

Team ID	PNT2022TMID33355
Project Name	Personal Expense Tracker Application
Team members	S.Kaviya Dharshini U.Kiruthika V.Ponnarasi P.Karthick

1.INTRODUCTION

1.1 Project Overview

Nowadays people are concerned about the regularity of their daily expenses. This is done mainly to keep a track of the users' daily expenses to have a control of users' monthly expenses. We have developed an android application named as "Expense Tracker Application" and this application is used to manage the user's daily expenses in a more coherent and manageable way. This application will help us to reduce the manual calculations for their daily expenses and also keep track of the expenses. With the help of this application, the user can calculate his total expenses per day and these results will be stored for unique users. As the traditional methods of budgeting, we need to maintain Excel sheets, Word Documents, notes, and files for the user's daily and monthly expenses. There is no as such full-fledged solution to keep a track of our daily expenses easily. Keeping a log in diary is a very monotonous process and also may sometimes lead into problems due to the manual calculations. Looking on all the above given conditions, we are trying to satisfy the user requirements by building a mobile application which will help them reduce their burdens. "Expense Tracker Application" is an application where one can enter their daily expenses and at the end of the day, they know their expenses in charts.

1.2 Purpose

Expense tracker is an android based application. This application allows the user to maintain a computerized diary. Expense tracker application which will keep a track of Expenses of a user on a day-to-day basis. This application keeps a record of your expenses and also will give you a category wise distribution of your expenses. With the help of this application users can track their daily/weekly/monthly expenses. This application will also have a feature which will help you stay on budget because you know your expenses. Expense tracker application will generate a report at the end of month to show Expense via a graphical representation. We also have added a special feature which will distribute your expenses in different categories suitable for the user. An expense history will also be provided in application.

2. LITERATURE SURVEY

2.1 Existing Problem

The Expense tracker existing system does not provide the user portable device management level, existing system only used on desktop software so unable to update anywhere expenses done and unable to update the location of the expense details disruptive that the proposed system provides . In existing, we need to maintain the Excel sheets, CSV files for the user daily, weekly and monthly expenses. In existing, there is no such complete solution to keep a track of its daily expenses easily. To do so a person has to keep a log in a diary or in a computer system, also all the calculations need to be done by the user which may sometimes result in mistakes leading to losses. The existing system is not user friendly because data is not maintained perfectly. But this project will not have any reminder to remain a person on a specific date, so that is the only drawback in which the remainder is not present. This project will be unpopulated because it has some disadvantages by not reminding a person for each and every month. But it can used to perform calculation on income and expenses to overcome this problem we propose the new project.

2.2 References

- [1] KAZI, A., KHERADE, P. S., VILANKAR, R., & SAWANT, P. M. (2021). Expense Tracker.
- [2] Geetha, V., Nikhitha, G., & Gomathy, H. S. L. D. C. EXPENDITURE MANAGEMENT SYSTEM
- [3] Manchanda, A. (2012). Expense Tracker Mobile Application (Doctoral dissertation, San Diego State University)

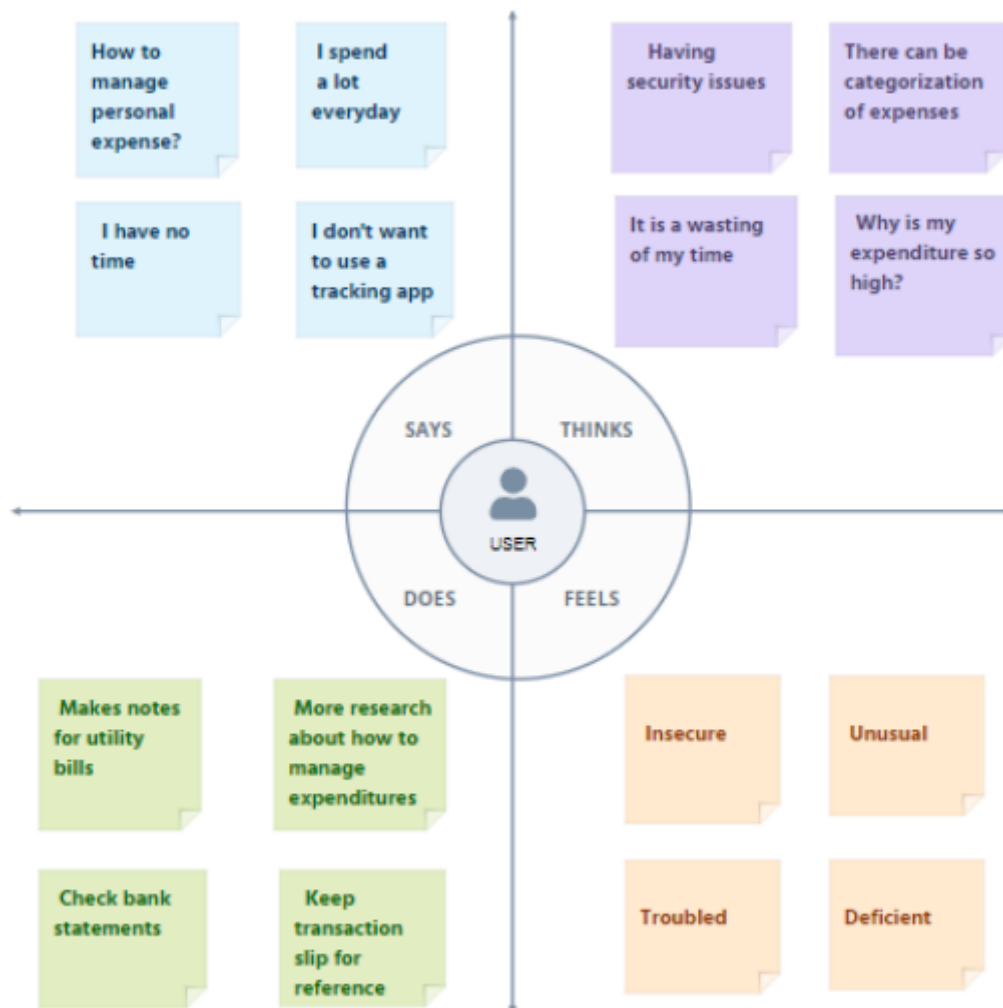
2.3 Problem Statement Definition

In simple words, personal finance entails all the financial decisions and activities that a Finance app makes your life easier by helping you to manage your finances efficiently. A personal finance app will not only help you with budgeting and accounting but also give you helpful insights about money management.

Personal finance applications will ask users to add their expenses and based on their expenses wallet balance will be updated which will be visible to user. Also, users can get an analysis of their expenditure in graphical forms. They have an option to set a limit for the amount to be used for that particular month if the limit is exceeded the user will be notified with an email alert.

