

**SONA COLLEGE OF TECHNOLOGY, SALEM**

**(An Autonomous Institution)**

**Project**

**PERSONAL EXPENSE TRACKER APPLICATION**

**Done By:**

**Team ID: PNT2022TMID18510**

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Sathish K

Sanjay Kumar C

Rinto Jose M V

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## Project Report Format

### 1. INTRODUCTION

#### 1.1 Project Overview

Personal Expense Tracker is a web application that allows you to track the daily expense of the user and help them to keep track of their expenses daily ,monthly ,weekly and yearly basis. It will also create a digital records for the user's income and various expenses spent by the user is calculated. It also gets the input from the user as how much income earned and the date of the income earned and further creates a transaction entry and sums up all the total income. Further we can give voice commands and it is responsive . It will be very helpful for theusers to manage their needs and they can spend in a better way by keeping track of the application daily basis.

#### 1.2 Purpose

The main purpose of personal expense tracker application is used to keep track of expenses based on the users income and how much they spent and also they can keep track of their expenses daily,monthly,weekly and yearly basis.

### 2. LITERATURE SURVEY

#### 2.1 Existing Problem

**Paper 1:** Expense Tracker

**Publisher:** International Journal for Research in Applied Science & Engineering

Technology (IJRASET)

- The Expense Tracker is a Web application that facilitates the users to keep track their expenses.
- This application records all the expenses of the users and the user can view them anytime. The application provides monthly and year-wise expenditures which will let theuser know where he is spending the most. It also provides graphical visualizations which helps the user to perform detailed analysis on the expenditure.

#### **Pros**

- Using paper is not easy to manage the expenses. This application eliminates the usageof paper and excel sheets to keep track the user's expenses.
- It saves time and requires less human effort.
- The user just needs to enter the income and the expenses, everything will be taken careby the application.

### **Cons**

- There is not limit on the amount that can be used by the user
- The application does not send any notification regarding the usage of the amount by user.

### **Paper 2: eExpense: A Smart Approach to Track Everyday Expense**

**Publisher:** IEEE

- eExpense is a mobile application that runs on the Android smartphones. Using this application, users can save their expense by scanning the bills and the receipt copies. Optical Character Recognition (OCR) is used to extract the information from the bills or receipts. It is also capable of tracking savings from user's saving accounts by reading the SMS's automatically from the message application of the android device.
- The application consists of four sections such as debit, credit, balance and history. Debit section records the expenses of the user. The input can be given either manually by the user or the system will take automatically by scanning. When users open the credit interface, the system reads all the messages from the user's messaging inbox. The input can be given manually or it can be taken by the system automatically.
- This application allows users to set the budget for a month or year. When the limit exceeds, it sends a notification to the user. Balance section shows the monthly and yearly balance. History section contains calendar. By selecting a particular date, it shows the expenses on that day.

### **Pros**

- It is an automated system to store the expense of the user and the expenses are stored in the database category wise.
- This application extracts the textual information from the receipts and saves the amount and description for further processing.
- It also monitors user's income by tracking the received SMS's from the user's saving accounts. By calculating income and expense it produces the user's balance in monthly and yearly basis.
- It eliminates the usage of paper and excel sheets to keep track the user's expenses. It saves time and requires less human effort.

### **Cons**

- This application is useful only for Android users.
- It does not provide graphical visualizations which could be helpful for detailed analysis of the expenditure.

### **Paper 3: Expense Tracker**

**Publisher:** International Research Journal of Modernization in Engineering Technology and Science (IRJMETs)

The Expense Tracker is a mobile application that allows the users to download in their mobile phones and can be used to track and update their daily costs. So that they can keep track of their earnings. The user can know easily on how much the amount they have spent on the various things for household, clothing and house rentals and we can easily depict the cost to the user using pie charts. Based on this we can keep track of daily expenses that we spent in a single day. Moreover, this is an automated solution for tracking the expenses.

#### **Pros**

- The application does not require a large number of users and only requires them to enter the expense amount, date, category, merchant, and other optional parameters
- It helps the android users in any situation by keeping track of their expenses every day.
- App also sends customized tips in the form of push notifications which helps users to manage expenses.

#### **Cons**

- This application is made only for android users.
- There is no limit for the amount that is been used by the user.

#### **Paper 4: Daily Expense Tracker**

**Publisher:** International Journal of Research in Engineering and Science (IJRES)

Daily Expense Tracker is a web application that allows you to track the daily expense of the user and help them to keep track of their expenses daily ,monthly ,weekly and yearly basis. It will also create a digital records for the user's income and various expenses spent by the user is calculated. It also gets the input from the user as how much income earned and the date of the income earned and further creates a transaction entry and sums up all the total income. Further we can give voice commands and it is responsive .It will be very helpful for the users to manage their needs and they can spend in a better way by keeping track of the application daily basis.

Daily Expense Tracker application can be accessed from any browsers like Google chrome, Mozilla Firefox and it allows for portable work environment. We can also digitally maintain the records with visual representation and also graphically view them using bar graphs and pie charts on how much amount is being spent and can also eliminate the physical entries by using voice commands.

Daily expense Tracker is an AI powered engine providing voice recognition which is very helpful for the users to do the work in easiest way. The application is divided into three major components that is income, expense and create transaction section. Create transaction component allows user to choose from two categories whether it is a Expense or an Income and also choose from list of types of income or expense enter the amount and date and create entry. After the creation of transaction pie charts are created in the income or expense section based on type of transaction. All of these features can also be updated or deleted using users voice commands.

#### **Pros**

- It is an AI powered engine so that is easy to store all the expenses of the user in a database.

- It eliminates the user by typing manually instead it is very helpful using voice recognition.
- It saves time and user friendly and also requires less human effort.
- It is a platform independent web application. Users can use this application either in their mobile phones or desktops. Both Income and Expenses pie chart will be created when we add any item and distributed according to the user need.
- If any user doesn't know how to add or delete then we can simply give voice commands.

