

**NALAIYA THIRAN PROJECT BASED LEARNING ON
PROFESSIONAL READINESS FOR INNOVATION,
EMPLOYMENT AND ENTREPRENEURSHIP
PROJECT REPORT**

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1.INTRODUCTION

Personal Income Expense Tracker is to easily manage your finance by recording your monthly incomes and expenses. Sometimes at the end of every month, we usually find a shortage of money due to our unaccounted expenses or our bad spending habits. It is necessary to keep track of our incomes and expenses.

1.1 Project Overview

Personal Expense Tracker (PET) is a daily expense management system which is specially designed for non- salaried and salaried personnel for keeping track of their daily expenditure with easy and effective way . Personal expense or 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 expense or finance applications will ask users to add their expenses and based on their expenses wallet balance will be updated which will be visible to the 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.

1.2 Purpose

The purpose of the project is to help you control your expenses in order to manage the proper spending of money. About the System The Expense Tracker App was created in a HTML web browser that use JavaScript to give user a great interactive experience when using an app.

When you track your spending, you know where your money goes and you can ensure that your money is used wisely. Tracking your expenditures also allows you to understand why you're in debt and how you got there. This will then help you design a befitting strategy of getting out of debt. Budgeting ensures you're not spending more than you're making, allowing you to plan for short- and long-term expenses. It's an easy, helpful way for people with all types of income and expenses to keep their finances in order.

It's important to have a smart expense tracking solution that helps you manage your money better. The state-of-the-art expense tracking features include category-wise budget tracking thus helping you manage your spending. You not only track your spending but also allot an emergency fund.

2.LITERATURE SURVEY

Literature review was carried out to gain knowledge and improve the skills needed to complete this project. This chapter shows the different techniques that have been implemented.

2.1 Existing Problem

An expense tracker is a software or application that helps to keep an accurate record of your money inflow and outflow. Many people in India live on a fixed income, and they find that towards the end of the month they don't have sufficient money to meet their needs.

2.2 References

[1] <http://expense-manager.com/how-expense software/>

[2] <https://www.splitwise.com/terms>

[3] <http://code.google.com/p/socialauthandroid/wiki/Facebook>

[4] <http://code.google.com/p/socialauth-android>

[5] Developer.android.com

[6] <http://www.appbrain.com/app/expensemanager/com.expensemanager>

[7] <https://www.xpenditure.com/en?>

[8] <http://expense-manager.com/how-expense software/>

[9] Donn Felker, "Android Application Development for Dummies", published by For Dummies, 2010.

[10] Ed Burnette, "Hello, Android: Introducing Google's Mobile Development Platform", published by Pragmatic Bookshelf, 2009.

Lee, "Beginning Android Application Development", Published by WroxPress, 2011.

2.3 Problem Statement Definition

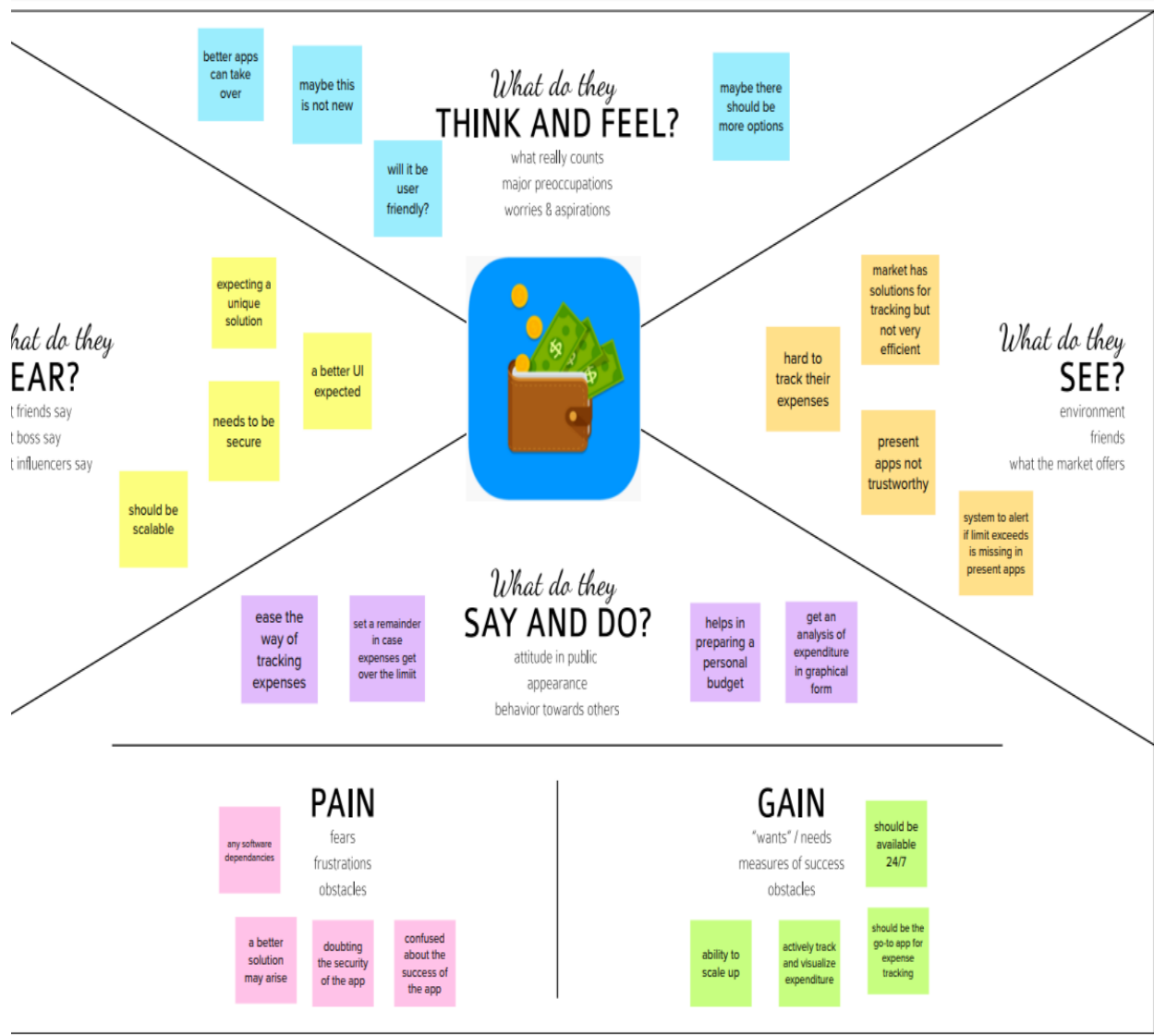
It is tough to keep track of all the financial decisions and activities that a person makes. Traditional expense tracking methods are inconvenient and unreliable. In order to get a quick overview about your total incomes and expenses and control spending , its convenient to digitize the process by having a personal expense tracker.

