT dated 4th September 2020:

- Web application
- For efficient daily expense management.
- Users can enter income for daily expense calculations.
- Predictive data mining.

LITERATURE SURVEY→

[3.] "**Supervised multi-class text classification**" : Research paper by Susan Li published in TDS dated 19th February 2018 :

- Model that categorizes the expenses based on the entered text.
- Uses Scikit-Learn and algorithms like logistic regression in predicting the category.
- Similar idea was used to build our model.

HARDWARE REQUIREMENTS

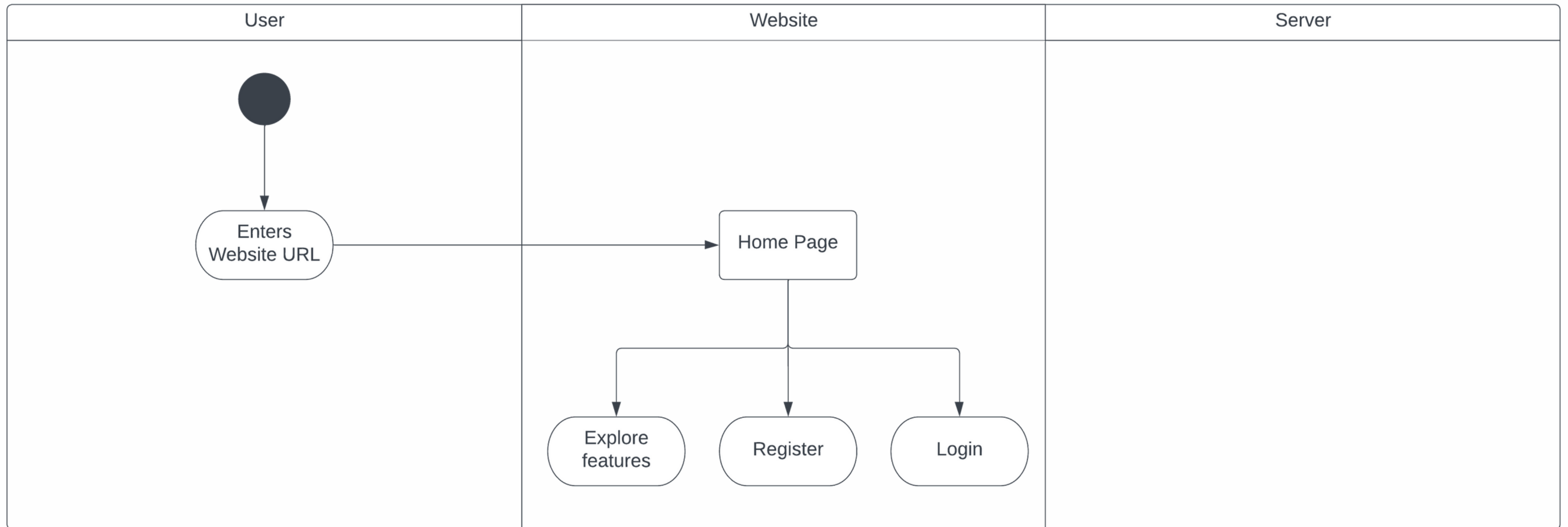
- Processor: 8th gen Intel Core i5 or higher
- Memory: 8GB RAM or above
- Clock speed: 2.7GHz or higher

SOFTWARE REQUIREMENTS

- Jupyter Notebook - For ML model
- VS Code - As a Code editor
- Python 3.10 - For ML model
- NumPy - For ML model
- Pandas - For ML model
- Node.js - For Backend development
- Express.js - For Backend development
- EJS - As a Frontend templating engine
- Bootstrap - For Frontend designs
- MongoDB - For Database operations