#### **Cons**

- There is no option to scan the barcode on the price tag which may decreasing the effortsof entering the data.
- There is no notification system when the user expenses exceeds the income to warn thesituation.

## **2.2 References**

<https://www.ijraset.com/files/serve.php?FID=33797>

<https://ieeexplore.ieee.org/document/8628070>

[https://www.irjmets.com/uploadedfiles/paper/issue\\_4\\_april\\_2022/21604/fin a l/fin\\_irjmets1651132467.pdf](https://www.irjmets.com/uploadedfiles/paper/issue_4_april_2022/21604/fin a l/fin_irjmets1651132467.pdf)

<https://www.ijres.org/papers/Volume-9/Issue-12/Ser-4/L09127073.pdf>

## **2.3 Problem Statement Definition**

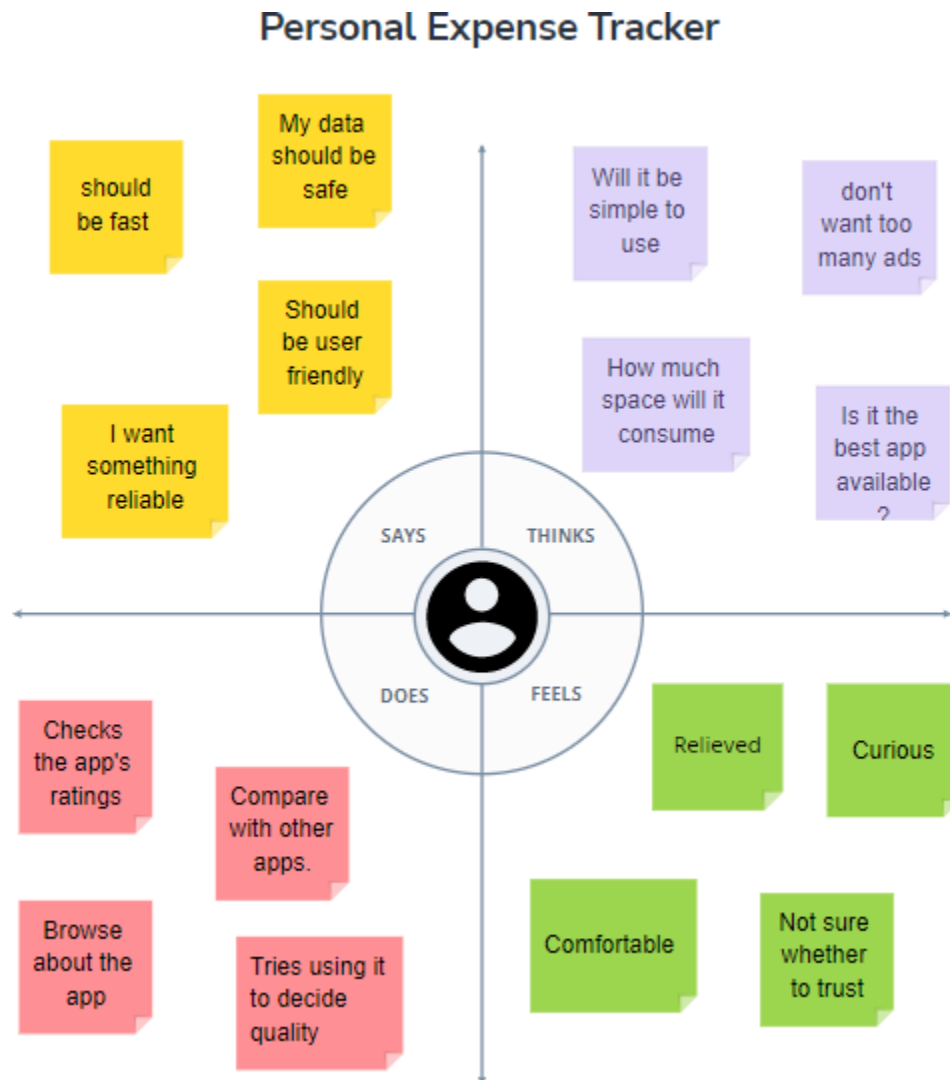
The Expense Tracker is a mobile application that allows the users to download in their mobile phones and can be used to track and update their daily costs. So that they can keep track of their earnings. The user can know easily on how much the amount they have spent on the various things for household, clothing and house rentals and we can easily depict the cost tothe user using pie charts. Based on this we can keep track of daily expenses that we spent in a single day. Moreover, this is an automated solution for tracking the expenses.

## **3. Ideation & Proposed Solution**

### **3.1 Empathy Map Canvas**

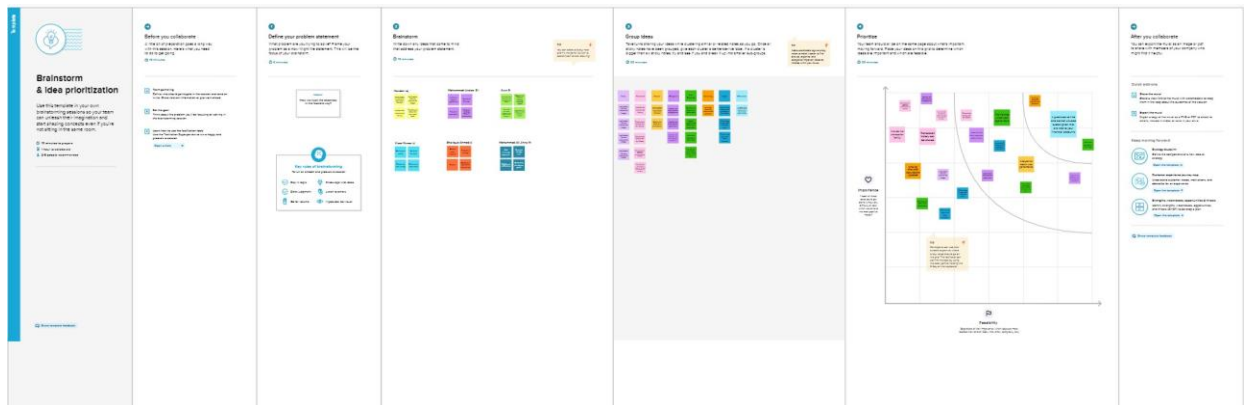
An empathy map is used to gain deeper insights on the customer's interaction with the system. It gives an idea on what the user feels and experiences while using thesystem, what fears the user has respective to the system, etc. It also specifies how supportive the system environment is and what the users are likely to hear from

the people around them regarding the usage of the system.