Who does the problem affect?	Working individuals, students and budget conscious consumers.
What are the boundaries of the problem?	Limited features to provide for expense tracking.
What is the issue?	To be vigilant about the expense spent increases financial stress. Being indecisive about the finances may result in less financial security and exceed the budget.
When does this issue occur?	When people are not able to track their expenses properly.
Where is the issue occurring?	In daily life of employees as well as students.
Why is it important that we fix the problem?	Fixing this issue will help users to better plan their budget and lead to financial well-being.

- Sophie, who is a homemaker, finds it hard to control her desire to shop. To stop herself from overindulging in impulsive purchases, she needs to track her expenses and hold herself accountable.
- Sam is a high school student who usually gets a limited allowance from his parents. Tracking his expenses and good budgeting technique allows him to spend on his regular expenses as well as on himself.
- Percy, who is a novice budgeter, finds it tedious to track and manage the expenses amongst his busy schedule. Prioritizing his expenses will help him to curtail his unnecessary expenditures.

3.IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



Template

Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

- 10 minutes to prepare
- 1 hour to collaborate
- 3-6 people recommended

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

10 minutes

S Team gathering
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

G Set the goal
Think about the problem you'll be focusing on solving in the brainstorming session.

C Learn how to use the facilitation tools
Use the Facilitation Superpowers to run a happy and productive session.

Open article →

1 Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

5 minutes

PROMPT

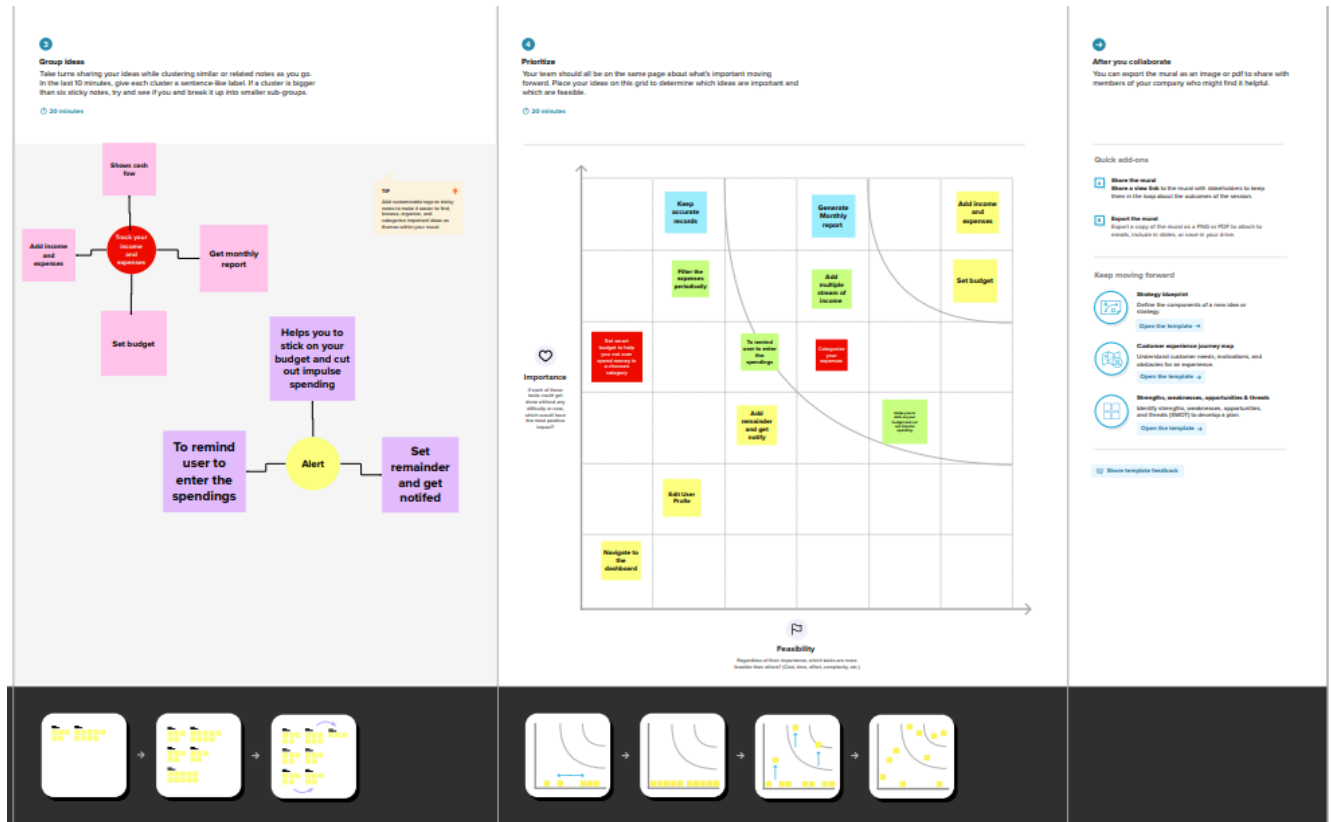
How to help the user to get tracking of monthly expenses and send alerts about spending expenses

Key rules of brainstorming

To run an smooth and production session

Stay in topic.	Encourage wild ideas.
Defer judgment.	Listen to others.
Go for volume.	If possible, be visual.