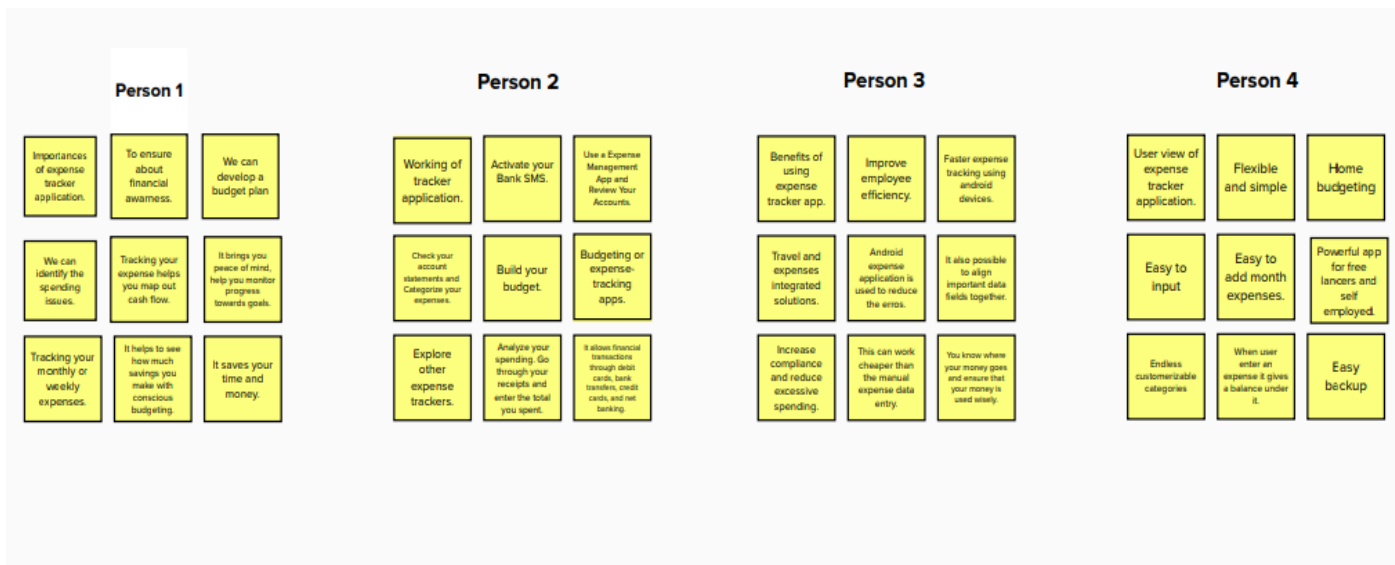
3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