### 3.2 Ideation & Brainstorming

Ideation and Brainstorming are performed to generate ideas and solutions. Brainstorming is a group activity unlike ideation.



### 3.3 Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Expense tracking is essential in successful financial management. By knowing where our money goes, we can effectively sort out our financial priorities based on our budget. This will help us save for our financial goals and achieve the lifestyle we want.
2.	Idea / Solution description	To develop a personal finance application which allows users to add their expenses and based on their expense wallet balance will be updated and displayed. 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 and if the limit is exceeded the users will be notified with an email alert.
3.	Novelty / Uniqueness	Integration of email alerting system Representation of expenditure analysis in graphical forms Categorisation and disclosure of business expenses Set boundaries on monthly expenses



4.	Social Impact / Customer Satisfaction	<p>Customers can maintain control of their finances and promote better financial habits like saving and investing.</p> <p>Customers can regularly track their expense wallet. By tracking personal expenses and keeping meticulous records, customers have everything ready come tax time.</p>
5.	Business Model (Revenue Model)	<p>The application can be used in every household where the significance of tracking personal expense is understood thereby serving as a good business model.</p>
6.	Scalability of the Solution	<p>The application can be scaled around every earning individual who wants to keep good track of his financial expenses.</p> <p>Also, scalability can extend around people working especially in Business sectors who pay higher grade of taxes.</p>

### 3.4 Problem Solution fit

- The Problem-Solution Fit means that the solution that is realized can actually solve the problem that the customer faces.

## PROBLEM-SOLUTION FIT

Define CS, fit into CC	<b>1. CUSTOMER SEGMENT(S)</b> <ul style="list-style-type: none"><li>• Working Individuals</li><li>• Students</li><li>• Budget conscious consumers</li></ul>	<b>6. CUSTOMER CONSTRAINTS</b> <ul style="list-style-type: none"><li>• Internet Access</li><li>• Device (Smartphone) to access the application</li><li>• Data Privacy</li><li>• Cost of existing applications</li><li>• Trust</li></ul>	<b>5. AVAILABLE SOLUTIONS</b> <ul style="list-style-type: none"><li>• Expense Diary or Excel sheet</li></ul> <p>PROS : Have to make a note daily which helps to be constantly aware</p> <p>CONS : Inconvenient, takes a lot of time</p>						
	<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> <ul style="list-style-type: none"><li>• To keep track of money lent or borrowed</li><li>• To keep track of daily transactions</li><li>• Alert when a threshold limit is reached</li></ul>	<b>9. PROBLEM ROOT CAUSE</b> <ul style="list-style-type: none"><li>• Reckless spendings</li><li>• Indecisive about the finances</li><li>• Procrastination</li><li>• Difficult to maintain a note of daily spendings (Traditional methods like diary)</li></ul>	<b>7. BEHAVIOUR</b> <ul style="list-style-type: none"><li>• Make a note of the expenses on a regular basis.</li><li>• Completely reduce spendings or spend all of the savings</li><li>• Make use of online tools to interpret monthly expense patterns</li></ul>						
Focus on J&P, tap into BE, understand RC	<b>3. TRIGGERS</b> <ul style="list-style-type: none"><li>• Excessive spending</li><li>• No money in case of emergency</li></ul>	<b>10. YOUR SOLUTION</b> <p>Creating an application to manage the expenses of an individual in an efficient and manageable manner, as compared to traditional methods</p>	<b>8. CHANNELS OF BEHAVIOUR</b> <p>ONLINE</p> <p>Maintain excel sheets and use visualizing tools</p>						
	<b>4. EMOTIONS</b> <table><tr><td>BEFORE</td><td>AFTER</td></tr><tr><td>• Anxious</td><td>• Confident</td></tr><tr><td>• Confused</td><td>• Composed</td></tr><tr><td>• Fear</td><td>• Calm</td></tr></table>		BEFORE	AFTER	• Anxious	• Confident	• Confused	• Composed	• Fear
BEFORE	AFTER								
• Anxious	• Confident								
• Confused	• Composed								
• Fear	• Calm								
Identify strong TR & EM									