[Share template feedback](#)



PROBLEM STATEMENT

Many organizations have their own system to record their income and expenses, which they feel is the main key point of their business progress. It is good habit for a person to record daily expenses and earning but due to unawareness and lack of proper applications to suit their privacy, lacking decision making capacity people are using traditional note keeping methods to do so. Due to lack of a complete tracking system, there is a 2 constant overload to rely on the daily entry of the expenditure and total estimation till the end of the month.

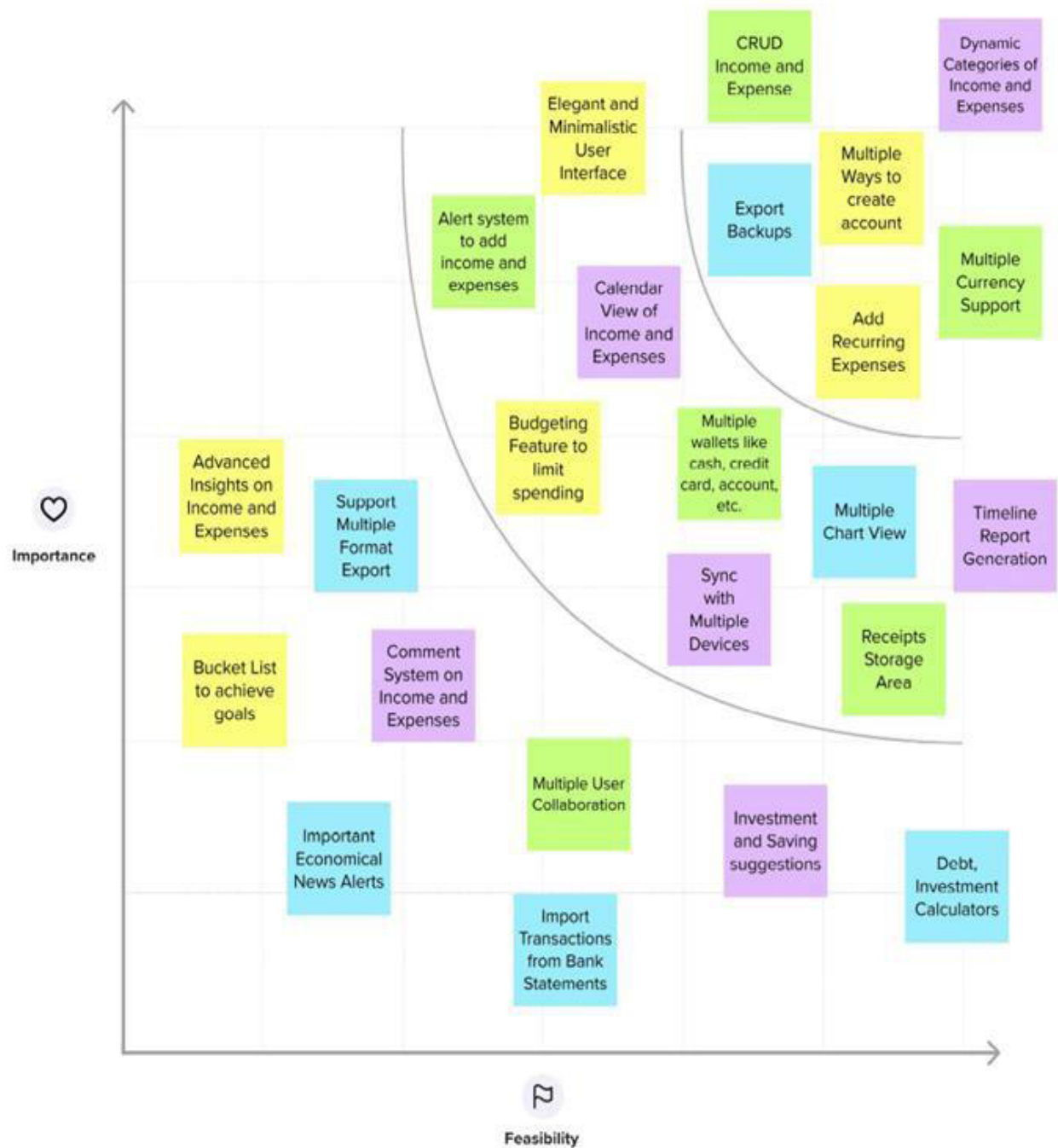
Who does the problem affect? People getting regular wages.

What is the issue? The paper based expense tracker system does not provide the user portability , existing system only used on paper based records so unable to update anywhere expenses done and unable to update the location of the expense details disruptive that the proposed system.

When does the issue occurs? When the digits could not be recognized correctly. When the transactions are not successful. When the elder people unable to understand the smaller handwritten digits. When the paper based expense tracker records are subjected to fire accident, flood, etc.

Where is the issue occurring? The issue occurs when the person is unable to track his income and expenditure.

Why is it important that we fix the problem? By solving this issue those people getting regular wages can track their expenses and avoid unwanted expenses.