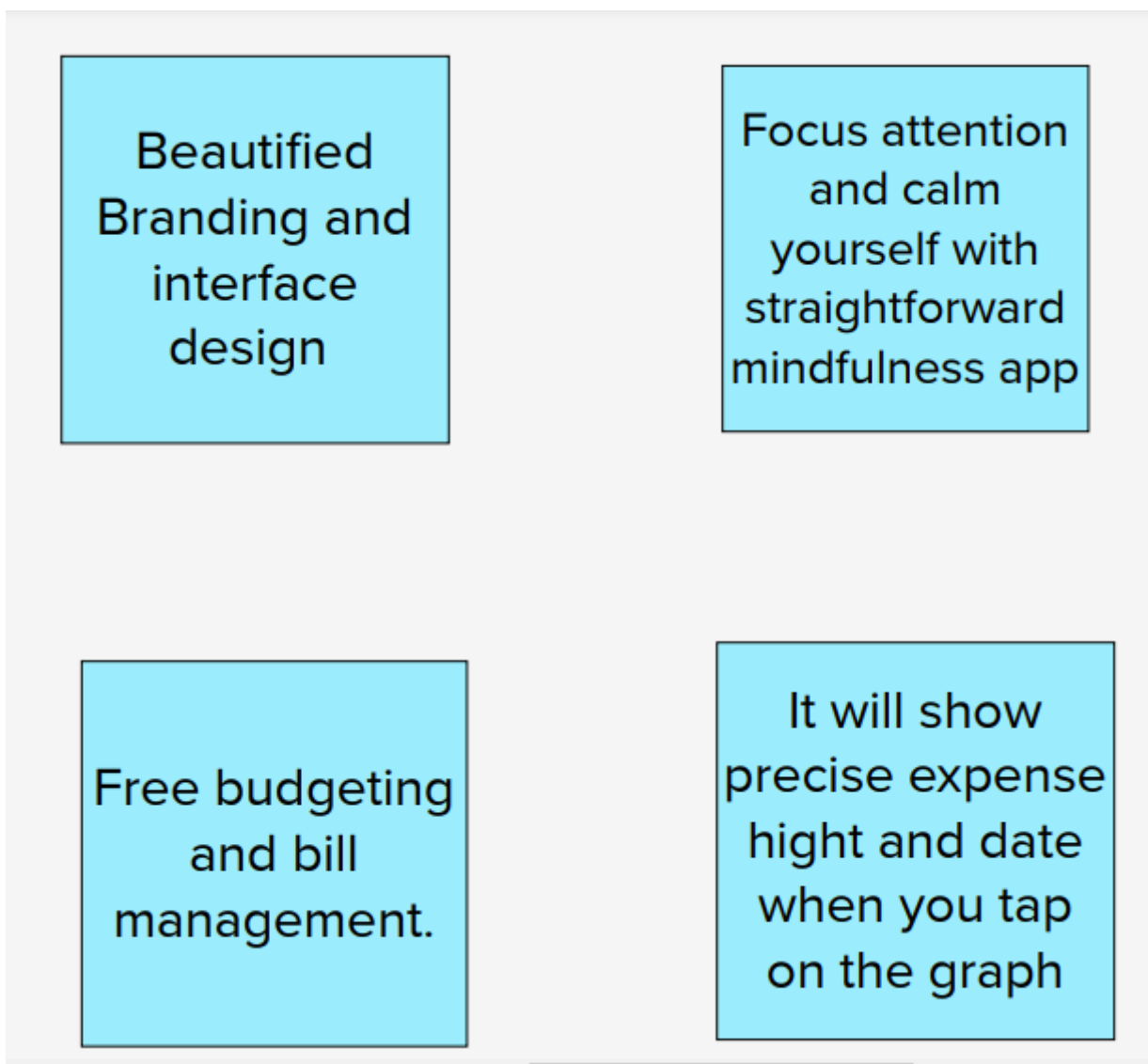


3.2 Ideation & Brainstorming

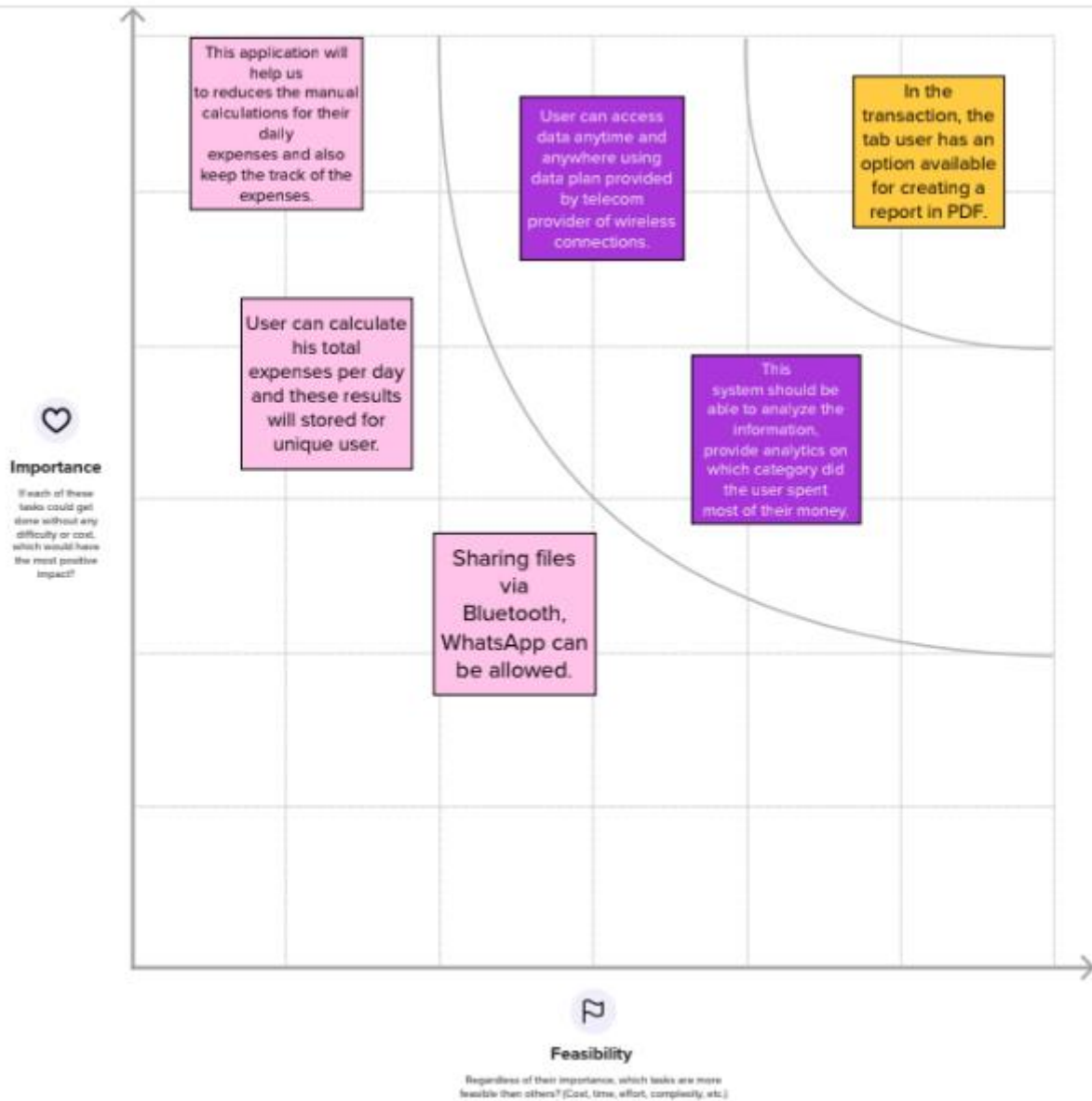
Brainstorm



Group Ideas



Prioritize



3.3 Proposed Solution

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Expense tracker application will generate report at the end of month to show Expense via a graphical representation. We also have added a special feature which will distribute your expenses in different categories suitable for the user.
2.	Idea / Solution description	Expense Tracker is going to be a mobile application so that It can be accessed any time required. This application will have a two-tier architecture: first one is the database tier, where all the data and financial data will be stored. Second it will be the user interface which will support the application user


		<p>communicate with the system and also store Information in the database. The proposed system should operate offline so it can be accessed at any time without internet availability. The proposed system should provide different categories for the user to select from and they can enter the amount and mode of payment. This system should be able to analyze the information, provide analytics on which category did the user spent most of their money. The proposed system should provide a user interface where the user could store and observe their past expenses. To create this system, we will use the android studio and it. It will be written in Java, Xml. MySQL will be the database used.</p>
3.	Novelty / Uniqueness	<p>Ranking the best apps by reviews and popularity is a constantly moving target. And the iOS and Android app universes are vastly different. The number of reviews on Google Play for a search of "expense trackers" is much greater than a similar search on the Apple App Store, except for the leading iOS expense tracker app.</p>

		<ul style="list-style-type: none"> • Easy transaction download. • Automatic logging of recurring transactions. • A forecast of your ending balances at some point in time (cash flow). • Auto-categorization of transactions, especially taxable items. • And one real luxury on the wish list: the ability to scan receipts.
4.	Social Impact / Customer Satisfaction	Build great experiences and a throng of customers will come knocking on our door, buy more of our products and services, and share their experiences with friends or anyone who cares to listen.
5.	Business Model (Revenue Model)	Personal Capital is a full-featured investment manager for hire. It tracks and categorizes all the expenses you make on your credit or debit card. The app creates charts indicating your monthly cash flow. It has two versions: the free financial dashboard and the wealth management service. The wealth management option provides an investment management option, which functions as a robo-advisor while providing live support. The free financial dashboard provides budgeting and a cash flow analyzer. The app can also help you with

		<p>retirement planning and provide an investment checkup.</p> <p>Pricing: Full access to the financial dashboard is free; wealth management service fees start at 0.89% per year.</p>
6.	Scalability of the Solution	<p>Achieve your business goals with a tailored mobile app that perfectly fits your business. Scale-up at the pace your business is growing.</p> <p>Control the security of your business and customer data. Optimize sales processes to generate more revenue through enhanced data collection.</p>


3.4 Problem Solution fit

Problem-Solution fit canvas 2.0		Purpose / Vision	
Define CS, fit into CC	1. CUSTOMER SEGMENTS 1. Family consumers 2. Original Equipment Manufacturers 3. Businesses 4. Political and Government consumers	6. CUSTOMER CONSTRAINTS Some customers don't have no android. Even though some of them having but they do not know how to use.	5. AVAILABLE SOLUTIONS When they faced a problem, they used pen, paper and calculator. Pros is many automatic spending tracking software programs are available for free. Cons is Automated everything to do with your finances can make you financially lazy.
	2. JOBS-TO-BE-DONE / PROBLEMS Provides a framework for defining, categorizing, capturing, and organizing all your customer's needs.	9. PROBLEM ROOT CAUSE 1. Tracking expenses will build a budget that works. 2. Monitor the spending to make sure monthly expenses are covered. 3. Even with a successful budget, check into ensure your spending plan is upto date.	7. BEHAVIOUR Listen carefully to what the customer has to say, and let them finish. Ask the customer, "What would be an acceptable solution to you?"
Focus on J&P, tap into BE, understand RC			Focus on J&P, tap into BE, understand RC
Identify strong TR & EM	3. TRIGGERS Seeing their neighbour or friends installing the application in android, after seeing them getting benefit from this applications, now the new customer also install the applications.	10. YOUR SOLUTION The app features quick and easy on-screen filtering and file linking via E-mail. Live mileage tracking ensures no mileage or time spent travelling is lost. For time tracking, this expense tracker app can be used to customize rates hourly, daily or by visit. The app also makes it simple to calculate overtime.	8. CHANNELS OF BEHAVIOUR Meet customers on their terms. Enable self services. Improve the response time.
	4. EMOTIONS: BEFORE / AFTER Before using application they feel uncertain, after they used they feel positive and govern.		8.2 OFFLINE 1. Direct mail. 2. Industry magazines, papers and journals. 3. Advertising in print.
			Extract online & offline CH of BE



Problem-Solution fit canvas is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 license Created by Daria Neprikhina / Amaltama.com

What kind of actions do customers take online? Extract online channels from #7



4. REQUIREMENT ANALYSIS

4.1 Functional Requirements

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Financial Accounts	Account details Verification of details
FR-4	User Dashboard	Expense Data Data Records
FR-5	User Notifications	System Access Real time Alerting
FR-6	Security of User Data	Secured Database Data Security Algorithms

4.2 Non-Functional Requirements

Following are the non-functional requirements of the proposed solution.