## 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
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

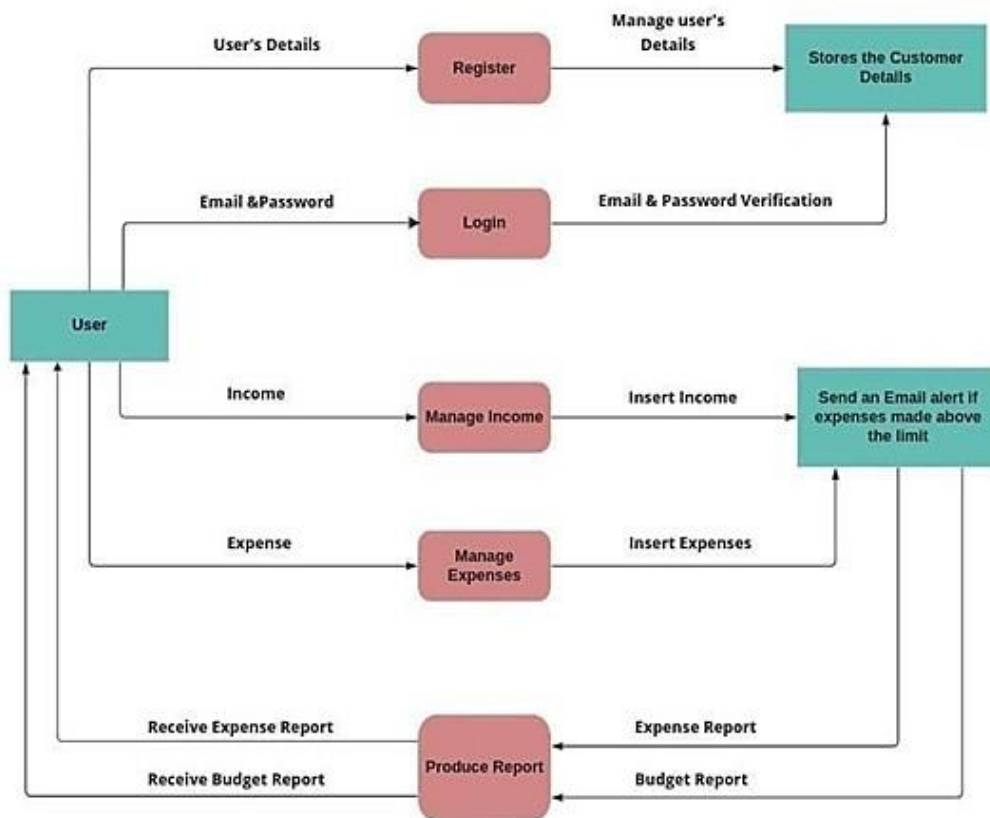
Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	By using this application, the user can keep track of their expenses and can ensure that user's money is used wisely.
NFR-2	<b>Security</b>	Maintain user personal details in an encrypted manner by using data security algorithms.
NFR-3	<b>Reliability</b>	It will maintain a proper tracking of day-to-day expenses in an efficient manner.
NFR-4	<b>Performance</b>	By entering our incoming and departing cash, and the software can help you keep and monitor it with at-most quality and security with high performance.
NFR-5	<b>Availability</b>	Using charts and graphs may help you monitor your budgeting and assets.
NFR-6	<b>Scalability</b>	Rely on your budgeting app to track, streamline, and automate all the recurrent expenses and remind you on a timely basis.

## 5. PROJECT DESIGN

### 5.1 Data Flow Diagrams

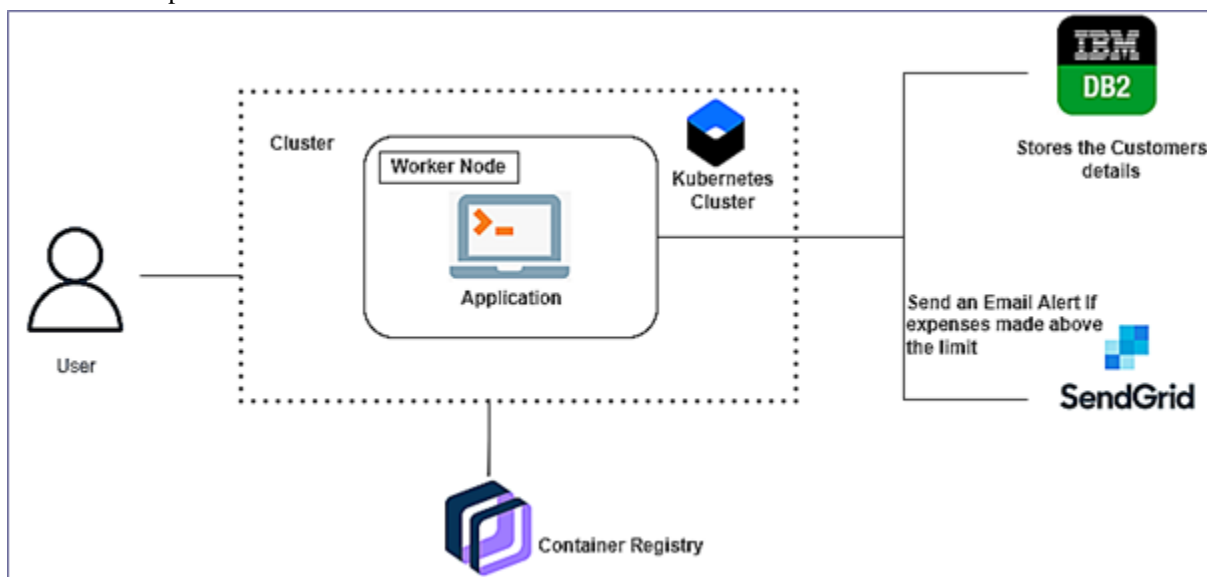
Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information and where the data is stored.



## 5.2 Solution & Technical Architecture

### Technical Architecture

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



## Components & Technologies:

S.No.	Component	Description	Technology
1.	User Interface	The user can Interact with the application with use of Chatbot	HTML, CSS, JavaScript / Angular Js / ReactJs etc.
2.	Application Logic-1	The application contains the sign in/sign up where the user will login into the main dashboard into the main dashboard	Java / Python
3.	Application Logic-2	Dashboard contains the fields like Add income, Add Expenses, SaveMoney	IBM Watson STT service
4.	Application Logic-3	The user will get the expense report in the graphform and also get alerts if the expense limit exceeds	IBM Watson Assistant,SendGrid
5.	Database	The Income and Expense dataare stored in the MySQL database	MySQL, NoSQL, etc.
6.	Cloud Database	With use of Database Service on Cloud, the User dataare stored in a well secured Manner	IBM DB2, IBMCloudant etc.
7.	File Storage	IBM Block Storage used to storethe Financial dataof the user	IBM Block Storageor Other Storage Service or Local Filesystem

### Application Characteristics:

S.No.	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask Framework in Python is used to implement this Application	Python-Flask
2.	Security Implementations	This Application Provides high security to the user Financial data. It can be done by using the Container Registry in IBM cloud	Container Registry, Kubernetes Cluster
3.	Scalable Architecture	Expense Tracker is a life time access supplication. It's demand will increase when the user's income are high	Container Registry, Kubernetes Cluster
4.	Availability	This application will be available to the user at any part of time	Container Registry, Kubernetes Cluster
5.	Performance	The performance will be high because there will be no network traffics in the application	Kubernetes Cluster

### 5.3 User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile 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	
	Login	USN-2	As a user, I can login to the application by entering email & password	I can access the application	High	
	Dashboard	USN-3	As a user I can enter my income and expenditure details.	I can view my daily expenses	High	
Customer Care Executive		USN-4	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-5	As an 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 and Scheduling

### 6.1 Sprint Planning & Estimation

The purpose of sprint planning is to define what can be delivered in the sprint and how that work will be achieved. Sprint planning is done in collaboration with the whole team.