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)	Attempting to manage the expenses of an individual in an efficient and manageable manner, as compared to the traditional way of expense tracking.
2.	Idea / Solution description	The application will be helpful for the individuals in not just managing their expenses, but also in enabling them to improve their investments.
3.	Novelty / Uniqueness	The application gives the user a chance to plan his/her monthly expenses at the start of the month. Besides this, the user gets a notification when he/she exceeds the limit that is set.
4.	Social Impact / Customer Satisfaction	With such applications, the public will start to plan their expenses better leading to their own financial stability. With more users, this application will ensure that financial state of our society improves.
5.	Business Model (Revenue Model)	Free trial for 1 month can be given to the users, so that a significant userbase is created. Following the free trial, the users can be given subscription for 3 months, 6 months or 1 year.
6.	Scalability of the Solution	Since the application takes the same set of input from all the users and does not perform many complex computations, it will be easy for us to scale the application to a larger set of users.

3.4 Problem Solution fit

Define CS, fit into CL	1. CUSTOMER SEGMENT(S) CS People who are struggling to track their expenses are our customers. They can use our app to maintain records about their income and expenses	6. CUSTOMER LIMITATIONS CL <small>EG. BUDGET, DEVICES</small> User have to entry every record manually. The category divided may be blunder or messy. person who is handling system must have some technical knowledge.	5. AVAILABLE SOLUTIONS AS <small>PLUSSES & MINUSES</small> User can add their income and expenses. 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.	Explore AS, differentiate
	2. PROBLEMS / PAINS PR <small>• ITS FREQUENCY</small> In paper-based expense tracker system it is difficult to track our monthly expenses manually. The paper-based expense records may get lost in case of fire accidents, flood etc.	9. PROBLEM ROOT / CAUSE RC When the digits could not be recognized correctly. When the transactions are not successful. When the elder people unable to understand the smaller handwritten digits. When the paper based expense tracker records are subjected to fire accident, flood, etc.	7. BEHAVIOR BE <small>• ITS INTENSITY</small> They may keep a temporary note on their mobile. He/She will tell the other persons to remember the expense they do while calculating the expenses they consider only on the expenses that are single time and huge and leave the rest	
Focus on PR, tap into BE, understand RC				Focus on PR, tap into BE, understand RC
Identify strong TR & EM	3. TRIGGERS TO ACT TR This application can create awareness among common people about their income and expenses. It Reduces time rather than entering details manually.	10. YOUR SOLUTION SL The application should be able to generate reports of their spending and notify users if they have exceeded their budget. This application can create awareness among common people about finance and stuffs. This application also helps user to be financially responsible.	8. CHANNELS of BEHAVIOR CH ONLINE Download statements from bank and pay monthly installment	Extract online & offline CH of BE
	4. EMOTIONS EM <small>BEFORE / AFTER</small> Frustration, Confusion, Inadequate > Boost, Feeling smart, Be an example for others		OFFLINE Using spreadsheets and notes for financial management	

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 Application Registration through Gmail
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User monthly expense tentative data	Data to be registered in the app
FR-4	User monthly income data	Data to be registered in the app
FR-5	Alert/ Notification	Alert through E-mail Alert through SMS
FR-6	User Budget Plan	Planning and Tracking of user expense vs budget limit

4.2 Non Functional Requirements

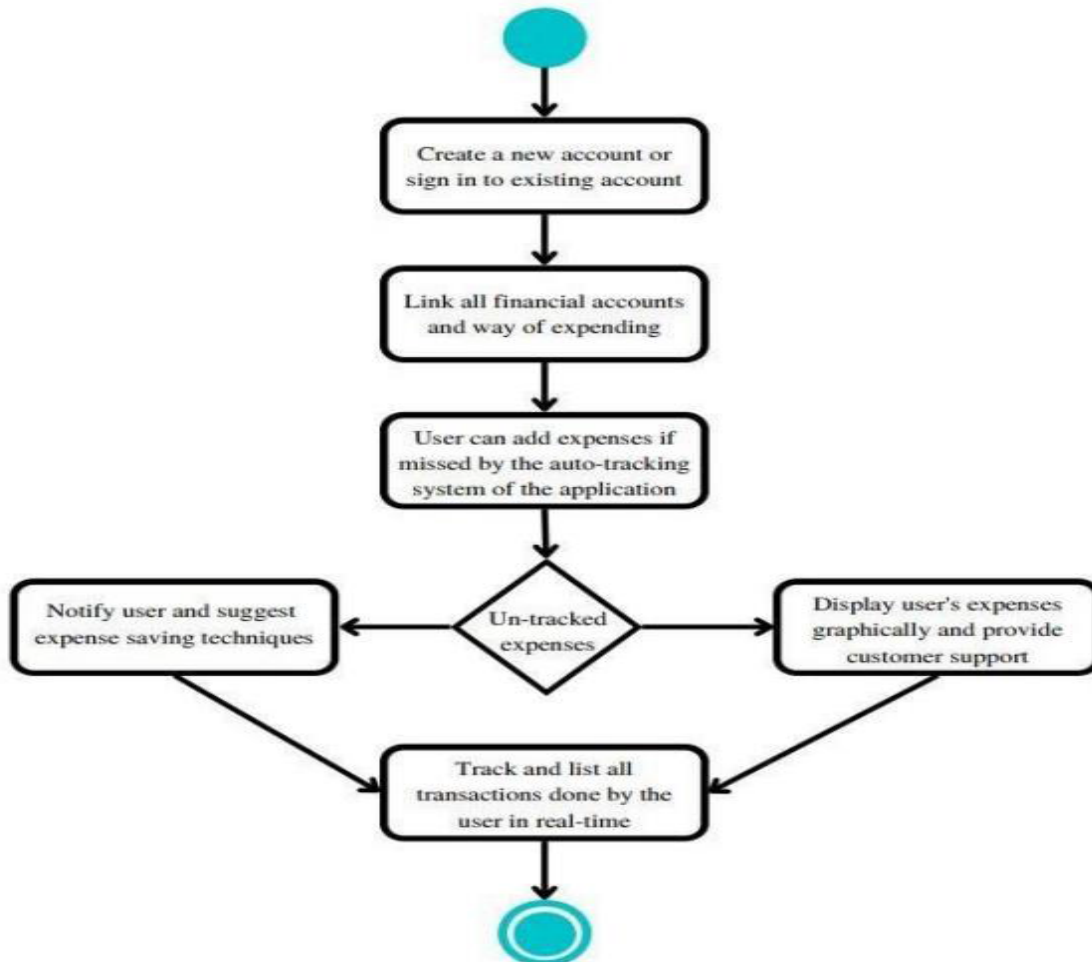
Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Effectiveness, efficiency and overall satisfaction of the user while interacting with our application.
NFR-2	Security	Authentication, authorization, encryption of the application.
NFR-3	Reliability	Probability of failure-free operations in a specified environment for a specified time.
NFR-4	Performance	How the application is functioning and how responsive the application is to the end-users.
NFR-5	Availability	Without near 100% availability, application reliability and the user satisfaction will affect the solution.
NFR-6	Scalability	Capacity of the application to handle growth, especially in handling more users.