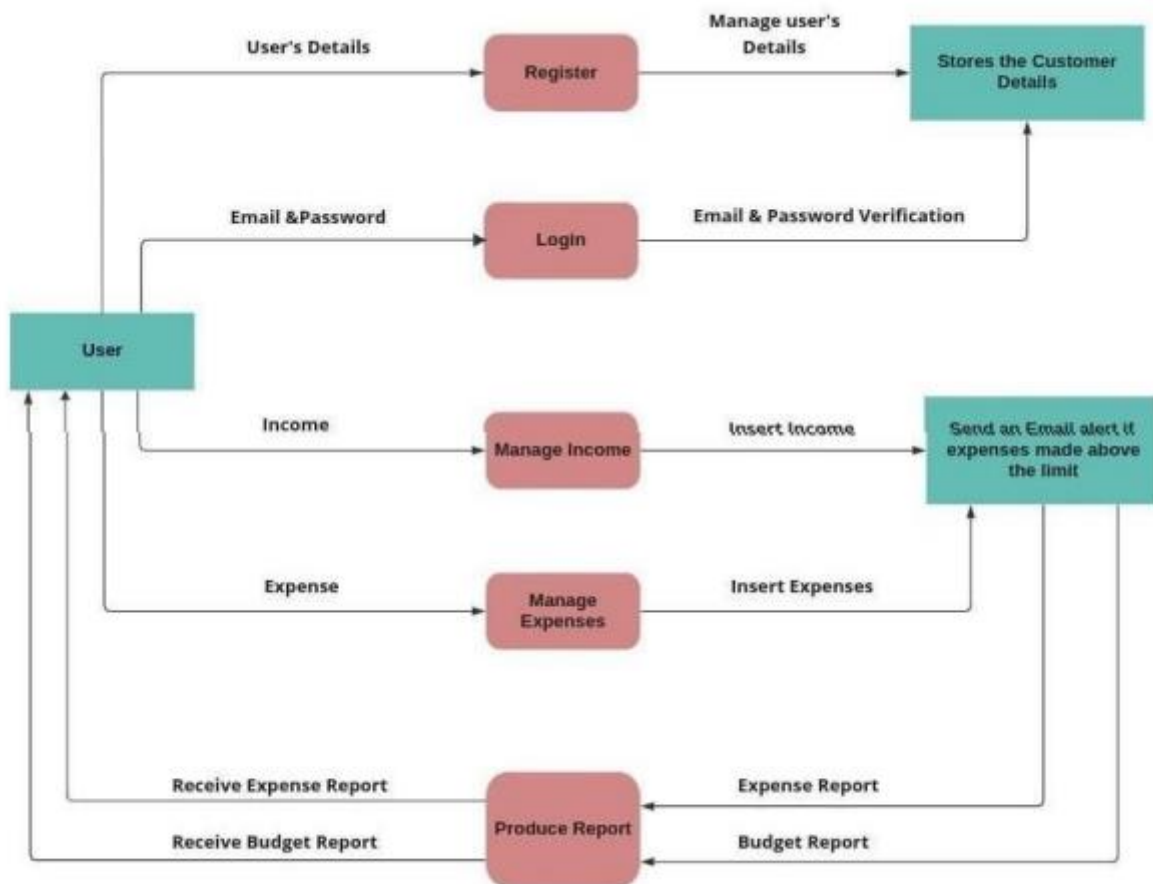
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Usability Testing was also carried out to make the

		acquaintance that how easy to use the application is with a group of representative users.
NFR-2	Security	Employs the latest security and technology measures to keep its customers' personal and financial information safe. Security measures include software and hardware encryption and multi-factor authentication.
NFR-3	Reliability	No repair is required or performed. The system adequately follows the defined performance specifications. to ensure that your products and services work as expected.
NFR-4	Performance	Expense Tracker is going to be a mobile application so that It can be accessed any time required. It provides different categories for the user to select from and they can enter the amount and mode of payment. It should operate offline so it can be accessed at any time without internet availability.
NFR-5	Availability	This application will have various components of updating and viewing users' expenditures. Some of the extra Components are like enabling users to register to the application using existing email or social network account, it will synchronize the users profile data to the application.
NFR-6	Scalability	Prioritizing it from the start leads to lower maintenance costs, better user experience, and higher agility. It highly-customizable infrastructure according to specific customer's needs. Already some categories pre-defined in the application. If user want to add more categories that are also available in the application.

5. PROJECT DESIGN

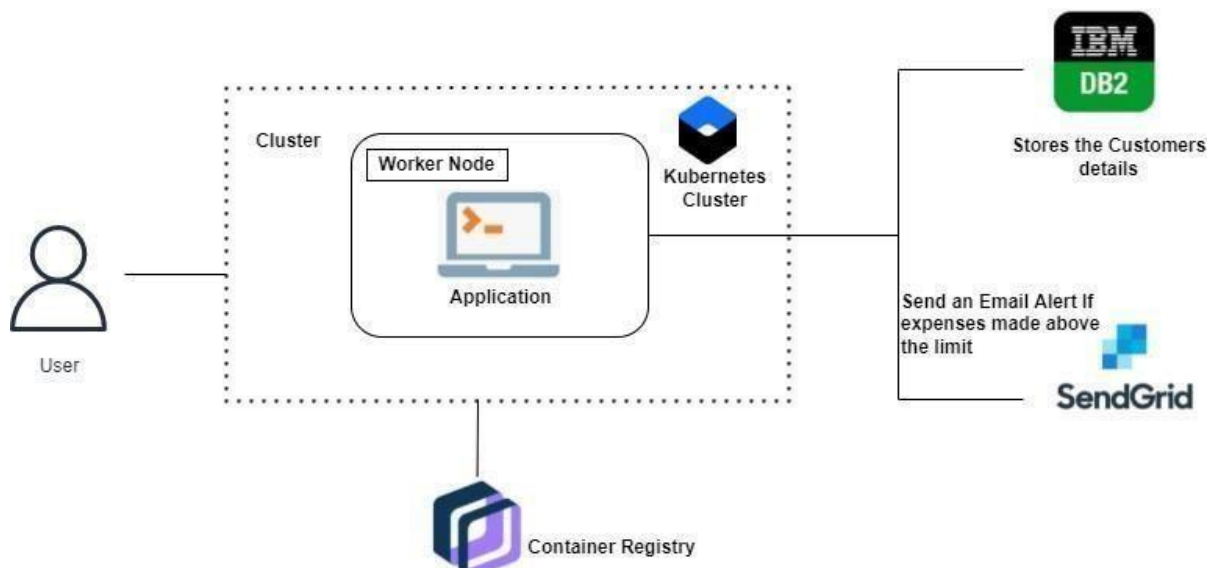
5.1 Data Flow Diagram

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



Technical Architecture

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2



User Stories

Use the below template to list all the user stories of the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobileuser & web user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	
		USN- 3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	
	Login	USN -4	As a user, I can log into the application by entering email & password	I can access the application	High	
	Dashboard	USN -5	As a user I can enter my income and expenditure details.	I can view my daily expenses	High	
Customer Care Executive		USN 6	As a customer care executive I can solve the log in issues and other issues of the application.	I can provide support or solution at any time 24*7	Medium	
Administrator	Application	USN -7	As a administrator I can upgrade or update the application.	I can fix the bug which arises for the customers and users of the application	Medium	

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Use the below template to create product backlog and sprint schedule.

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint 1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	S Kaviya Dharshini
		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	P.Karthick
	Login	USN-3	As a user, I can log into the application by entering email & password	1	High	U.Kiruthika
	Dashboard	USN-4	Logging in takes to the dashboard for the logged user.	2	High	V.Ponnarasi
Sprint 2	Workspace	USN-1	Workspace for personal expense tracking	2	High	S Kaviya Dharshini
	Charts	USN-2	Creating various graphs and statistics of customer's data	1	Medium	P.Karthick
	Connecting to IBM DB2	USN-3	Linking database with dashboard	2	High	U.Kiruthika
		USN-4	Making dashboard interactive with JS	2	High	V.Ponnarasi
Sprint-3		USN-1	Wrapping up the server side works of frontend	1	Medium	S Kaviya Dharshini
	Watson Assistant	USN-2	Creating Chatbot for expense tracking and for clarifying user's query	1	Medium	P.Karthick
	SendGrid	USN-3	Using SendGrid to send mail to the user about their expenses	1	Low	U.Kiruthika
		USN-4	Integrating both frontend and backend	2	High	V.Ponnarasi
Bug fixes, routine checks and improvisation by everyone in the team *Intended bugs only						
Sprint-4	Docker	USN-1	Creating image of website using docker/	2	High	P.Karthick
	Cloud Registry	USN-2	Uploading docker image to IBM Cloud registry	2	High	S Kaviya Dharshini
	Kubernetes	USN-3	Create container using the docker image and hosting the site	2	High	U.Kiruthika
	Exposing	USN-4	Exposing IP/Ports for the site	2	High	V.Ponnarasi