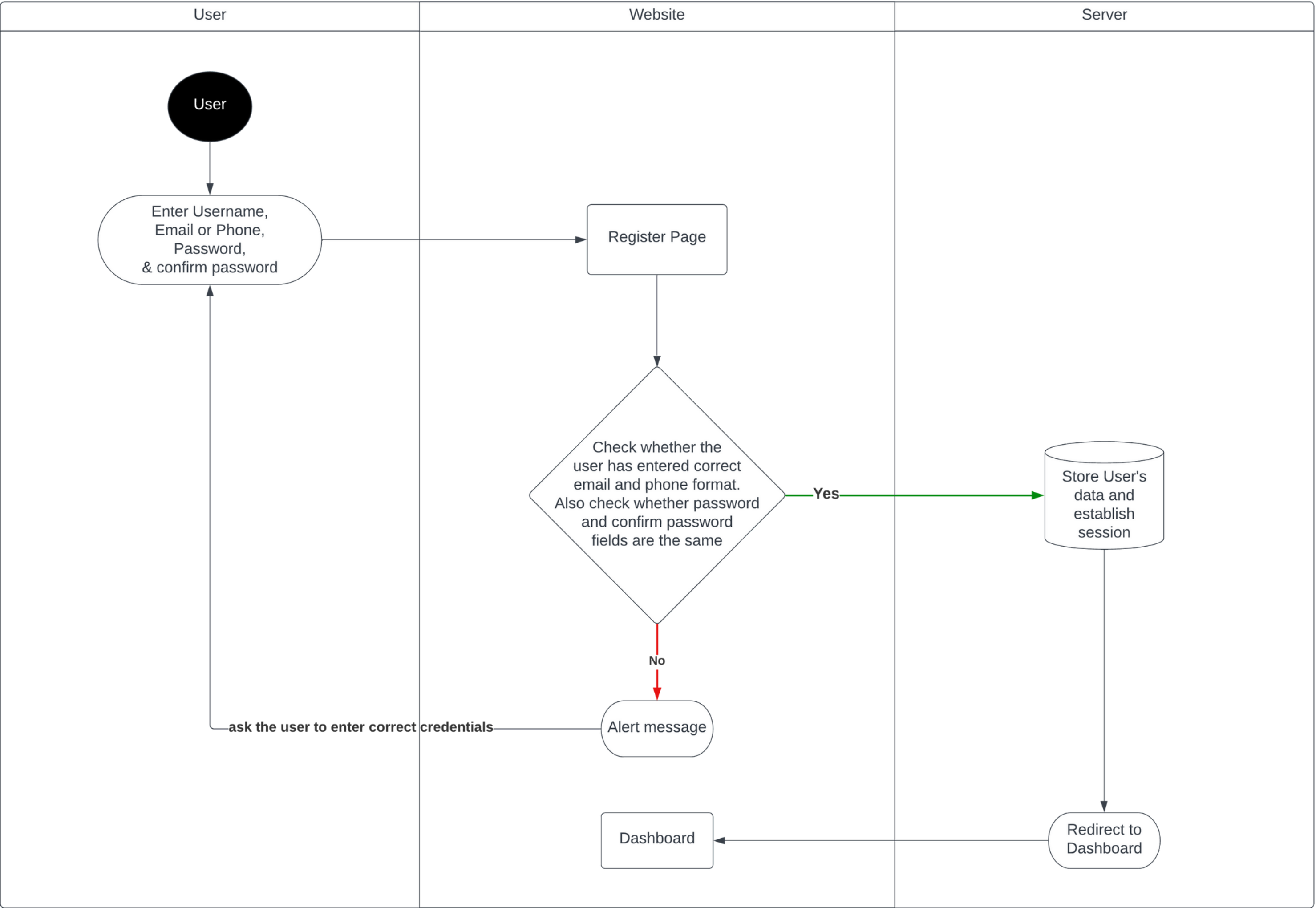
Project Design

1. Home page



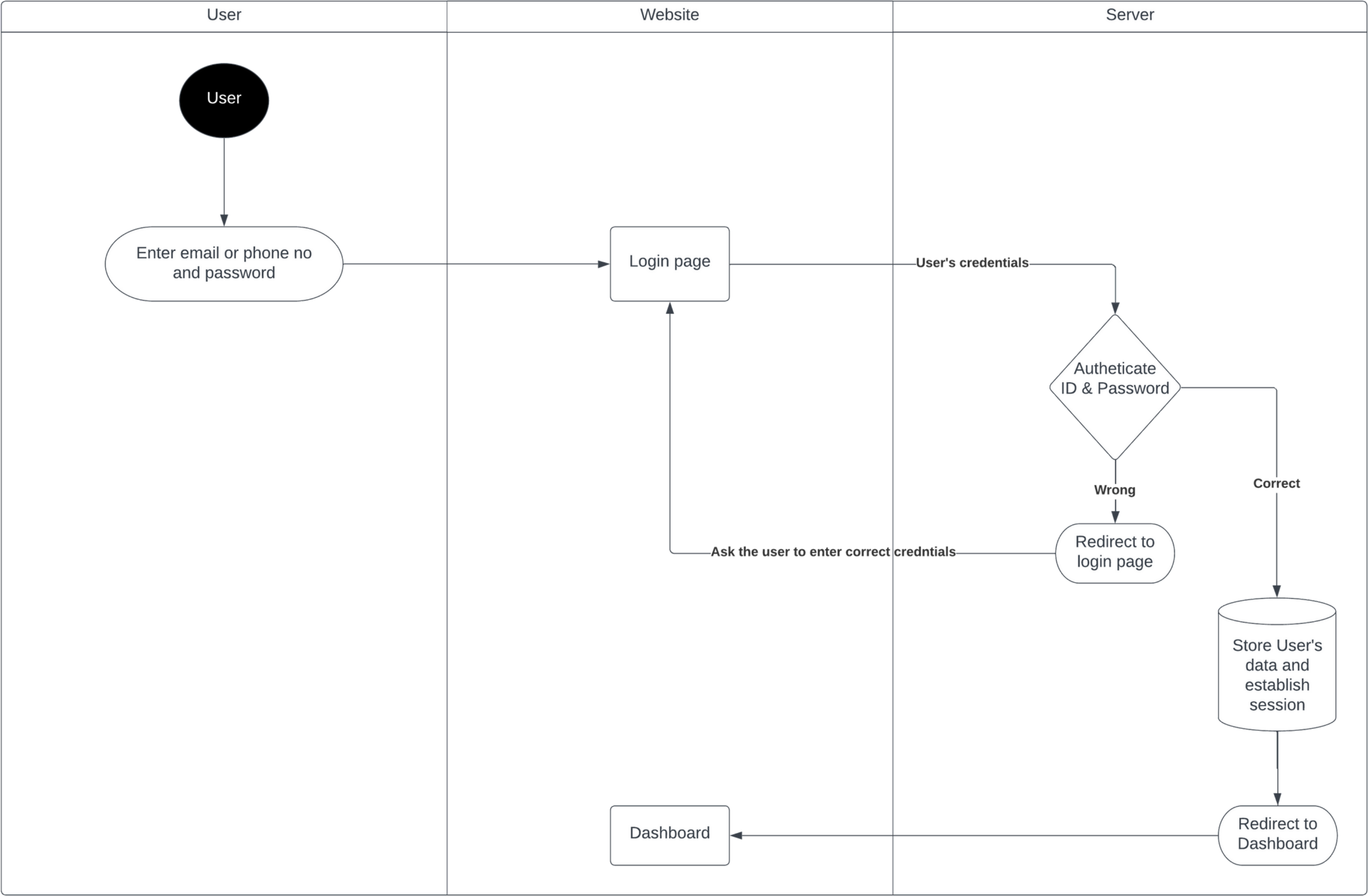
Project Design

2. Register



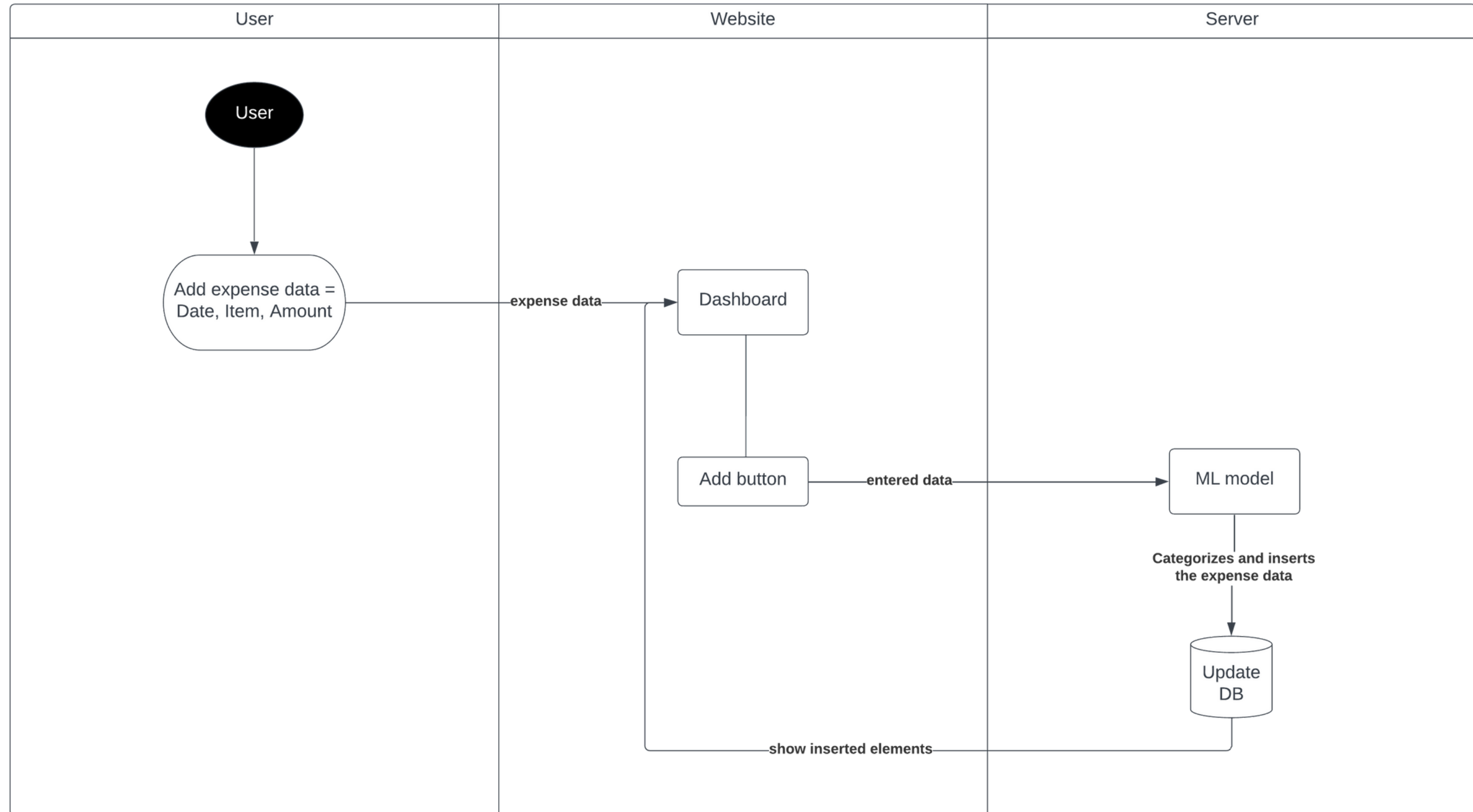
Project Design

3. Login



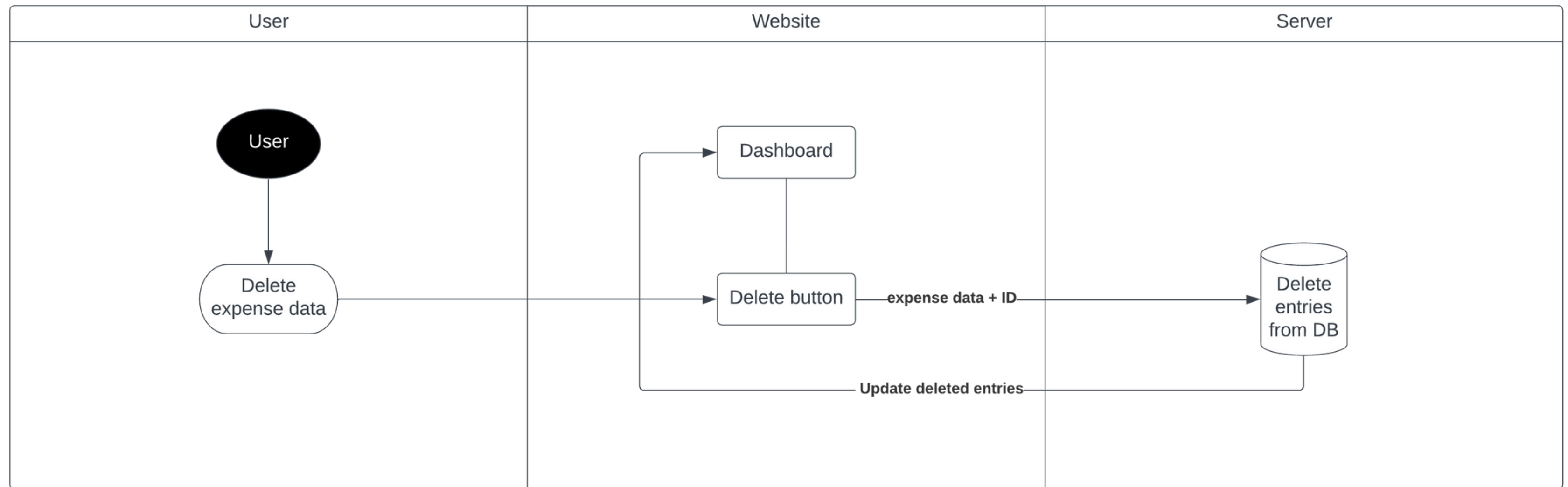
Project Design

4. Add Expense Data



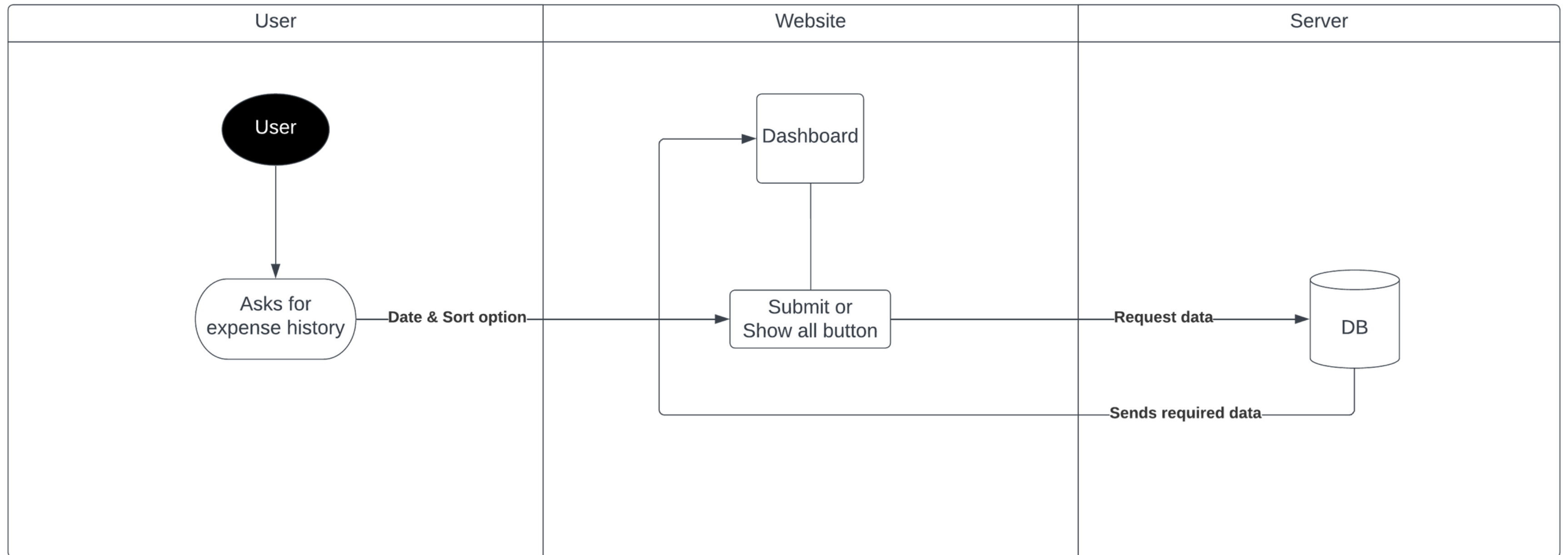
Project Design

5. Delete Expense Data



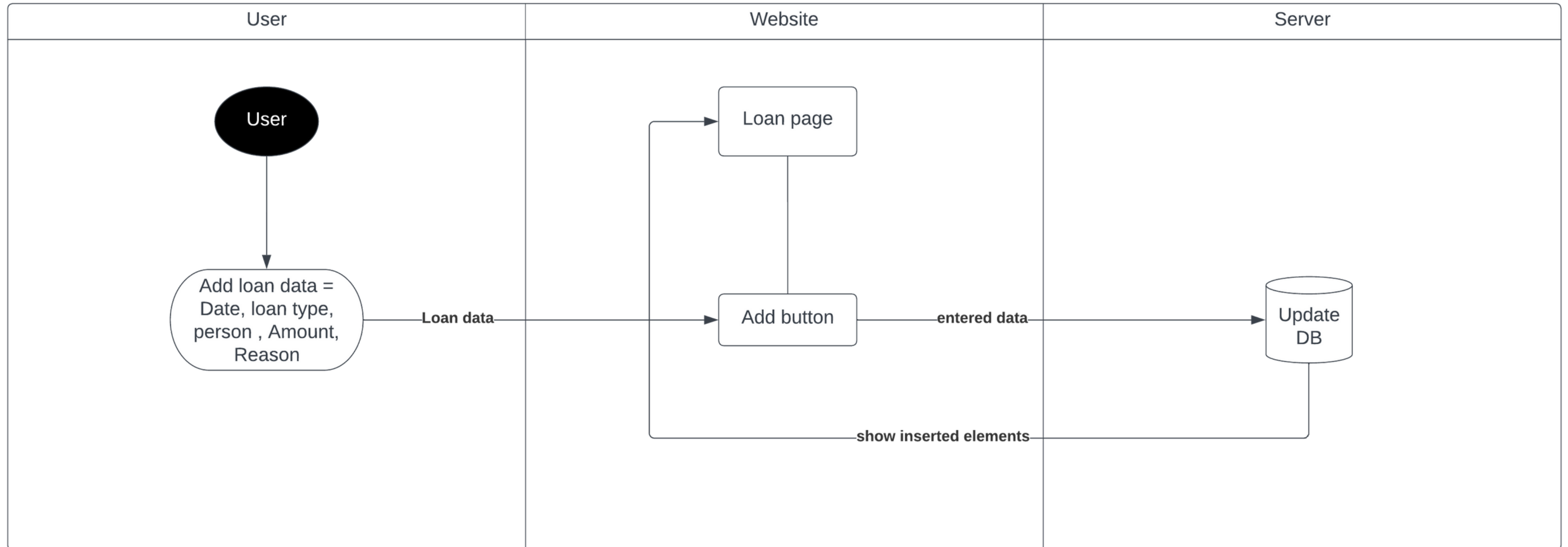
Project Design