5.PRODUCT DESIGN

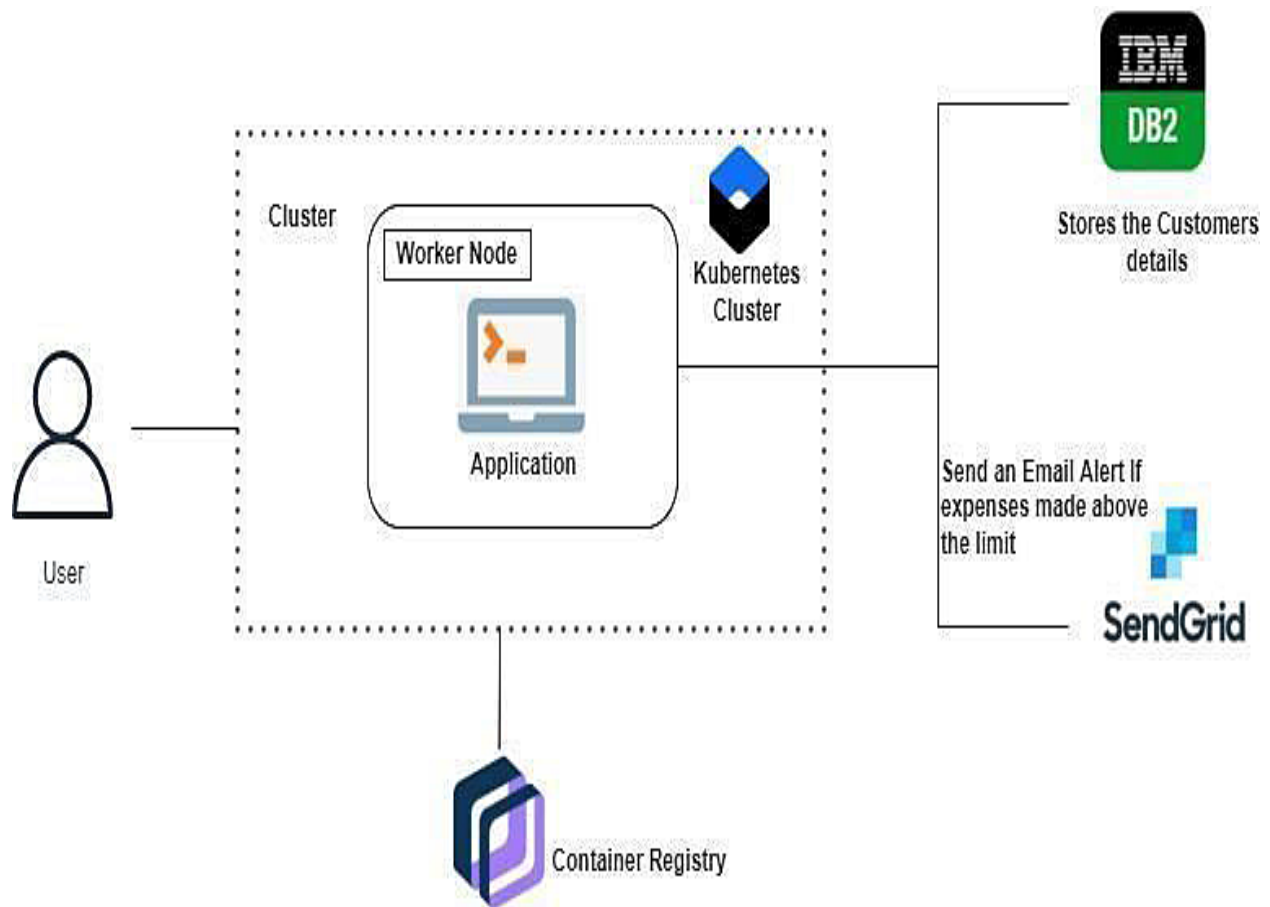
5.1 Data Flow Diagrams

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.