6.2 Sprint Delivery Schedule

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	23 Oct 2022	28 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	30 Oct 2022	04 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	06 Nov 2022	11 Nov2022	20	02 Nov 2022
Sprint-4	20	6 Days	13 Nov2022	18 Nov2022	20	19 Nov 2022

6.3 Reports from JIRA

Does your team need more from Jira? [Get a free trial of our Standard plan.](#)

Projects / Personal Expense Tracker

Backlog

Search: [] Filters: [K] [U] [K] [P] Epic: [v] Insights

PET Sprint 1 23 Oct – 30 Oct (5 issues) 0 0 0 [Start sprint](#)

- PET-7 As a user, I can register for the application by entering my email, password, and confirming my password. TO DO [User]
- PET-8 As a user, I will receive confirmation email once I have registered for the application TO DO [User]
- PET-9 As a user, I will receive confirmation email once I have registered for the application TO DO [User]
- PET-10 Logging in takes to the dashboard for the logged user. TO DO [User]
- PET-11 Workspace for personal expense tracking TO DO [User]

[+ Create issue](#)

Backlog (0 issues) 0 0 0 [Create sprint](#)

Quickstart

7. CODING & SOLUTIONING

7.1 Feature 1

1. Expense and revenue tracking.
2. Managing transaction receipts and records.
3. Paying taxes in time.
4. Processing payment and invoices.
5. Create in-depth reports.

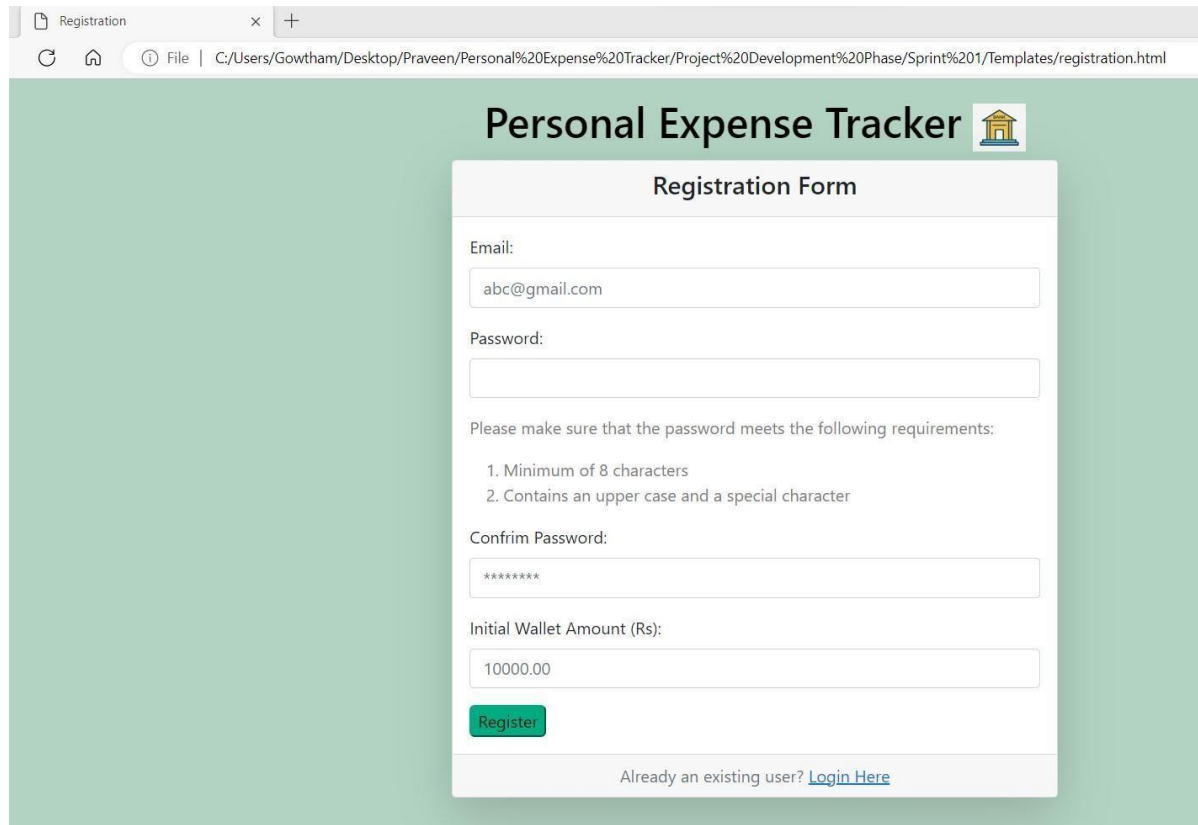
7.2 Feature 2

- 1. Track your expenses anywhere, anytime.
 2. Avoid data loss by scanning your tickets and bills and saving in the app.
 3. Seamlessly manage the money and budget without any financial paperwork.

8. TESTING

8.1 Test Cases

Registration Page



The screenshot shows a web browser window with a single tab titled "Registration". The address bar shows the file path: `C:/Users/Gowtham/Desktop/Praveen/Personal%20Expense%20Tracker/Project%20Development%20Phase/Sprint%201/Templates/registration.html`. The page has a light green background. At the top center, the text "Personal Expense Tracker" is displayed next to a small icon of a building. Below this, a white box contains the "Registration Form". The form includes fields for "Email:" (containing "abc@gmail.com"), "Password:" (empty), "Confirm Password:" (containing "*****"), and "Initial Wallet Amount (Rs):" (containing "10000.00"). A green "Register" button is at the bottom of the form. Below the button, a link says "Already an existing user? [Login Here](#)".

Registration

File | C:/Users/Gowtham/Desktop/Praveen/Personal%20Expense%20Tracker/Project%20Development%20Phase/Sprint%201/Templates/registration.html

Personal Expense Tracker

Registration Form

Email:

abc@gmail.com

Password:

Please make sure that the password meets the following requirements:

1. Minimum of 8 characters
2. Contains an upper case and a special character

Confirm Password:

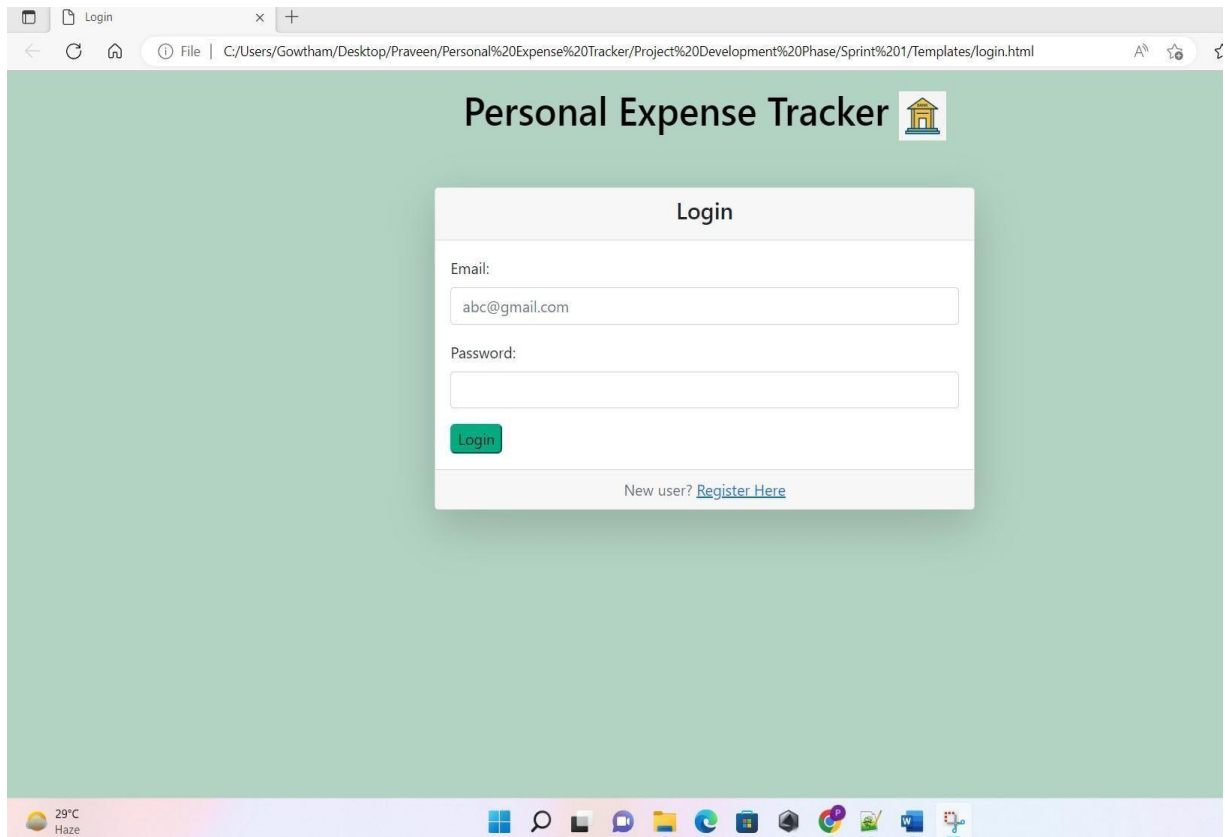
Initial Wallet Amount (Rs):

10000.00


Register

Already an existing user? [Login Here](#)

LOGIN



The screenshot shows a web browser window with a single tab titled 'Login'. The address bar displays the file path: `C:/Users/Gowtham/Desktop/Praveen/Personal%20Expense%20Tracker/Project%20Development%20Phase/Sprint%201/Templates/login.html`. The page has a light green background. At the top center, the text 'Personal Expense Tracker' is displayed next to a small icon of a building. Below this, a white login form is centered. The form has a title 'Login' and contains two input fields: 'Email:' with the value 'abc@gmail.com' and 'Password:'. A green 'Login' button is positioned below the password field. At the bottom of the form, a link 'New user? Register Here' is visible. The Windows taskbar at the bottom shows the system clock as 29°C Haze and several application icons.

Personal Expense Tracker 

Login

Email:


Password:


Login


New user? [Register Here](#)


ADD EXPENSE


Personal Expense Tracker

 Home


 Add Expense

 Modify Expense

 View Analysis

 Rewards & Goals


Add expense

Expense Made 

Amount Spent: (Rs)

Expense Category:

Date of Expense:



Description of Expense:

Submit Expense

9. RESULTS

9.1 PerformanceMetrics

An application can be a very powerful tool for businesses if once the app becomes a success. However, the success of an app is measured through numbers, metrics, and analytics. Developing an app takes quite a lot, so once you've dedicated much time, money, and effort to the process, it's mandatory to measure mobile app performance.



10. ADVANTAGES & DISADVANTAGES

Advantages

The best organizations have a way of tracking and handling these reimbursements. This ideal practice guarantees that the expenses tracked are accurately and in a timely manner. From a company perspective, timely settlements of these expenses when tracked well will certainly boost employees' morale.

Financially Aware and Improve Money Management tracking your expenditures ensures you achieve your project financial targets. How is that? By clearly understanding your project spending using project budget limits, you can aptly make the necessary changes to complete your project within time and budget.

Effective expense tracking and reporting to avoid conflict. As a project manager or business owner, you can set clear policies for the expense types and reimbursement limits to avoid misunderstandings about costs. Tracking the project expenses by asking team members to provide receipts is helpful to avoid conflict and maintain compliance also. An excellent reporting mechanism is extremely helpful to support the amount to be reimbursed to your team and also invoicing to your customer.

Helps anticipate the costs of similar projects When you formally track and report expenses, you have a permanent documentation which helps you correctly anticipate expenses for similar projects in the future. This is even more significant when it comes to the budget-making process.

Tracking the amount of money spent on the projects is important to invoice customers and determine the cost & profitability analysis when your company is providing services to another company. On the other hand, expense tracking or internal project is important for cost and ROI calculation. Understanding how this money is being utilized across the project is such a significant issue. The consequence for not properly tracking and reporting project expenses may lead to budgetary issues.

Disadvantages

Accounting, for any business, can be a complex undertaking. A manual accounting system requires you to understand the accounting process in a way that may be unnecessary with a computerized accounting system. This can be an advantage or a disadvantage, depending on the person doing the bookkeeping; often, a specially trained professional is needed to ensure that accounting is done properly. Unraveling the complexity of your financial records by hand may be time consuming. Since it takes time to generate reports.

11. CONCLUSION

The new system has overcome most of the limitations of the existing system and works according to the design specification given. The project we have developed is work more efficient than the other income and expense tracker. The project successfully avoids the manual calculation for avoiding calculating the income and expense per month. The modules are developed efficiently and also in an attractive manner. The developed systems dispense the problem and meet the needs of by providing reliable and comprehensive information. All the requirements projected by the user have been met by the system. The newly developed system consumes less processing time and all the details are updated and processed immediately. Since the screen provides online help messages and is very user friendly, any user will get familiarized with its usage. Modules are designed to be highly flexible so that any failure requirements can be easily added to the modules without facing many problems. The best organizations have a way of tracking and handling these reimbursements. This ideal practice guarantees that the expenses tracked are accurately and in a timely manner. From a company perspective, timely settlements of these expenses when tracked well will certainly boost your employees' morale

Quickly Determine How Profitable Business Is
Effective expense tracking and reporting to avoid conflict

12. FUTURE SCOPE

The Future Scope of the application can be allowed to support in all the upcoming android versions . History can be set to view all the detail in the app even if the particular data is deleted from the database. Statistics could be prepared based on the Income, Expense details of the user. Sharing files via Bluetooth, WhatsApp can be allowed. Printing the details of the particular income or expense details can be made. Some of the extra components are like enabling users to register to the application using an existing email or social network account, it will synchronize the users profile data to the application.

CHAPTER 13

APPENDIX

SOURCE CODE:

REGISTRATION PAGE

```
<!doctype html>
<html lang="en">
  <head>
    <!-- Required meta tags -->
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <!-- Bootstrap CSS -->
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASj
C" crossorigin="anonymous">

    <title>Registration</title>
  </head>

  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIax
VXM"crossorigin="anonymous"></script>

  <body style="background-color:#B2D3C2">
    <div class="container mt-3">
      <h1 style="color: black; text-align: center;">
        Personal Expense Tracker 
      </h1>

      <div class="container mt-2" style="width: 600px;">
        <div class="card shadow-lg bg-white rounded">
          <div class="card-header" style="text-align: center;">
            <h4>Registration Form</h4>
          </div>
          <div class="card-body">
```



```

<form action="/" method="POST">
  <div class="mb-3">
    <label for="email" class="form-label">Email: </label>
    <input type="email" class="form-control" name="email" id="email"
placeholder="abc@gmail.com">
  </div>

  <div class="mb-3">
    <label for="password" class="form-label">Password: </label>

    <input type="password" class="form-control"
name="password" id="password"></input>

    <p style="color: gray;" class="mt-3">Please make sure that the
password meets the following requirements:</p>

    <ol style="color: gray;"><li>Minimum of 8
characters</li><li>Contains an upper case and a special character</li></ol>

  </div>
  <div class="mb-3">

    <label for="confirmpassword" class="form-label">Confirm
    Password:

  </label>

    <input type="password" class="form-control"
name="confirmpassword"
id="confirmpassword" placeholder="*****">

  </div>
  <div class="mb-3">
    <label for="wallet" class="form-label">Initial Wallet Amount (Rs):

  </label>

    <input type="number" class="form-control" name="wallet"
id="wallet"
placeholder="10000.0
0">
  </div>

  <button type="submit" style="background-color:#00AD83;
border-color:#00AD83; border-radius:5px;">Register</button>

</form>
</div>

<div class="card-footer text-muted" style="text-align:center">
  Already an existing user? <span><a href="login">Login
  Here</a></span>

</div>