Use the below template to create product backlog and sprint schedule

<b>Sprint</b>	<b>Functional Requirement(Epic)</b>	<b>User Story Number</b>	<b>User Story / Task</b>	<b>Story P</b>
Sprint-1	Registration	USN-1	As a user, I can register for the applicationby entering my email, password, and confirming my password.	2
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1
Sprint-2		USN-3	As a user, I can register for the application through Facebook	2
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2
Sprint-1	Login	USN-5	As a user, I can log into the applicationby entering email & password	1
Sprint-3	Dashboard	USN-6	As a user, I can view the expenditure details and can add new expenses on the dashboard	3
Sprint-3	Limits	USN-7	As a user, I can set my monthly expenselimit and I will receive an email when the expense exceeds limit	4
Sprint-4	Reports	USN-8	As a user, I can view the expenditure detailsin the graphical form	5

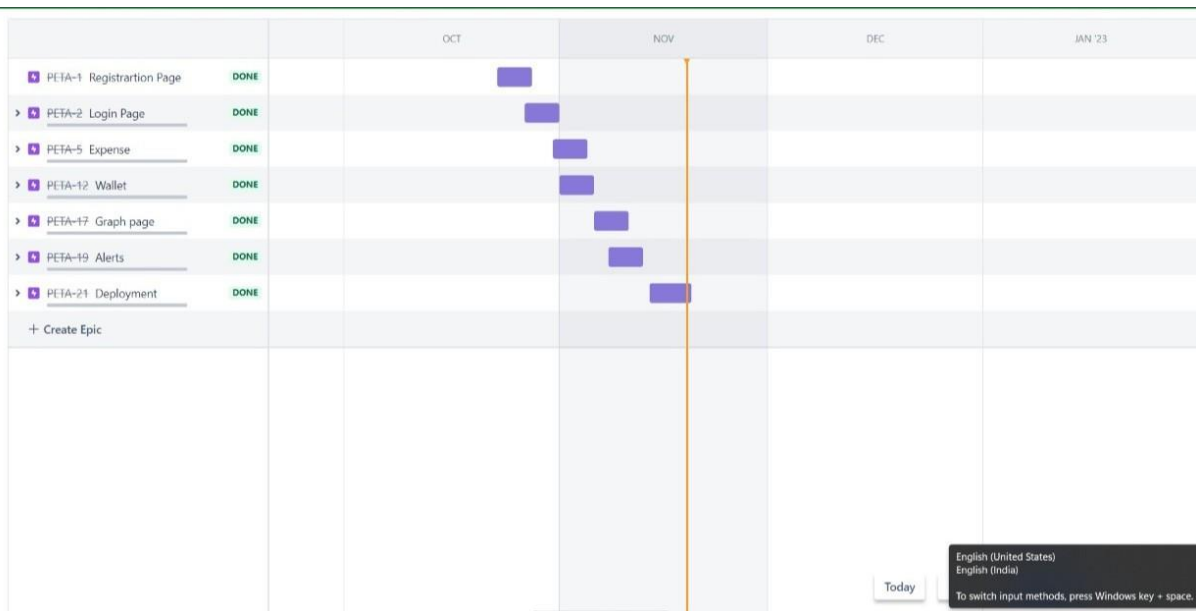
## 6.2 Sprint Delivery Schedule

Agile sprints typically last from one week to one month. The goal of sprints is to put pressure on teams to innovate and deliver more quickly, hence the shorter the sprint,the better

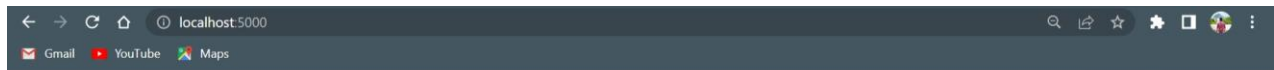


Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (aPlanned End)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20

## 6.3 Reports From JIRA



## 7.CODING & SOLUTIONING


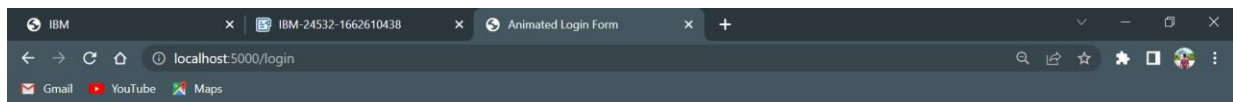


Login Sign up

## WELCOME TO PERSONAL EXPANSE TRACKER APPLICATION



## LOGIN



### WELCOME

Username

Password

[Forgot Password?](#)

**LOGIN**


[Don't have an account?](#)  
SIGNUP

```
File Edit Selection View Go Run Terminal Help • login.html - Untitled (Workspace) - Visual Studio Code
personal_expense_tracker > personal_expense_tracker > templates > login.html > html > body > div.container > div.img
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>Animated Login Form</title>
5   <link rel="stylesheet" type="text/css" href="..\static\css\login.css">
6   <link href="https://fonts.googleapis.com/css?family=Poppins:600&display=swap" rel="stylesheet">
7   <script src="https://kit.fontawesome.com/a81368914c.js"></script>
8   <meta name="viewport" content="width=device-width, initial-scale=1">
9 </head>
10 <body>
11   
12   <div class="container">
13
14     <div class="img">
15       
16     </div>
17     <div class="login-content">
18
19       <form action="/login" method="POST">
20         <div class="msg">{{ msg }}</div>
21         
22         <h2 class="title">Welcome</h2>
23         <div class="input-div one">
24           <div class="i">
25             <i class="fas fa-user"></i>
26           </div>
27           <div class="div">
28             <h5>Username</h5>
29             <input type="text" name="username" class="input" required>
30           </div>
31         </div>
32         <div class="input-div pass">
```

```
File Edit Selection View Go Run Terminal Help • login.html - Untitled (Workspace) - Visual Studio Code
personal_expense_tracker > personal_expense_tracker > templates > login.html > html > body > div.container > div.img
33       <div class="i">
34         <i class="fas fa-lock"></i>
35       </div>
36       <div class="div">
37         <h5>Password</h5>
38         <input type="password" name="password" class="input" required>
39       </div>
40     </div>
41     <a href="#">Forgot Password?</a>
42     <input type="submit" class="btn" value="Login">
43     <div class="app"><b>Don't have an account?</b><a id="app1" href="/signup">SIGNUP</a></div>
44   </form>
45
46 </div>
47
48 </div>
49
50 <script type="text/javascript" src="..\static\js\login.js"></script>
51 </body>
52 </html>
53
```

# SIGNUP





Welcome

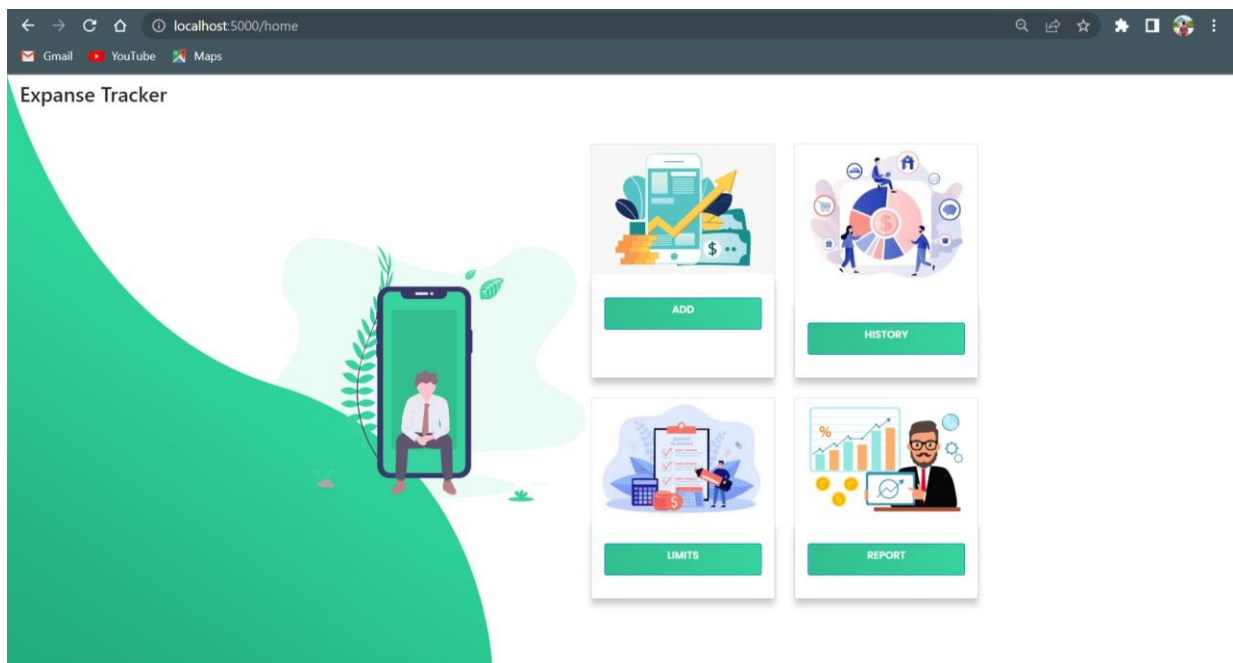
☐ I read and agree to [Terms & Conditions](#)

[Already have an account Sign in](#)

```
File Edit Selection View Go Run Terminal Help • signup.html - Untitled (Workspace) - Visual Studio Code
login.html • signup.html •
personal_expense_tracker > personal_expense_tracker > templates > signup.html > html > body > div.container
1 <html>
2 <head>
3 <meta charset="utf-8">
4 <title>Sign-up</title>
5 <link href="../static/css/signup.css" rel="stylesheet">
6 <script src="https://kit.fontawesome.com/a81368914c.js"></script>
7 <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css" integrity="sha384-Gn5384xqQ1aomXA+058RX
8 </head>
9 <body>
10 <div class="container">
11 <div class="sign-up">
12 <form action="/register" method="post">
13 <div class="msg">{{ msg }}</div>
14 
15 <h2 class="heading">Welcome</h2>
16 <!--name-box-->
17 <div class="text">
18 
19 <input placeholder="Name" type="text" name="username"/>
20 </div>
21 <!--Email-box-->
22 <div class="text">
23 
24 <input placeholder=" Example@gmail.com" type="email" name="email" />
25 </div>
26 <!--Password-box-->
27 <div class="text">
28 
29 <input placeholder=" Password" type="password" name="password"/>
30 </div>
31 <div class="or"><b></b></div>
32
```

```
File Edit Selection View Go Run Terminal Help • signup.html - Untitled (Workspace) - Visual Studio Code
login.html • signup.html •
personal_expense_tracker > personal_expense_tracker > templates > signup.html > html > body > div.container
33
34 <div>
35   <ul>
36   </ul>
37 </div>
38 <!--trem-->
39
40
41 <div class="trem">
42   <input class="check" type="checkbox" required/>
43   <p class="conditions">I read and agree to <a href="#">Trem & Conditions</a></p>
44 </div>
45 <!--button-->
46 <div class="toop">
47   <button type="submit" class="btn btn-primary">CREATE ACCOUNT</button> </div>
48 </form>
49 <!--sign-in-->
50 <div class="t"><p class="conditions" id="p3">Already have an account <a href="/signin">Sign in</a></p> </div></div>
51 </div>
52 </body>
53 </html>
```

## HOME



# ADD

localhost:5000/add

Home Add History LIMIT Report Log-out

### Add Expense

Date  
12-11-2022

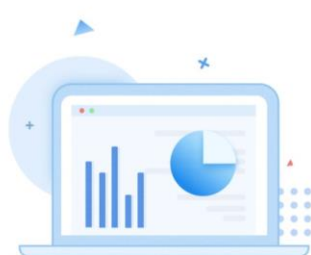
Expense name  
Trip

Expense Amount  
1000

cash

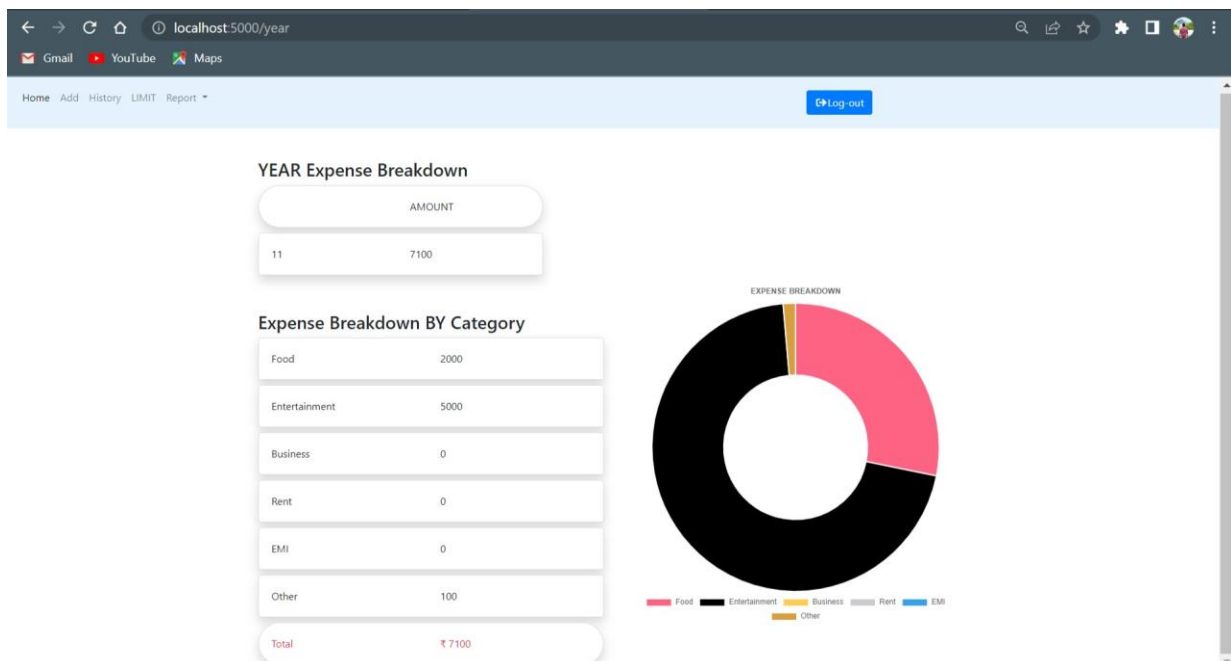
Entertainment

Add



```
File Edit Selection View Go Run Terminal Help add.html - Untitled (Workspace) - Visual Studio Code
personal_expense_tracker > personal_expense_tracker > templates > add.html > div.container > div.row > div.col-md-6 > div.imagge
1 {% extends 'base.html' %}
2
3 {% block body %}
4
5 <div class="container">
6   <div class="row">
7     <div class="col-md-6">
8       <form style="position: relative; left:0cm;right:15cm;top:4cm;" action="/addexpense" method="POST">
9         <h3 style="text-align:center;">Add Expense</h3>
10        <div class="form-group">
11          <label for="">Date</label>
12          <input class="form-control" type="date" name="date" id="date"></div>
13        <div class="form-group"> <label for="">Expense name</label>
14          <input class="form-control" type="text" name="expensename" id="expensename">
15        </div>
16        <div class="form-group">
17          <label for="">Expense Amount</label>
18          <input class="form-control" type="number" min="0" name="amount" id="amount">
19        </div>
20
21        <div class="form-group">
22          <label for=""></label>
23          <select class="form-control" name="paymode" id="paymode">
24            <option selected hidden>Pay-Mode</option>
25            <option name="cash" value="cash">cash</option>
26            <option name="debitcard" value="debitcard">debitcard</option>
27            <option name="creditcard" value="creditcard">creditcard</option>
28            <option name="epayment" value="epayment">epayment</option>
29            <option name="onlinebanking" value="onlinebanking">onlinebanking</option>
30          </select>
31
32        </div>
33      </form>
34    </div>
35  </div>
36</div>
```

```
File Edit Selection View Go Run Terminal Help • add.html - Untitled (Workspace) - Visual Studio Code
personal_expense_tracker > personal_expense_tracker > templates > add.html > div.container > div.row > div.col-md-6 > form > div.form-group
35 <div class="form-group">
36 <label for=""></label>
37 <select class="form-control" name="category" id="category">
38
39 <option selected hidden>Category</option>
40 <option name = "food" value="food">food</option>
41 <option name = "entertainment" value="entertainment">Entertainment</option>
42 <option name = "business" value="business">Business</option>
43 <option name = "rent" value="rent">Rent</option>
44 <option name = "EMI" value="EMI">EMI</option>
45 <option name = "other" value="other">other</option>
46 </select>
47 </div>
48
49
50
51
52 <input class="btn btn-danger" type="submit" value="Add" id="">
53
54 </form>
55
56 <div style="position: relative; left: 590px; top: -550px;" class="image">
57 
58 </div>
59
60 </div>
61 </div>
62 </div>
63
64 </div>
65 {% endblock %}
```



## 8. Testing

### 8.1 Test Case:

Test cases are a set of actions performed on a system to determine if it satisfies software requirements and functions correctly as it claimed to perform.

### 8.2 User Acceptance Testing

Before deploying the software application to a production environment the end user or client performs a type of testing known as user acceptance testing, or UAT to ensure whether the software functionality serves the purpose of development.

## Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the [PERSONAL EXPENSE TRACKER APPLICATION] project at the time of the release to User Acceptance Testing (UAT).

## Defect Analysis

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	10	0	0	10
Client Application	50	0	0	50
Security	1	0	0	1
Outsource Shipping	3	0	0	3

This report shows the number of resolved or closed bugs at each security level, and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	10	3	1	2	16
Duplicate	1	0	3	0	4
External	2	3	0	1	6
Fixed	11	2	4	20	37
Not	0	0	1	0	1



Reproduced					
Skipped	0	0	1	1	2
Wont Fix	0	5	2	1	8
Totals	24	13	12	25	74

## Test Case Analysis

This report shows the number of test cases that have passed, failed, and untested

Exception Reporting	8	0	0	8
Final Report Output	4	0	0	4
Version Control	2	0	0	2

## 9. Results

### 9.1 Performance Metrics

Tracking income and expenses: Monitoring the income and tracking all expenditures (through bank accounts, mobile wallets, and credit & debit cards).

- Transaction Receipts: Capture and organize your payment receipts to keep track of your expenditure.
- Organizing Taxes: Import your documents to the expense tracking app, and it will streamline your income and expenses under the appropriate tax categories.
- Payments & Invoices: Accept and pay from credit cards, debit cards, net banking, mobile wallets, and bank transfers, and track the status of your invoices and bills in the mobile app itself. Also, the tracking app sends reminders for payments and automatically matches the payments with invoices.
- Reports: The expense tracking app generates and sends reports to give a detailed insight about profits, losses, budgets, income, balance sheets, etc.
- E-commerce integration: Integrate your expense tracking app with your eCommerce store and track your sales through payments received via multiple payment methods.
- Vendors and Contractors: Manage and track all the payments to the vendors and contractors added to the mobile app.
- Access control: Increase your team productivity by providing access control to particular users through custom permissions.
- Track Projects: Determine project profitability by tracking labor costs, payroll, expenses, etc.,

of your ongoing project.

- **Inventory tracking:** An expense tracking app can do it all. Right from tracking products or the cost of goods, sending alert notifications when the product is running out of stock or the product is not selling, to purchase orders.
- **In-depth insights and analytics:** Provides in-built tools to generate reports with easy-to-understand visuals and graphics to gain insights about the performance of your business.
- **Recurrent Expenses:** Rely on your budgeting app to track, streamline, and automate all the recurrent expenses and remind you on a timely basis

## 10. ADVANTAGES & DISADVANTAGES:

### Advantages:

- **You have no control over your money** If you don't check your spending and create a budget, you will have no control whatsoever on your money. Instead, money will control you, and you will either have perpetual lack of funds or you will end up steeped in debt. A money manager app helps you decide between short-term and long-term spending.
- **You have no financial goals** If you are spending money frivolously, you will not have money to set financial goals. However, when you have a daily expense manager, you will be able to work with limited resources and use your money in a wise manner so that you can create financial goals and ensure you meet them.
- **You are unaware what is happening with your money** If you are clueless about how much is your inflow and how much you are spending, you will not know at the end of the month what happened to your money. An expense tracker helps you figure out what is happening to your money, and whether you can afford something you want.
- **You spend and save in a haphazard manner** If you don't have great financial management skills, you will not know how to categorize your expenses. However, tracking your expenses and budgeting them will help you become aware of how much you have to allocate to each expense category, and if you are short, you will be able to make adjustments with ease.
- **You have no clue about making your money work for you,** In this day and age, when expenses are going through the roof, it has become crucial that you learn to make your money work for you so that you can create a nest egg for the future.

- **You don't have funds for emergencies** Remember, emergencies come when you least expect. Hence, if you don't have money stashed away for a rainy day, you will end up borrowing from family and friends. This way you could get into debt that will be difficult to pay back due to your poor money management skills.

#### **Disadvantages:**

- Your information is less secure, and probably being used and sold. If the service is free, then the product is you. Mint.com, like other financial apps, is a free service. They have to pay their bills somehow, so regardless of what their privacy policy may or may not say, just assume that your spending history and trends are going to be recorded and analyzed, by someone, somewhere.
- Now, you shouldn't have to worry about credit card fraud or identity theft, these companies are large enough and secure enough that you'll never have to worry about something like that. Just recognize that your information, most likely anonymous, will be used and potentially even sold.
- Personally, I have no problem with that, but if you do, then make sure you avoid these types of services. Automating everything to do with your finances can make you financially lazy. If your bills are paid automatically and your finances are tracked automatically, then what is there left for you to do? Not a lot, to be honest. So you might stop caring about what you're spending and where your money is going. Eventually you may look at your Mint data and realize that you've blown your budget over the last two months, but by then it is too late. So if you do choose to use this program, ensure that you are also being diligent in checking in on your finances. Set up a weekly or biweekly check for yourself to go through your finances and hit on all the important points.

## **11. Conclusion**

After making this application we assure that this application will help its users to manage the cost of their daily expenditure. It will guide them and aware them about their daily expenses. It will prove to be helpful for the people who are frustrated with their daily budget management, irritated because of amount of expenses and wishes to manage money and to preserve the record of their daily cost which may be useful to change their way of spending money. In short, this application will help its users to overcome the wastage of money.

## **12. Future Scope**

The further enhancement that are planned for developing the application to be user friendly and further features like login with gmail or social media accounts using facebook or twitter and also using SSO login so that it is helpful for users to get into platform easily.

## **13. Appendix**

### **13.1 Github Link**

<https://github.com/IBM-EPBL/IBM-Project-24532-1659944226>

### **13.2 Project Demo Link**

<https://drive.google.com/file/d/1YXfcEsGphq931K5WdlUPQp1Y4SRfCTZI/view>