5.2 Technical Architecture

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



5.3 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	I can provide support or solution	Medium	

6.PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story/Task	Story Points	Priority	Team Members
Sprint 1	Registration	USN 1	Register for the application by entering email,password, and confirming password	2	High	Mathesh Kumar S
Sprint 1		USN 2	As a user will receive confirmation email once have registered for the application	1	High	Mathesh Kumar S
Sprint 2		USN 3	Register for the application through Facebook	2	Low	Pushparaj M
Sprint 1		USN 4	User register for the application through Gmail	2	Medium	Pushparaj M
Sprint 1	Login	USN 5	User log into the application by entering email & password	1	High	Mesack K
Sprint 3	Dashboard	USN 6	Expenditure details on the application	3	High	Mesack K
Sprint 3	Limits	USN 6	User can set monthly expense	4	High	Suriya K

			limit so that receive a mail on exceeding			
Sprint 4	Reports	USN 6	View the graphical form of expenses category wise	5	Medium	Suriya K

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	6	6 days	15 OCT 2022	30 OCT 2022	6	30 OCT 2022
Sprint 2	2	6 days	30 OCT 2022	05 NOV 2022	2	05 NOV 2022
Sprint 3	7	6 days	05 NOV 2022	12 NOV 2022	7	12 NOV 2022
Sprint 4	5	6 days	12 NOV 2022	19 NOV 2022	5	19 NOV 2022

7.CODING & SOLUTIONING

7.1 Feature 1

1. Expense and revenue tracking.

```
temp = [] temp.append(dictionary["ID"])
```

```
temp.append(dictionary["USERID"]) temp.append(dictionary["DATE"])
```

```
temp.append(dictionary["EXPENSENAME"])
```

```
temp.append(dictionary["AMOUNT"])
```

```
temp.append(dictionary["PAYMODE"])
```

```
temp.append(dictionary["CATEGORY"]) expense.append(temp)
```

```
print(temp)
```

8.TESTING

8.1 Test Cases

DASHBOARD

apiVersion: v1

kind: ServiceAccount

metadata:

name: admin-user

namespace: kubernetes-dashboard

apiVersion: v1

kind: Secret

metadata:

name: admin-user-token

namespace: kubernetes-dashboard

annotations:

kubernetes.io/service-account.name: admin-user

type: kubernetes.io/service-account-token

apiVersion: rbac.authorization.k8s.io/v1

kind: ClusterRoleBinding

metadata:

name: admin-user

roleRef:

apiGroup: rbac.authorization.k8s.io

kind: ClusterRole

name: cluster-admin

subjects:

- kind: ServiceAccount
name: admin-user
namespace: kubernetes-

8.2 User Acceptance Testing

User Acceptance Testing (UAT) is a type of testing performed by the end user or the client to verify/accept the software system before moving the software application to the production environment. UAT is done in the final phase of testing after functional, integration and system testing is done.

1. Defect Analysis

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

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	10	4	2	8	15
Duplicate	1	0	3	0	4
External	2	3	0	1	6
Fixed	9	2	4	11	20
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	0	5	0	1	8
Totals	22	14	11	22	51

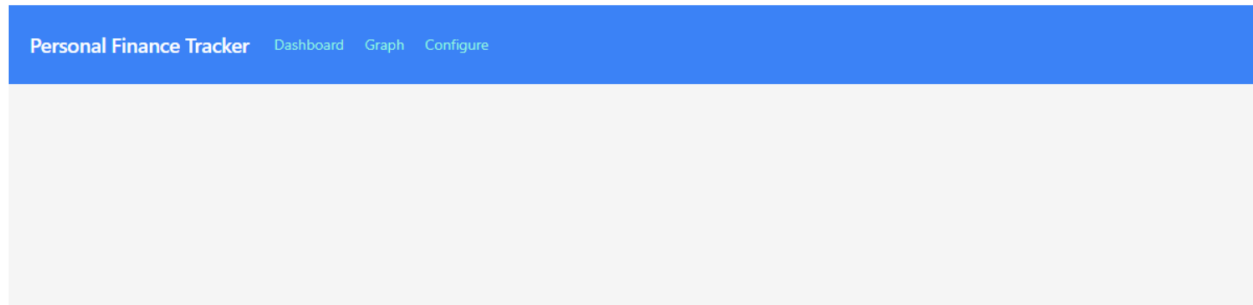
2. Test Case Analysis

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

Section	Total Cases	Not Tested	Fail	Pass
Interface	7	0	0	7
Login	20	0	0	20
Logout	2	0	0	2
Limit	3	0	0	3
Signup	8	0	0	8
Final Report Output	4	0	0	4

9.RESULTS

DASHBOARD



LOGIN

A login form interface displayed on a light blue background. The form is contained within a white rounded rectangle with a subtle drop shadow. At the top of the form, the word "Login" is written in a large, bold, black font. Below this, there are two input fields: the first is a light blue box containing the text "Mathesh"; the second is a white box with a black border containing seven dots, representing a password. Below these fields is a solid blue button with the word "Login" in white text. At the bottom of the form, the text "Don't have an account? Signup" is displayed, with "Signup" in a bold font.

Hey Welcome, Mathesh

Login Out

SIGNUP PAGE

Sign up

Mathesh

mathesh0921@gmail.com

.....|

Create Account

Already have an account? **Log in**

9.1 Performance Metrics

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.