6. Show expense history



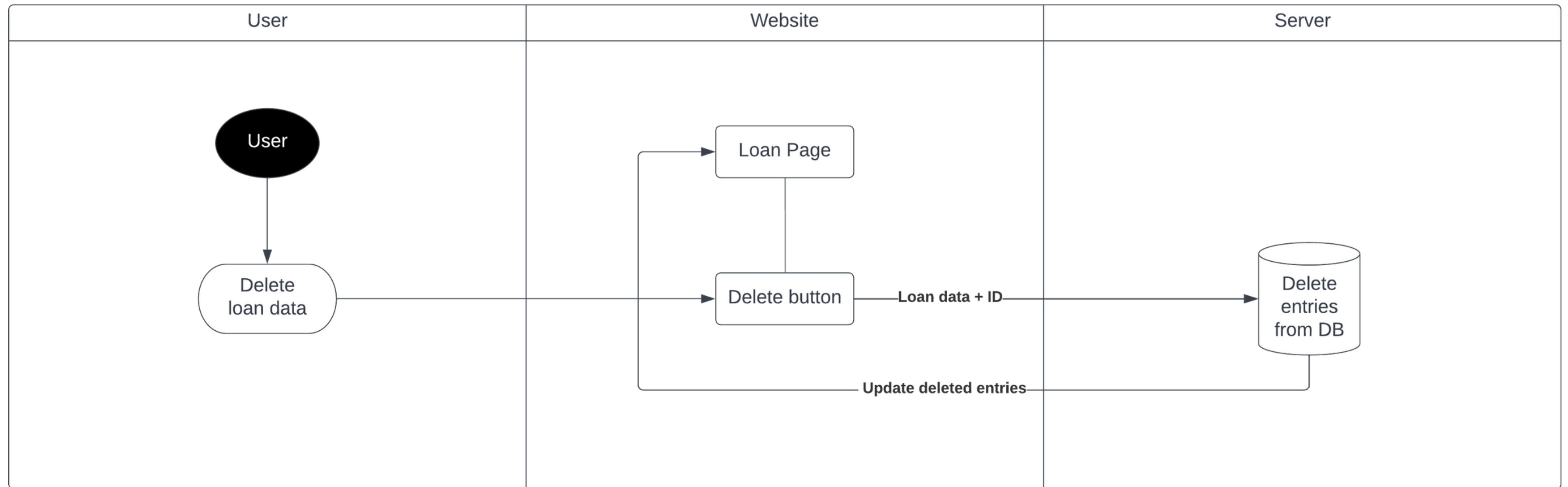
Project Design

7. Add loan data



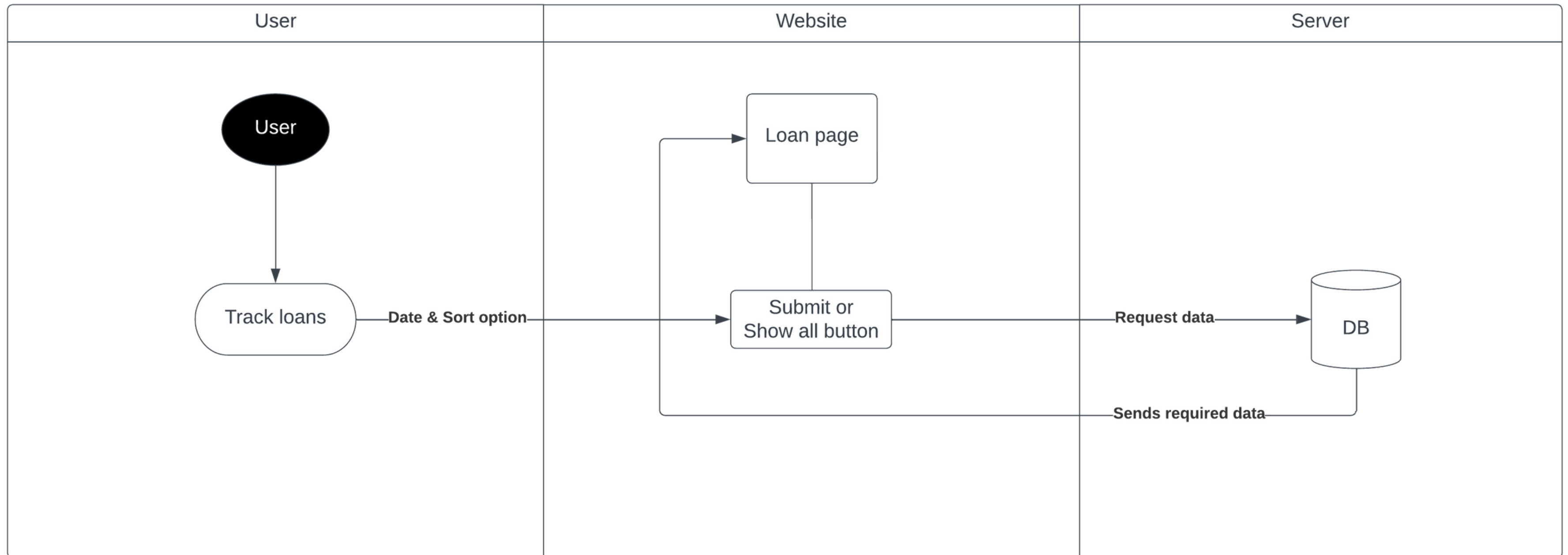
Project Design

8. Delete loan data




Project Design


9. Track loans



System Implementation

1.Register page





Register to Continue

Name

Email or Phone

Password

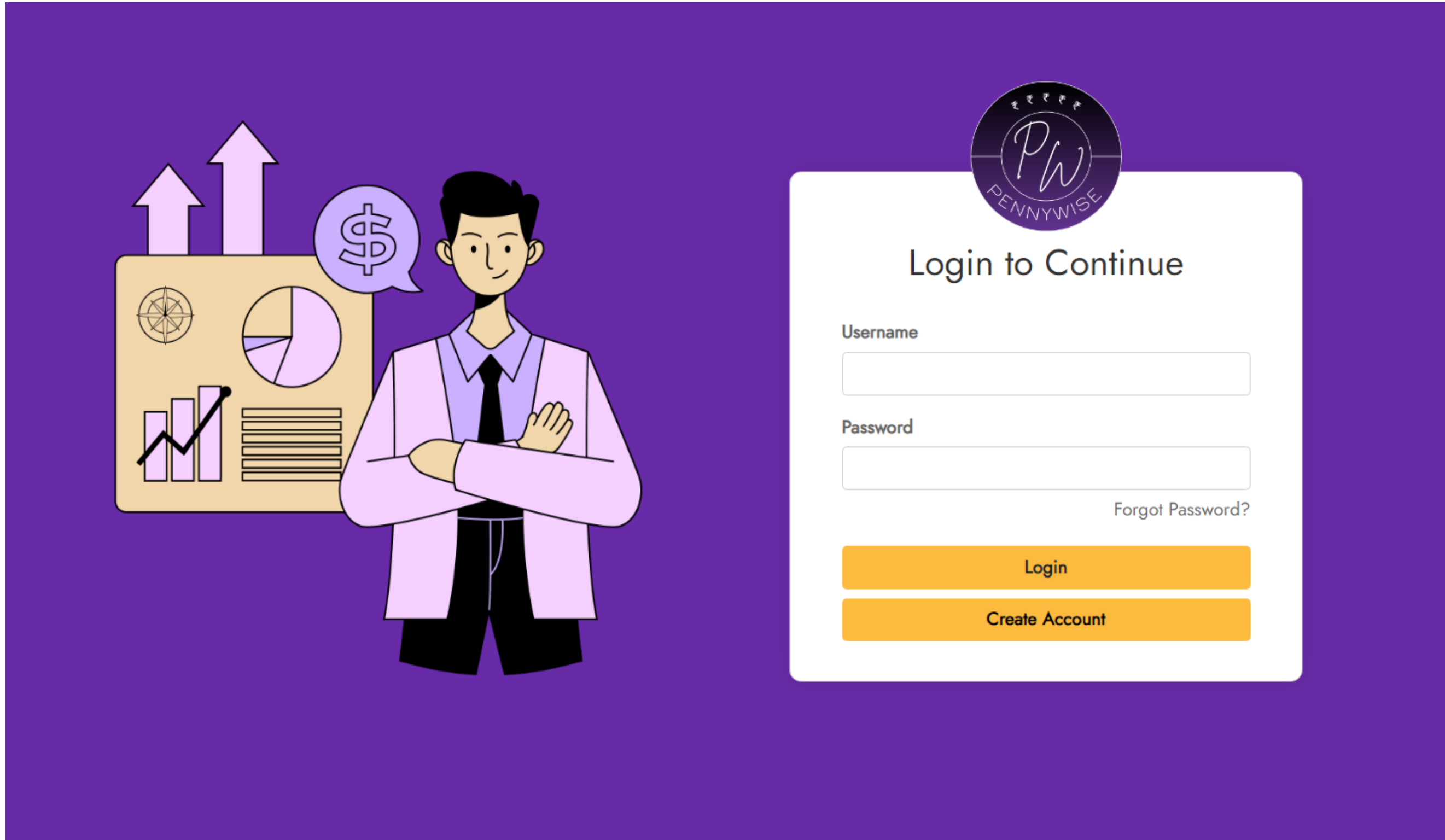
Confirm Password

Register

Already have an account? [Login here.](#)

System Implementation

2. Login page



System Implementation

3. Dashboard page - to add or delete expenses

Hello vadi

Welcome to your Dashboard

Add or Delete your expenses here

Date:

22-04-2023

Item:

Add item

Amount:

Amount in Rs

+

22/04/2023

dosa

Rs 50

-

22/04/2023

dolo 650

Rs 40

-

22/04/2023

petrol

Rs 200

-

23/04/2023

current bill

Rs 1000

-

23/04/2023

water bill

Rs 200

-

System Implementation

4. Dashboard page - to show expense history

Your expense history

Date:

Sort By:

Show all

Submit

| ITEM | AMOUNT IN RS | DATE | CATEGORY |
|----------|--------------|------------|----------|
| dosa | 50 | 22/04/2023 | NA |
| dolo 650 | 40 | 22/04/2023 | NA |
| petrol | 200 | 22/04/2023 | NA |

System Implementation

5. Loan page - to add or delete loans

Add/Delete Loans

Date:

dd-mm-yyyy

Loan Type

Lent

From

Vanamala

Amount:

Amount in Rs

Reason

Reason

+

26/05/2023

borrowed from Vanamala

100

-

28/05/2023

borrowed from Kiran

200

-

03/06/2023

lent to Vanamala

50

-

08/06/2023

lent to Kiran

100

-

Summary

| | | | |
|-----|-----|---------|-------------|
| You | owe | Rs. 50 | to Vanamala |
| You | owe | Rs. 100 | to Kiran |

System Implementation

6. Loan page - to track loans

Track Your loans

Date:

◀

26-05-2023

📅

▶

Sort By:

Any

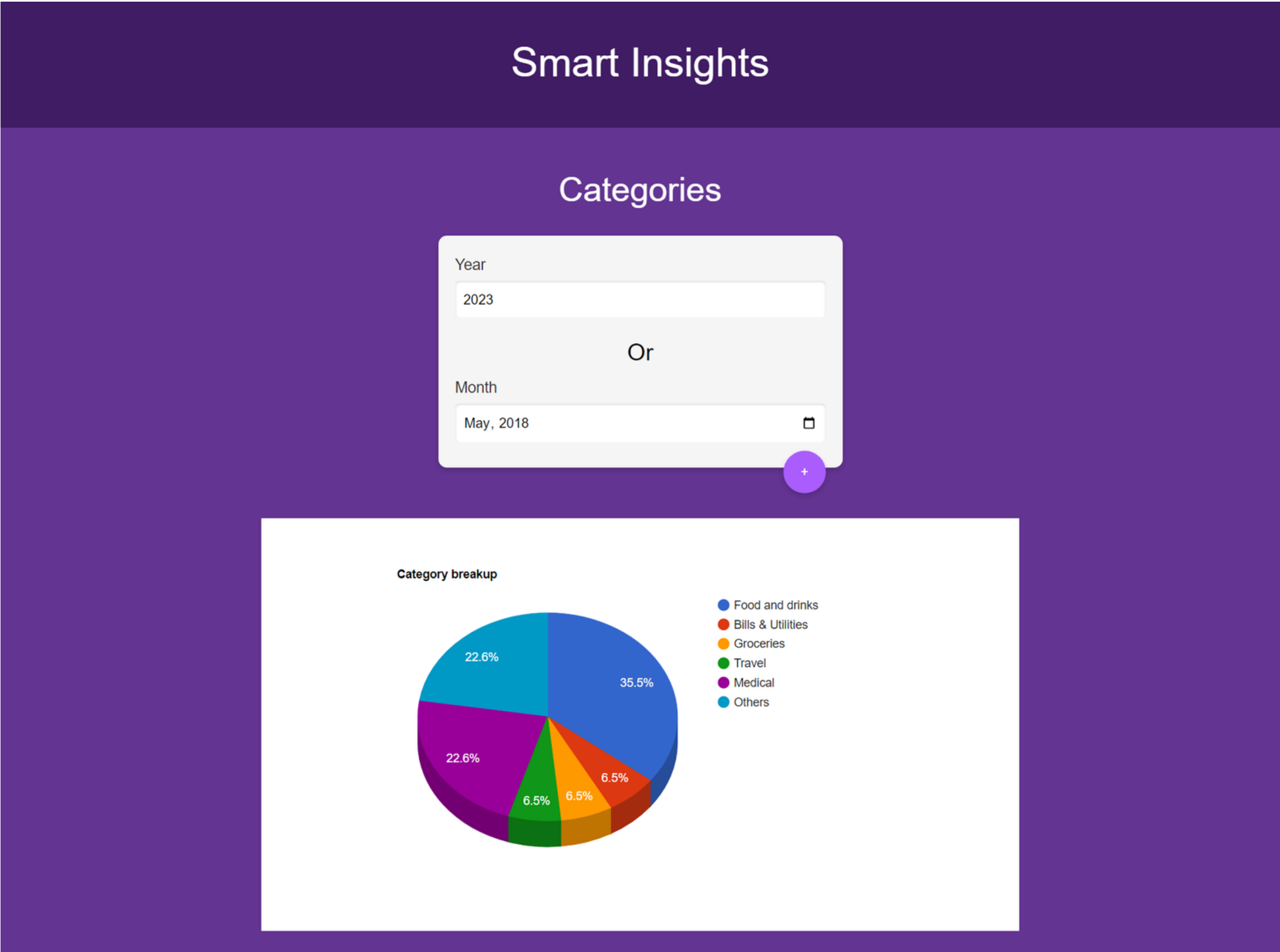
▼

Apply filter

| DATE | TYPE | FROM | REASON | AMOUNT |
|------------|----------|----------|--------------|--------|
| 26/05/2023 | borrowed | Vanamala | Movie ticket | 100 |
| 26/05/2023 | lent | Kiran | tea | 100 |

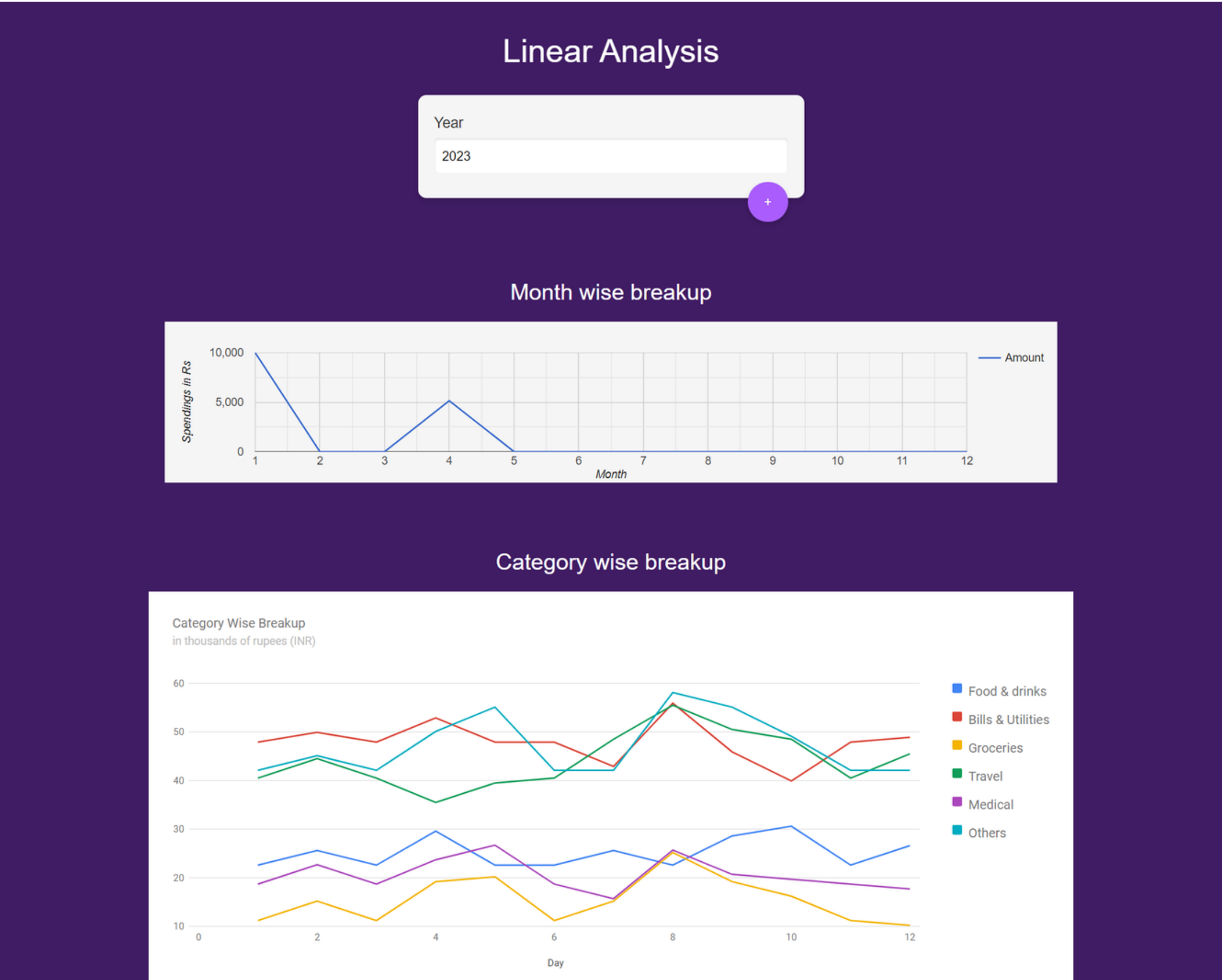
System Implementation

7. Insights page - to represent category wise expense data



System Implementation

8. Insights page - to represent month wise expense data




System Implementation

Deployed website link =

[Click here to access the website...](#)

System Testing

1.Login Page entry



Login to Continue

Username not found


Username

Password

[Forgot Password?](#)

Login

Create Account



Login to Continue

Incorrect password

Username

Password

[Forgot Password?](#)

Login

Create Account

System Testing

2.Register page entry



Register to Continue

Email is already registered

Name

sammedcjain

Email or Phone

sammedcjain@gmail.com

Password

.....

Confirm Password

.....

Register

Already have an account? Login here.

localhost:3000 says

Please give a valid username.
Usernames should not have numbers.

OK

Register to Continue

Name

2020is_sammedcjain_b@nie.ac.in

Email or Phone

tony@gmail.com

Password

....

Confirm Password

....

Register

Already have an account? Login here.

localhost:3000 says

Please enter a valid email address or 10-digit phone number.

OK

Register to Continue

Name

sammedcjain

Email or Phone

sammedcjain@gmail

Password

....

Confirm Password

....

Register

Already have an account? Login here.

System Testing

2.Register page entry

localhost:3000 says
Please enter a 10-digit phone number.

OK

Register to Continue

Name

Email or Phone

Password

Confirm Password

Register

Already have an account? [Login here.](#)

localhost:3000 says
Password and confirm password do not match.

OK

Register to Continue

Name

Email or Phone

Password

Confirm Password


Register


Already have an account? [Login here.](#)

System Testing

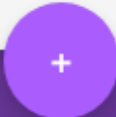
3. Dashboard page entry

Add or Delete your expenses here


Date:
 

Item:
  Please fill out this field.


Amount:




Add or Delete your expenses here


Date:
 

Item:


Amount:
  Please fill out this field.

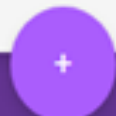


Add or Delete your expenses here

Date:
 

Item:

Amount:
  Please fill out this field.



System Testing

4.Expense history

Your expense history

Date:

Sort By:



Please select an item in the list.

Your expense history

Date:

Sort By:

Apply filter

No elements found for this date.

Show all

System Testing

5.Loan page entry

Add/Delete Loans

Date:
12-05-2023

Loan Type
Borrowed

From
Select a person

Amount:
50

Reason
Taxi

Please select an item in the list.

+

Add/Delete Loans

Date:
31-05-2023

Loan Type
Lent

From
Kiran

Amount:
Amount in Rs

Reason
Taxi

Please fill out this field.

+

Add/Delete Loans

Date:
17-06-2023

Loan Type
Lent

From
Sajjan

Amount:
1000

Reason
Reason

Please fill out this field.

+

System Testing

6.Loan history

Track Your loans

Date:

Sort By:

Apply filter

No elements found for this date.

Show all

Track Your loans

Date:

Sort By:



Please select an item in the list.

Conclusion

- All the defined objectives have been successfully implemented .
- With its user-friendly interface and various features, Pennywise empowers users to achieve better financial control, paving the way for improved financial health.
- Extensive testing procedures have been implemented to verify the functionality & performance aspects of the application.
- Through these tests, most of the issues or bugs have been identified and addressed, resulting in a stable application.
- Overall, this project delivers an efficient solution for managing expenses and loans, empowering users to make informed financial decisions and improve their financial well-being.

Future Enhancements

- Expense Sharing and Splitting : Introduce features that enable users to share and split expenses with friends, family, or colleagues.
- Mobile SMS data integration : Integration of user's mobile messages containing money transactions to automatically add expenses to the PennyWise app.
- Integration with Digital Wallets and Payment Platforms: Expand integration capabilities to include popular digital wallets and payment platforms.
- Enhanced user accessibility: Developing mobile versions of PennyWise for Android and iOS devices.

Thank
You