```

```

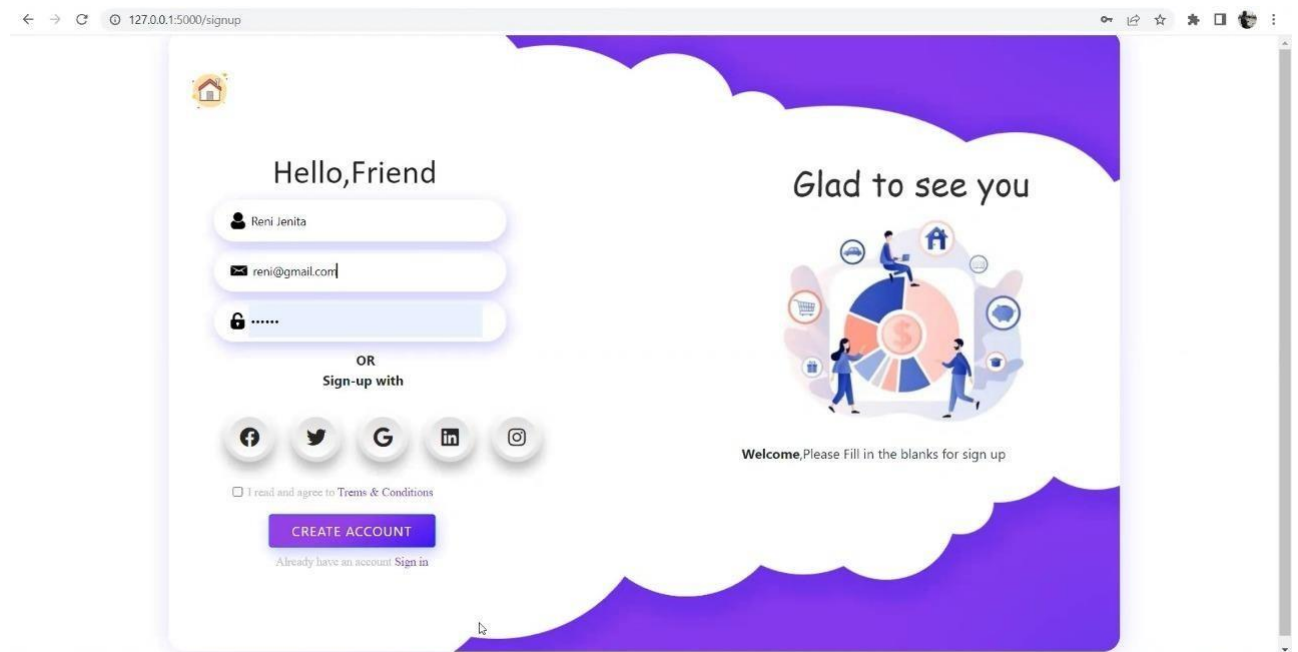
        </div>
    </div>

    </div>
</body>

</html>

```

OUTPUT:



LOGIN PAGE

```

<!doctype html>
<html lang="en">

<head>

    <!-- Required meta tags -->
    <meta charset="utf-8">

    <meta name="viewport" content="width=device-width, initial-scale=1">


    <!-- Bootstrap CSS -->

    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOMLA

```

SjC" crossorigin="anonymous">

```
<title>Login</title>
</head>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min
.js"integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/t
WtIaxVXM"crossorigin="anonymous"></script>
```

```
<body style="background-color:#B2D3C2">
```

```
<div class="container mt-3">
```

```
<h1 style="color: black; text-align: center;">
```

```
    Personal Expense Tracker 
```

```
</h1>
```

```
<div class="container mt-5" style="width: 600px;">
```

```
<div class="card shadow-lg bg-white rounded">
```

```
<div class="card-header" style="text-align: center;">
```

```
<h4>Login</h4>
```

```
</div>
```

```
<div class="card-body">
```

```
<form action="/login" method="POST">
  <div class="mb-3">

    <label for="email" class="form-label">Email: </label>

    <input type="email" class="form-control" name="email"
id="email"placeholder="abc@gmail.com">

  </div>
  <div class="mb-3">

    <label for="passowrd" class="form-label">Password: </label>

    <input type="password" class="form-control"
name="password" id="password"></input>

  </div>
  <button type="submit" style="background-
color:#00AD83; border-color:#00AD83; border-
radius:5px;">Login</button>

</form>
</div>

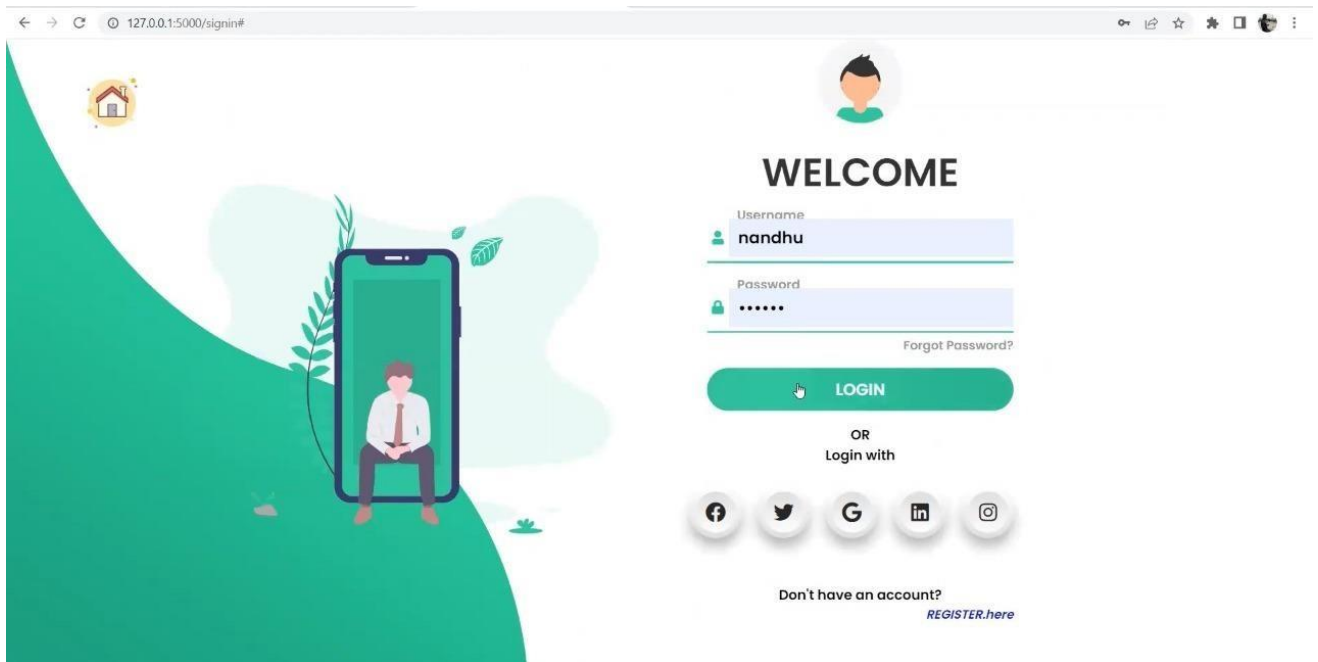
<div class="card-footer text-muted" style="text-align:center">

  New user? <span><a href="registration.html">Register
  Here</a></span>

</div>
</div>

</div>
</body>
</html>
```

OUTPUT:



ADD EXPENSE PAGE

```
!doctype html>
<html lang="en">
<head>
  <!-- Required meta tags -->

  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <!-- Bootstrap CSS -->

  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOMLA
SjC" crossorigin="anonymous">

  <title>AddExpense</title>
</head>
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min
.js" integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/
```

tWtlaxVXM"crossorigin="anonymous"></script>

```
<div class="container-fluid" >

  <div class="row flex-nowrap">
    <div class="col-auto col-md-3 col-xl-2 px-sm-2 px-0"
style="background-color:#B2D3C2">

      <div class="d-flex flex-column align-items-center align-items-sm-
start px-3 pt-2min-vh-100" style="color:black">

        <p class="d-flex align-items-center pb-3 mb-md-0 me-md-auto
text-white text-decoration-none">

          <span class="fs-5 d-none d-sm-inline" style="color:black;
font-weight:bold;">Personal Expense Tracker</span>

          
        </p>

        <ul class="nav nav-pills flex-column mb-sm-auto mb-0 align-items-
center align-items-sm-start" id="menu">
```

```

        <li class="nav-item mt-2">
            <a href="dashboard.html" class="nav-link align-middle px-0"
style="color:black;">

                <span class="ms-1 d-none d-sm-inline">Home</span>

            </a>

        </li>
        <li class="nav-item mt-2" style="background-color:#00AD83;
height: 50px;width: 150px; border-radius: 5px;" >

            <a href="addexpense.html" class="nav-link px-0
align-middle"style="color:black;">

                <span class="ms-1 d-none d-sm-inline">Add Expense</span>

            </a>

        </li>
        <li class="nav-item mt-2">
            <a href="modifyexpense.html" class="nav-link px-0 align-middle"
style="color:black;">

                <span class="ms-1 d-none d-sm-inline">Modify
Expense</span><imgsrc="edit_icon.svg" style="width:20px;height:20px;margin-
left: 5px;">

            </a>

        </li>
        <li class="nav-item mt-2">

            <a href="analysis.html" class="nav-link px-0
align-middle"style="color:black;">

                <span class="ms-1 d-none d-sm-inline">View
Analysis</span><imgsrc="graph.png" style="width:20px;height:20px;margin-left:
5px;">

            </a>

        </li>
        <li class="nav-item mt-2">

            <a href="rewards.html" class="nav-link px-0 align-middle"
style="color:black;">

                <span class="ms-1 d-none d-sm-inline">Rewards &
Goals</span><imgsrc="reward.png" style="width:20px;height:20px;margin-left:
5px;">

```

```

        </a>
    </li>

</ul>
</div>

</div>
<div class="col py-3" style="background-color:black">
    <h3 style="color:white; text-align: center;">Add expense</h3>

    <div class="container mt-3" style="width: 600px;">
        <div class="card shadow-lg bg-white rounded">
            <div class="card-header" style="text-align: center;">

                <span style="display:inline-flex"><h4>Expense
Made</h4><imgsrc="pay.png" style=" margin-left:10px; width:30px;
height:30px"></span>

            </div>

            <div class="card-body">
                <form>
                    <div class="mb-3">

                        <label for="amountspent" class="form-label">Amount Spent: (Rs)
</label>

                        <input type="number" class="form-control" name="amountspent"
id="amountspent" placeholder="100.00">

                    </div>
                    <div class="mb-3">
                        <label for="expensecategory" class="form-label">Expense
Category:
</label>

                        <input type="text" class="form-control" name="expensecategory"
id="expensecategory"></input>

                    </div>

                    <div class="mb-3">
                        <label for="date" class="form-label">Date of Expense: </label>
                        <input type="date" class="form-control" name="date"
id="date"></input>

                    </div>
                </form>
            </div>
        </div>
    </div>

```



```
        <div class="mb-3">
          <label for="description" class="form-label">Description of
Expense:
    </label>
    <input type="text" class="form-control" name="description"
id="description"></input>
    </div>
</form>

    </div>
    <div class="card-footer text-muted" style="text-align:center">

        <button type="submit" style="background-
color:#00AD83; border-color:#00AD83; border-radius:5px;">Submit
Expense</button>

    </div>

</div>

</div>

</div>

</div>
</div>

</html>
```

Output:

The screenshot displays a web browser window with the address bar showing '127.0.0.1:5000/add'. The page title is 'Personal Expense Tracker'. The navigation bar includes links for 'Home', 'Add', 'History', 'LIMIT', and 'Report'. A user profile dropdown labeled 'User' is in the top right corner.

The main content area features the 'Add Expense' form with the following fields:

- Date: A text input with a date picker icon, showing the placeholder 'dd-mm-yyyy --:--'.
- Expense name: A text input field.
- Expense Amount: A text input field.
- Pay-Mode: A dropdown menu.
- Category: A dropdown menu.
- An 'Add' button at the bottom left of the form.

To the right of the form is a decorative illustration of a notepad titled 'EXPENSES' with a checklist:

Category	Status
FOOD	<input checked="" type="checkbox"/>
ELECTRIC	<input type="checkbox"/>
WATER	<input checked="" type="checkbox"/>
PHONE	<input checked="" type="checkbox"/>
INTERNET	<input type="checkbox"/>

The python code to Connect with DB

```
import
ibm_db
dictionary=
{}
def printTableData(conn):
sql = "SELECT * FROM
userdetails" out =
ibm_db.exec_immediate(conn,
sql)document =
ibm_db.fetch_assoc(out) while
document != False:
dictionary.update({ document['USERNAME']:
```

```

document t['PASSWORD'])
document =
ibm_db.fetch_assoc(out)def
insertTableData(conn,rollno,username,email,password):
sql="INSERT INTO
userdetails(rollno,username,email,password) VALUES
({},{},{},{})".format(rollno,username,email,password)
out = ibm_db.exec_immediate(conn,sql)
print('Number of affected rows :
',ibm_db.num_rows(out),"\\n")def
updateTableData(conn,rollno,username,email,password):
word):
sql = "UPDATE userdetails SET (username,email,password)=({},{},{})
WHERE rollno={ }".format(username,email,password,rollno)
out = ibm_db.exec_immediate(conn, sql)
print('Number of affected rows : ',
ibm_db.num_rows(out), "\\n")def
deleteTableData(conn,rollno):
sql = "DELETE FROM userdetails WHERE rollno={ }".format(rollno)

```

```

out = ibm_db.exec_immediate(conn, sql) print('Number of affected rows : ',
ibm_db.num_rows(out), "\n")

try:

conn=ibm_db.connect("DATABASE=bludb;HOSTNAME=2f3279a5-73d1-
4859-88f0-
a6c3e6b4b907.c3n41cmd0nqnrk39u98g.databases.appdomain.cloud;PORT=30
756;Security=
SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=ctb99199;PWD=
GybYxLw1rHz86oSh;", "", "")

print("Db
connected")

except:

print("Error")

from flask import
Flask,render_template,request,url_for,session

app=Flask(__name__)

@app.route("/")

@app.route("/login",methods=['POS
T','GET'])def login():

if request.method=="POST":

printTableData(conn)

username=request.form['username']

password=request.form['password']

try: if dictionary[username] == password and username in dictionary:

```