The accuracy of the model is 0.96 by training the with the epoch of 10.

```
model.fit_generator(x_train, steps_per_epoch=24, epochs=10, validation_data=x_test, validation_steps=40)
```

```
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:1: UserWarning: `Model.fit_generator` is deprecated in future version. Please use `Model.fit`, which supports generators.
```

```
"""Entry point for launching an IPython kernel.
```

```
Epoch 1/10
```

```
24/24 [=====] - 17s 666ms/step - loss: 1.9786 - accuracy: 0.5628
```

```
Epoch 2/10
```

```
24/24 [=====] - 16s 662ms/step - loss: 1.4525 - accuracy: 0.6621
```

```
Epoch 3/10
```

```
24/24 [=====] - 16s 676ms/step - loss: 0.9580 - accuracy: 0.6842
```

```
Epoch 4/10
```

```
24/24 [=====] - 16s 675ms/step - loss: 0.7076 - accuracy: 0.7240
```

```
Epoch 5/10
```

```
24/24 [=====] - 16s 659ms/step - loss: 0.6103 - accuracy: 0.7488
```

```
Epoch 6/10
```

```
24/24 [=====] - 16s 663ms/step - loss: 0.5005 - accuracy: 0.8054
```

```
Epoch 7/10
```

```
24/24 [=====] - 17s 679ms/step - loss: 0.4164 - accuracy: 0.8904
```

```
Epoch 8/10
```

```
24/24 [=====] - 18s 723ms/step - loss: 0.3408 - accuracy: 0.8994
```

```
Epoch 9/10
```

```
24/24 [=====] - 16s 659ms/step - loss: 0.2641 - accuracy: 0.9536
```

```
Epoch 10/10
```

```
24/24 [=====] - 16s 664ms/step - loss: 0.1676 - accuracy: 0.9672
```

10.ADVANTAGES & DISADVANTAGES

Maintaining Financial Control.

When it comes to personal finance, being out of control is not something anybody would strive for.

There's nothing financially worse than feeling like you don't have any idea what's going on with your money.

The good news is, when you make an effort to record every financial transaction you make, you are essentially, taking the reins on anything and everything involving your money.

At any one time, you will know exactly how much money is sitting in your bank account, and how much you can spend.

In other words, when you track your expenses, you take complete control over your finances.

Holding Yourself Accountable

If you have any plans on saving, investing, getting out of debt, or building wealth, what is holding you accountable.

I mean, we can all set financial goals, and have financial dreams, but if you aren't tracking your expenses, there is nothing to hold you accountable when you make a bad financial decision.

1. Susceptible to costly human errors

Did you know that up to 9 out of 10 spreadsheets consist of human errors? Unfortunately, even the smallest of mistakes in a spreadsheet can cause catastrophic consequences.

Fidelity Magellan Fund once suffered a \$2.6 billion overstatement when an accountant accidentally omitted the minus sign on a net capital loss of \$1.3 billion.

There is always a greater chance of human error with manual processes, especially when it comes to complex data sets, such as those involved with expense management.

Failure to accurately track your company's expenditure and pay invoices on time can wreak havoc on your business's bottom line.

2. Lack of collaboration and access

Because Excel spreadsheets are a single file, only one user at a time may access and modify the data.

It can also be challenging to collaborate with other departments because you have to manually share or email a copy of the relevant spreadsheet with your colleagues.

When it comes to expense management data, however, these Excel spreadsheets are frequently shared and proofed across numerous teams and departments.

To guarantee that everyone is viewing the current version, users must be rigorous about version control and sharing when updates are made.

3. Time-consuming manual processes

The quantity of expense management data you need to review, analyse, and track will grow as your business evolves.

The only way to validate your data when using Excel spreadsheets, however, is to manually double check and re-enter any inaccurate information.

This is a time-consuming and labour-intensive task. As a result, Excel spreadsheets slow workers down and reduce accuracy by requiring them to perform repetitive processes that could be simplified or automated using expense management and invoicing software.

4. Inaccuracy leads to slower decision making

There's no denying that manual processes which increase the chances of inaccuracy lead to slower decision making within companies.

Extracting expense data and invoices from different departments, as well as consolidating them and summarising the information, is incredibly time consuming.

Because spreadsheets are prone to inaccuracies, everyone involved in processing the information must double-check the data as much as possible, which can further slow the process.

5. Lack of version control

The sharing of Excel spreadsheets from team to team might lead to concerns with the data's version and validity. You should consider who had the most recent access to the data.

Who did what to the spreadsheet and when?

Can you confirm that the calculations are correct? If you don't trust the answers, you may need to start all over again.

6. Data isn't updated in real-time

Excel spreadsheets don't update in real-time, so each update requires manual input. Because Excel spreadsheets can be difficult to modify, they are usually updated at the end of the day or every few days.

Typically, this entails keeping daily paper records and then manually entering them to update the Excel spreadsheet at a later date.

Not only is this a waste of time, but it also raises the likelihood of data being entered inaccurately or decisions being made based on out-of-date information.

7. Increased potential to lose important data

If a spreadsheet owner is unfamiliar with best practices for data storage and backup, they might keep just one version of their spreadsheet in a single location, such as on their desktop.

In the event of a technical issue, however, there's no guarantee of complete data recovery, meaning a company could lose all of their vital data in a split-second.

- ☒ Improved customer service
- ☒ Cloud-based solution
- ☒ Order Fulfillment
- ☒ Harness Customer Loyalty and Retention

11.CONCLUSION

Taking proper care of our record is crucial in every business, no matter how big or little, we must understand. We must educate ourselves about the idea of effective inventory management and its applications because we can see that managers do not fully grasp it. A company's inventory management system is one of the reasons for its failure. Many customs to combat failure are present, and we can start from this point. Modern technologies can support us in managing and keeping an eye on our inventory. We may learn, put new ideas into practice, and assess our company.

12.FUTURE SCOPE

- 1) It will have various options to keep record (for example Food, Travelling Fuel, Salary etc.).
- 2) Automatically it will keep on sending notifications for our daily expenditure.
- 3) In today's busy and expensive life, we are in a great rush to make moneys, but at the end of the month we broke off. As we are unknowingly spending money on title and unwanted things. So, we have come over with the plan to follow our profit.
- 4) Here user can define their own categories for expense type like food, clothing, rent and bills where they have to enter the money that has been spend and likewise can add some data in extra data to indicate the expense.

13.APPENDIX

13.1 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/bootstra
p.min.css" rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWfSpd3yD65Vohhp
uuCOMLASj C" crossorigin="anonymous">
<title>Registration</title>
</head>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.b
undle.min.js" integrity="sha384-
MrcW6ZMFYlzcLA8NI+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcX
n/tWtlax 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

Personal Expense Tracker



Registration Form

Email:

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):

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

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">
```



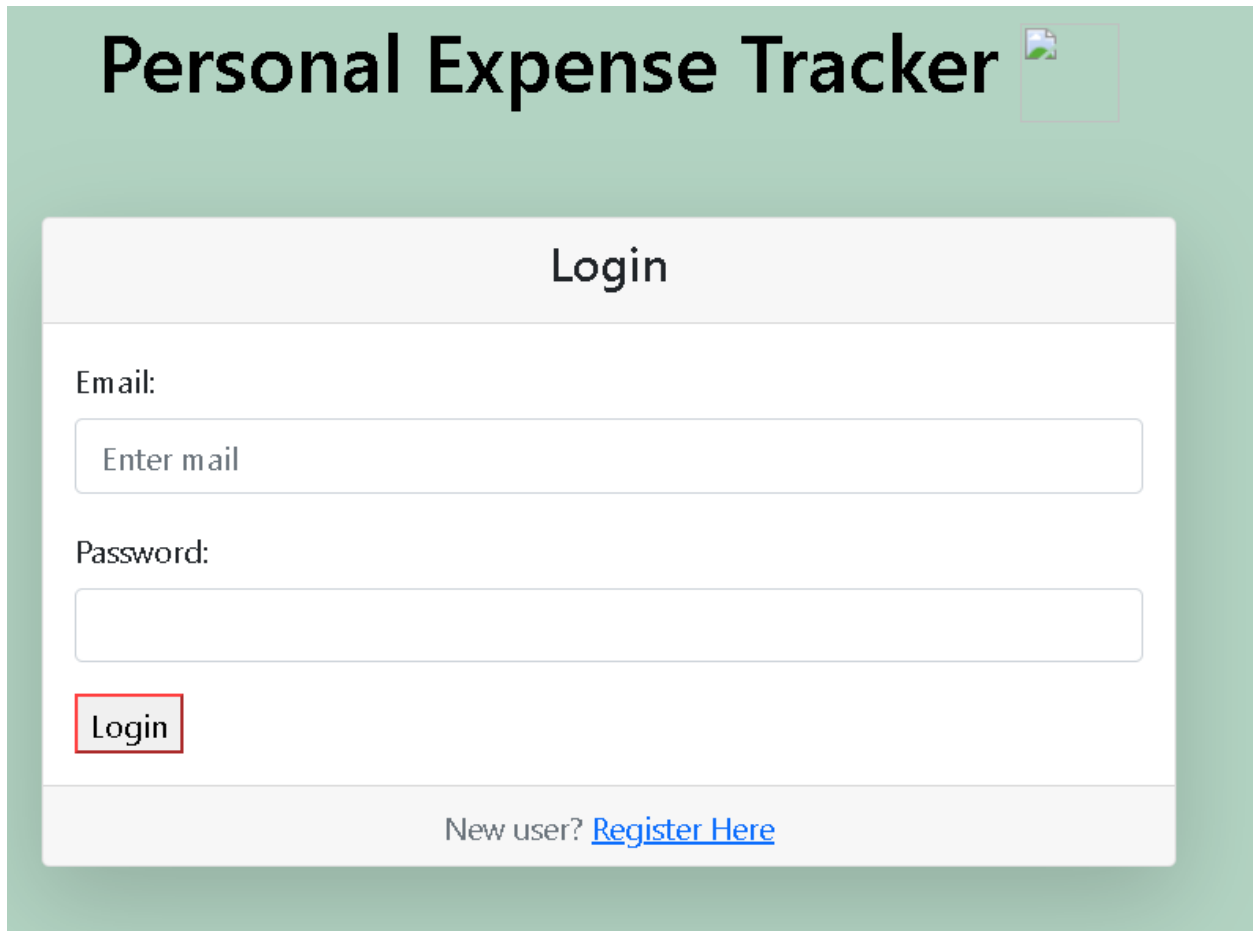
```

<!-- 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+JcX
n/t WtlaxVXM" 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>
</div>
</body>
</html>
```

Output



The screenshot shows a web application titled "Personal Expense Tracker" with a light green background. A white login form is centered on the page. The form has a title "Login" at the top. Below the title, there are two input fields: "Email:" with a placeholder "Enter mail" and "Password:". A red rectangular box highlights the "Login" button. At the bottom of the form, there is a link "New user? [Register Here](#)".

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/bootstra
```

```

p.min.css" rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTWfSpd3yD65Vohhp
uuCOMLA SjC" crossorigin="anonymous">
<title>AddExpense</title>
</head>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.b
undle.min
.js" integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcX
n/
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">


```



Output

input

!doctype html>

**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

Python Code To Connect With IBM 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['PASSWORD']})
document =
ibm_db.fetch_assoc(out)def
insertTableData(conn,rollno,username,email,pass word):
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,pass
word):
sql = "UPDATE userdetails SET (username,email,password)=(('{}','{}','{}')
WHERErollno={}".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;PW
D=
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=['POST',
'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:
```

Thus we conclude with our final deliverables of the project Personal expense tracker.

13.2 Github & Demo Link

Final Deliverables & Final Code Github Link: <https://github.com/IBM-EPBL/IBM-Project-32396-1660209506>

Demo Video Link: