RMK ENGINEERING COLLEGE

(An Autonomous Institution)

R.S.M. Nagar, Kavaraipettai, Gummidipoondi Taluk, Thiruvallur District 601 206.

PROJECT

PERSONAL EXPENSE TRACKER APPLICATION

DONE BY

TEAM ID: PNT2022TMID15608

ASHWIN DEV P (111719104013) – TEAM LEADER

BALAJI S (111719104015)

BHARATH KUMAR M (111719104023)

DRAVID SANJAY L (111719104049)

CHEVURI SUMANTH BABU (111719104033)

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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 the users 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

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 the user know where he is spending the most. It also provides graphical visualizations which helps the user to perform detailed analysis on the expenditure.

Pros

1. Using paper is not easy to manage the expenses. This application eliminates the usage of paper and excel sheets to keep track the user's expenses.
2. It saves time and requires less human effort.
3. The user just needs to enter the income and the expenses, everything will be taken care by the application.

Cons

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

Paper 2 - eExpense: A Smart Approach to Track Everyday ExpensePublisher: 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

1. It is an automated system to store the expense of the user and the expenses are stored in the database category wise.
2. This application extracts the textual information from the receipts and saves the amount and description for further processing.
3. 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.
4. 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

1. This application is useful only for Android users.
2. 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

1. This application is made only for android users.
2. There is no limit for the amount that is been used bythe 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

1. It is an AI powered engine so that is easy to store all the expenses of the user in a database.
2. It eliminates the user by typing manually instead it is very helpful using voice recognition.
3. It saves time and user friendly and also requires less human effort.
4. 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.

5. If any user doesn't know how to add or delete then we can simply give voice commands.

Cons

1. There is no option to scan the barcode on the price tag which may decreasing the efforts of entering the data.
2. There is no notification system when the user expenses exceeds the income to warn the situation.

2.1 References

1.https://www.ijraset.com/fileserve.php?FID=33797

1. **https://ieeexplore.ieee.org/document/8628070**
2. **https://www.irjmets.com/uploadedfiles/paper/issue_4_april_2022/21604/final/fin_irjmets1651132467.pdf**
3. **https://www.ijres.org/papers/Volume-9/Issue-12/Ser-4/L09127073.pdf**

2.2 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 to the user using

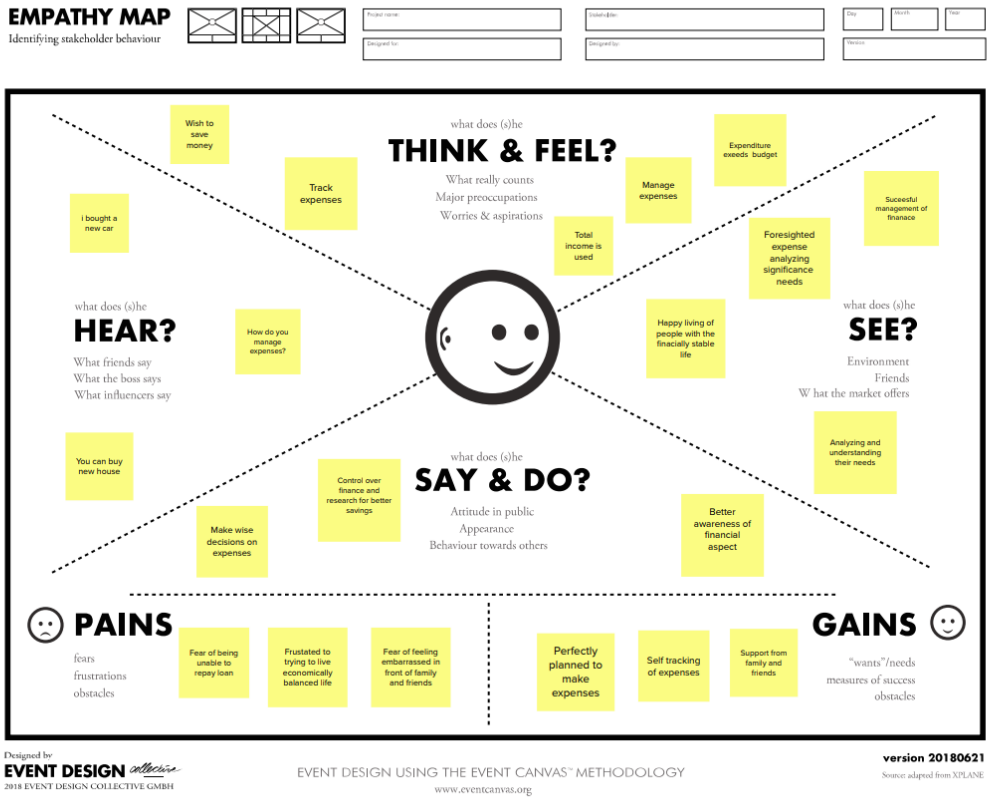
pie charts. Based on this we can keep track of daily expenses that we spent in a single day. Moreover, this is an automated solution for tracking the expenses.

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 the system, 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.

Empathy Map



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	1. Integration of email alerting system 2. Representation of expenditure analysis in graphical forms 3. Categorisation and disclosure of business expenses 4. Set boundaries on monthly expenses

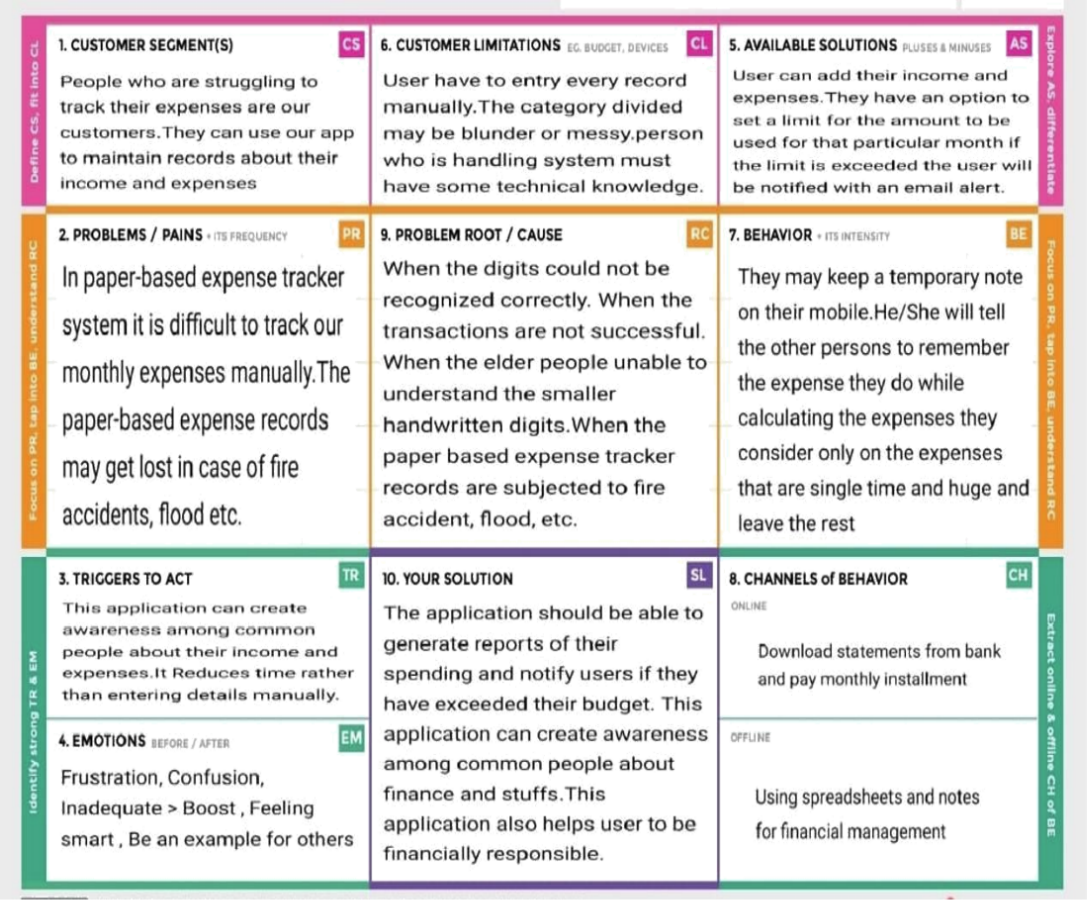
4.	Social Impact / Customer Satisfaction	1. Customers can maintain control of their finances and promote better financial habits like saving and investing. 2. Customers can regularly track their expense wallet. 3. By tracking personal expenses and keeping meticulous records, customers have everything ready come tax time.
5.	Business Model (Revenue Model)	The application can be used in every household where the significance of
		tracking personal expense is understood thereby serving as a good business model.
6.	Scalability of the Solution	1. The application can be scaled around every earning individual who wants to keep good track of his financial expenses. 2. Also, scalability can extend around people 3. working especially in Business sectors 4. who pay higher grade of taxes.

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.



4. REQUIREMENT ANALYSIS

4.1 Functional requirement

The suggested solution's functional requirements are listed below.

FR No.	Functional Requirement	Sub Requirement
FR-1	User Registration	This is a form that collects information from

		the user.
FR-2	Login	User needs to enter their username and password here.
FR-3	Expenses	The user must be able to add their expenses and set limit of their expenses in the application.
FR-4	Expense Tracker	The expenses should be represented graphically.
FR-5	Email Alert	The application sends an email if the expense exceeds the limit

4.2 Non-Functional requirements

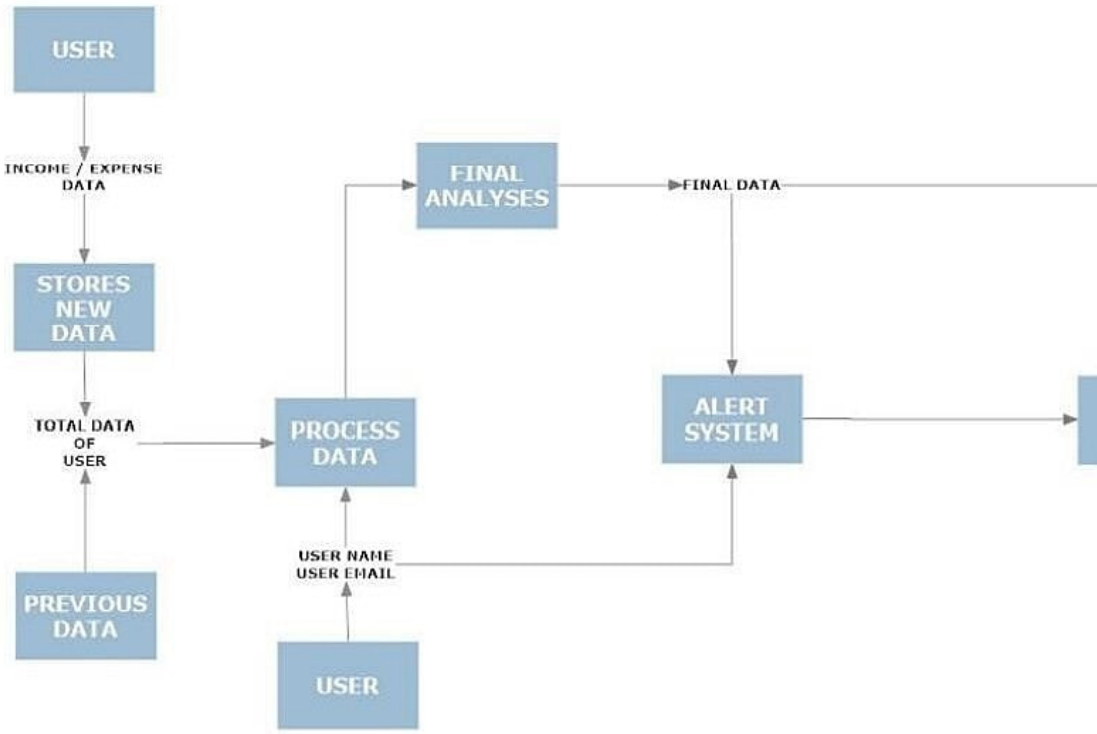
The non-functional requirements of the proposed solution are as follows.

NFR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The Application keeps an accurate record of the user's income and expenses.
NFR-2	**Security**	A detailed accounting of the user's income and expenses.
NFR-3	**Performance**	Because of lightweight database support, the system's throughput is increased.
NFR-4	**Availability**	The application must be completely operational at all times.
NFR-5	**Scalability**	The application must always function in its entirety.

5. PROJECT 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 Solution & Technical Architecture

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

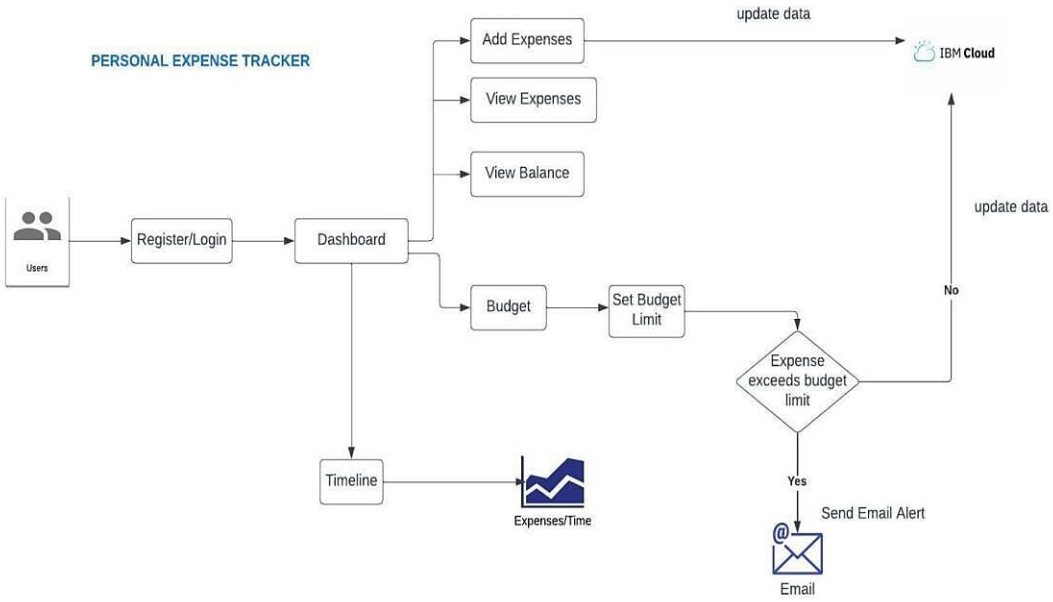


Table 1 : Components & Technologies:

S No	Component	Description	Technology
1.	User Interface	The user can interact with the application with the use of a Chatbot.	HTML, CSS, JavaScript / React Js etc.
2.	Application Logic-1	This application has a sign-in/sign-up feature that allows users to access the main dashboard after signing up.	Python/Node JS
3.	Application Logic-2	The dashboard has fields for saving money, adding expenses, and adding revenue.	IBM Watson STT service

4.	Application Logic-3	The user will receive notifications if the expense cap is exceeded and also get an expense report in form of a graph	IBM Watson Assistant
5.	Database	The MySQL database contains income and expense information.	MySQL, NoSQL, etc.
6.	Cloud Database	The user data are saved in a secure manner while using a cloud-based database service.	IBM DB2, etc
7.	File Storage	The user's financial data is stored on IBM Block Storage.	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	It makes internal resources accessible to users or apps from the outside world.	IBM Weather API, etc.

Table 2: 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	The user's financial information is extremely secure. IBM cloud's Container Registry can be used to accomplish this.	Container Registry, Kubernetes Cluster
3.	Scalable Architecture	This application 'Expense Tracker' has lifetime access. When a user's income is high, this product will be in more demand.	Container Registry, Kubernetes Cluster
4.	Availability	The user will have access to this application at any 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

An informal, generic explanation of a software feature written from the viewpoint of the end user is known as a user story. Its objective is to explain how a software feature will benefit the user.

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

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user & web user)	Registration	USN-1	As a user, I can register for the application by entering my email, and password, and confirming my password.	I can access my account/dashboard	High	Sprint-1
		USN-2	As a user, I will receive a confirmation email once I have registered for the application	I can receive a confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through a Google account.	I can register & access the dashboard with a Google Account login.	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering my email & password	I can access the application.	High	Sprint-1
	Dashboard	USN-6	As a user, I can see the expenditure details and the daily expense.	I can view the daily expenses and add the expense details.	High	Sprint-1
Customer Care Executive		USN-7	As a customer care executive, I can solve the problem that customers face.	I can provide support to customers at any time 24*7.	Medium	Sprint-1
Administrator	Application	USN-8	As an administrator, I can upgrade or update the application.	I can fix any bugs raised by customers and upgrade the application.	Medium	Sprint-1

6. PROJECT PLANNING & 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

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

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	Byna Rithika
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	Deepika A
Sprint-2		USN-3	As a user, I can register for the application through Facebook	2	Low	Deepika A
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2	Medium	Aishwarya J
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	1	High	Byna Rithika
Sprint-3	Dashboard	USN-6	As a user, I can view the expenditure details and can add new expenses on the dashboard	3	High	Aishwarya J
Sprint-3	Limits	USN-7	As a user, I can set my monthly expense limit and I will receive an email when the expense exceeds limit	4	High	Byna Rithika
Sprint-4	Reports	USN-8	As a user, I can view the expenditure details in the graphical form	5	Medium	Aishwarya J

6.2 Sprint Delivery Schedule

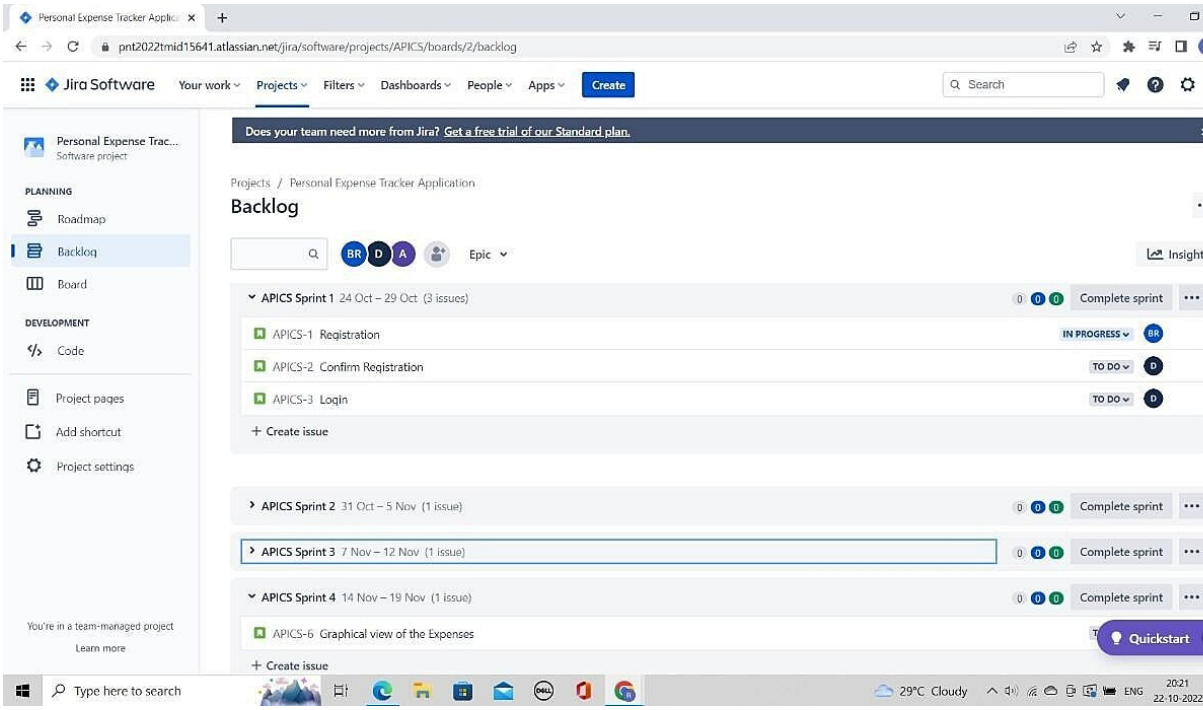
Agile sprints typically last from one week to one month. The goal of sprints is to put pressure on teams to innovate and deliver

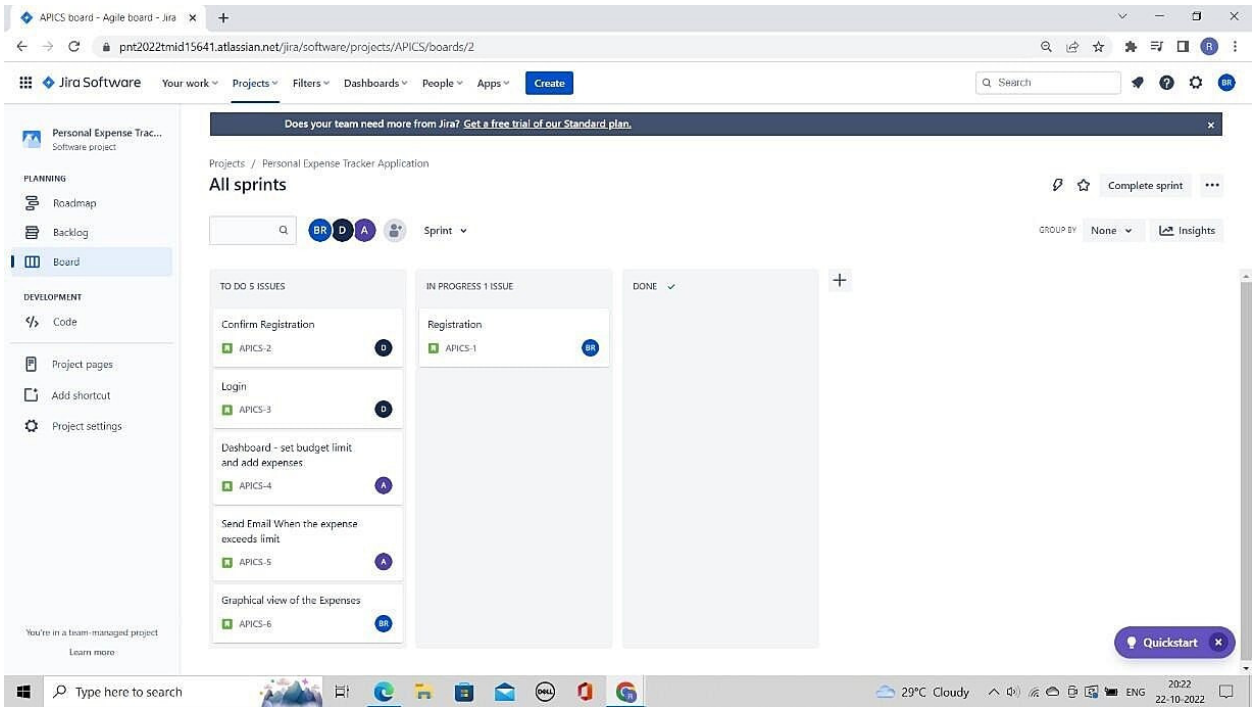
more quickly, hence the shorter the sprint, the better.

Project Tracker, Velocity & Burndown Chart: (4 Marks)

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	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	31 Oct 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	07 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	14 Nov 2022

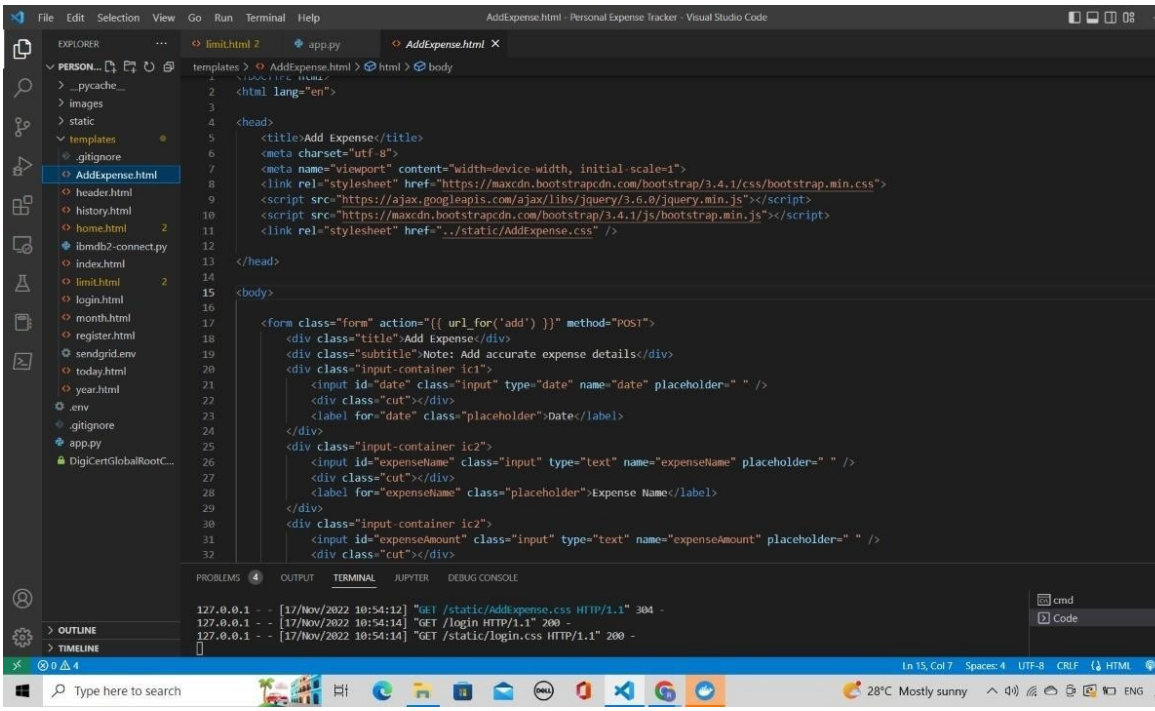
6.3 Reports from JIRA

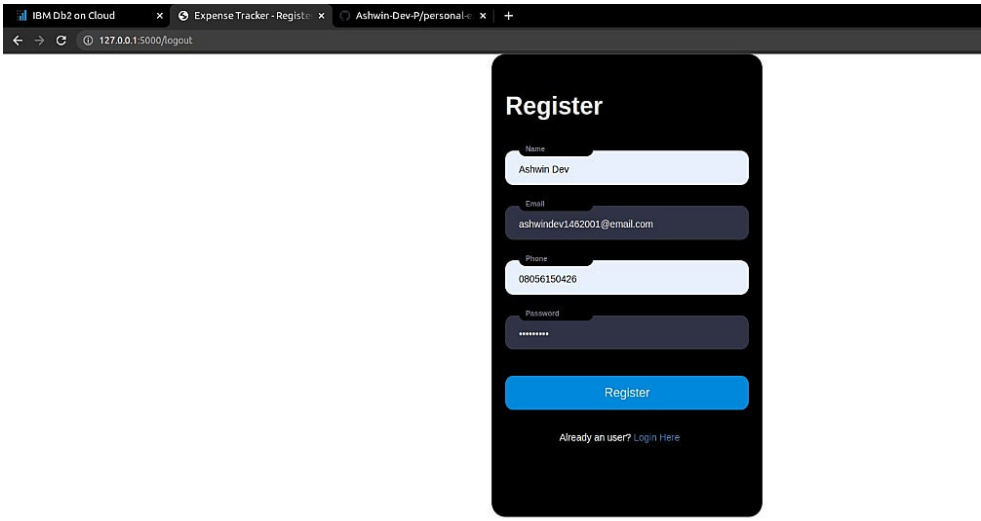




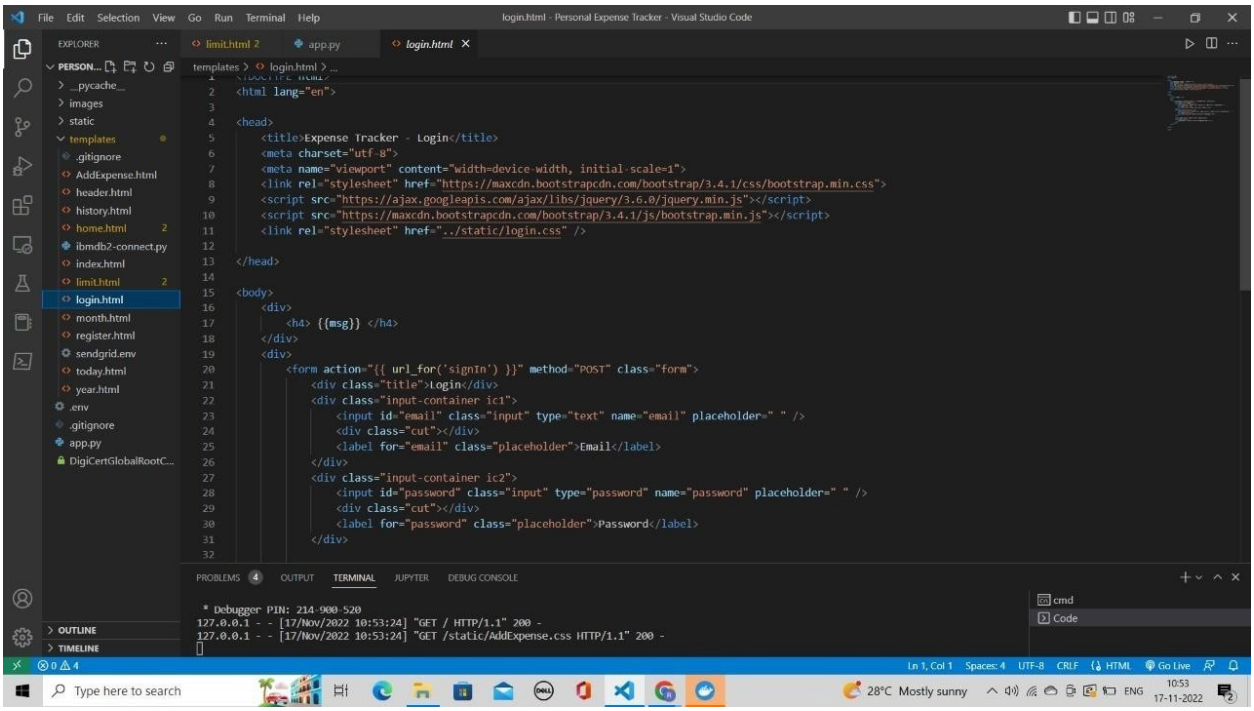
7.CODING & SOLUTIONING (Explain the features added in the project along with code)

7.1 REGISTER PAGE

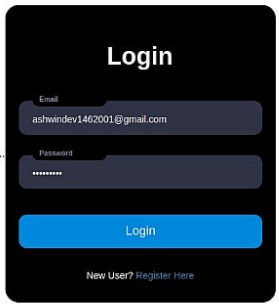




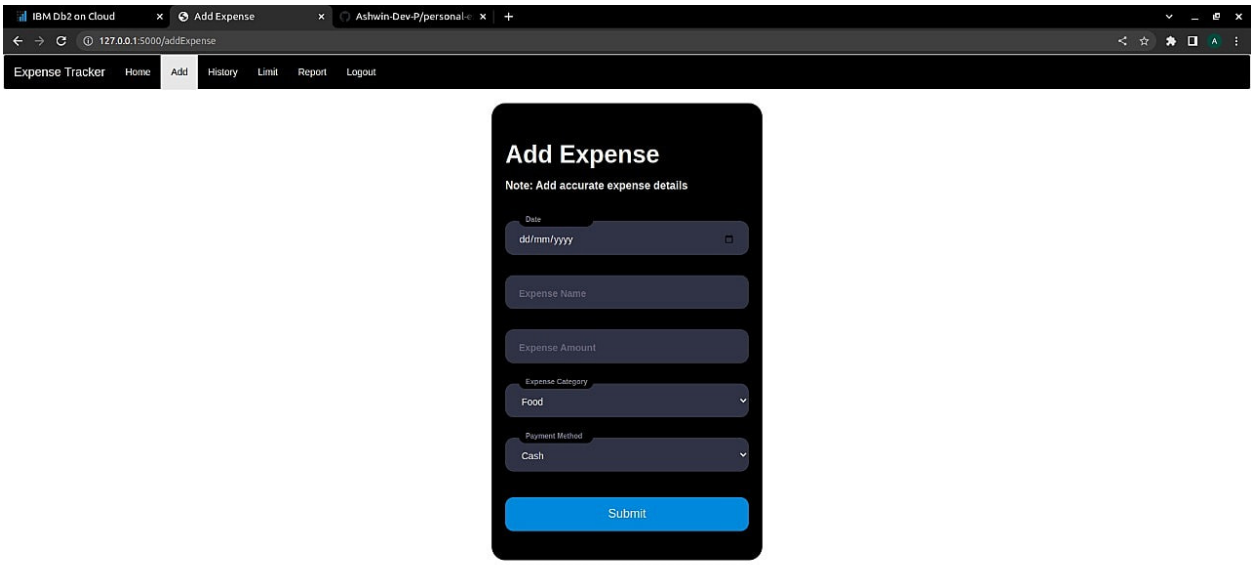
7.2 LOGIN PAGE



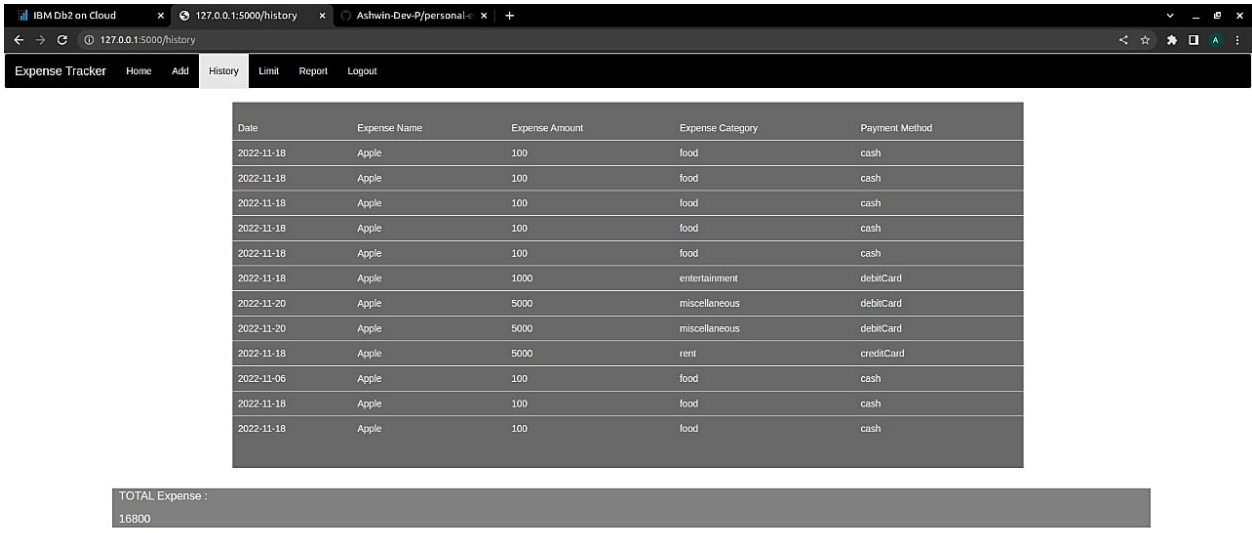
Registered successfuly..



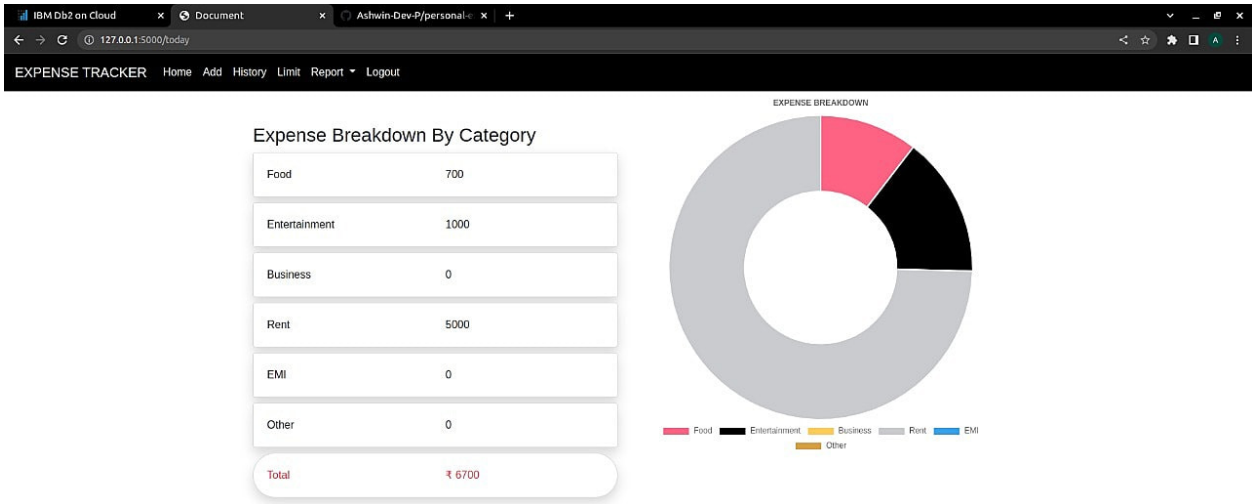
7.3 ADD EXPENSE PAGE



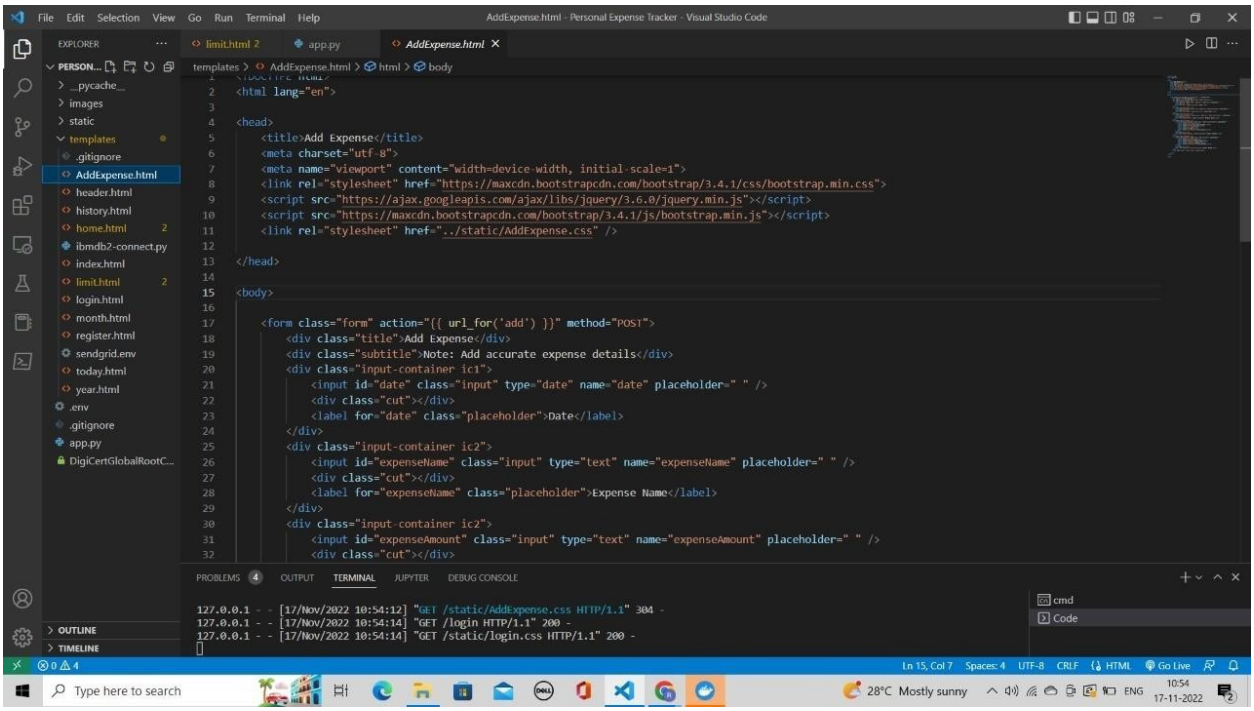
7.4 HISTORY



7.5 USERS LIMIT


IBM Db2 on Cloud
Document
Ashwin-Dev-P/personal-e
127.0.0.1:5000/today
EXPENSE TRACKER
Home
Add
History
Limit
Report
Logout
Expense Breakdown By Category
Food 700
Entertainment 1000
Business 0
Rent 5000
EMI 0
Other 0
Total ₹ 6700
EXPENSE BREAKDOWN
Food
Entertainment
Business
Rent
EMI
Other

7.6 REPORT


File Edit Selection View Go Run Terminal Help
AddExpense.html - Personal Expense Tracker - Visual Studio Code
EXPLORER
limit.html 2
app.py
AddExpense.html
templates > AddExpense.html > html > body
PERSON...
__pycache__
images
static
templates
.gitignore
AddExpense.html
header.html
history.html
home.html 2
ibmdb2-connect.py
index.html
limit.html 2
login.html
month.html
register.html
sendgrid.env
today.html
year.html
.env
.gitignore
app.py
DigiCertGlobalRootC...
<!DOCTYPE html>
<html lang="en">
<head>
<title>Add Expense</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
<link rel="stylesheet" href="../static/AddExpense.css" />
</head>
<body>
<form class="form" action="{{ url_for('add') }}" method="POST">
Add Expense
Note: Add accurate expense details

<input id="date" class="input" type="date" name="date" placeholder=" " />

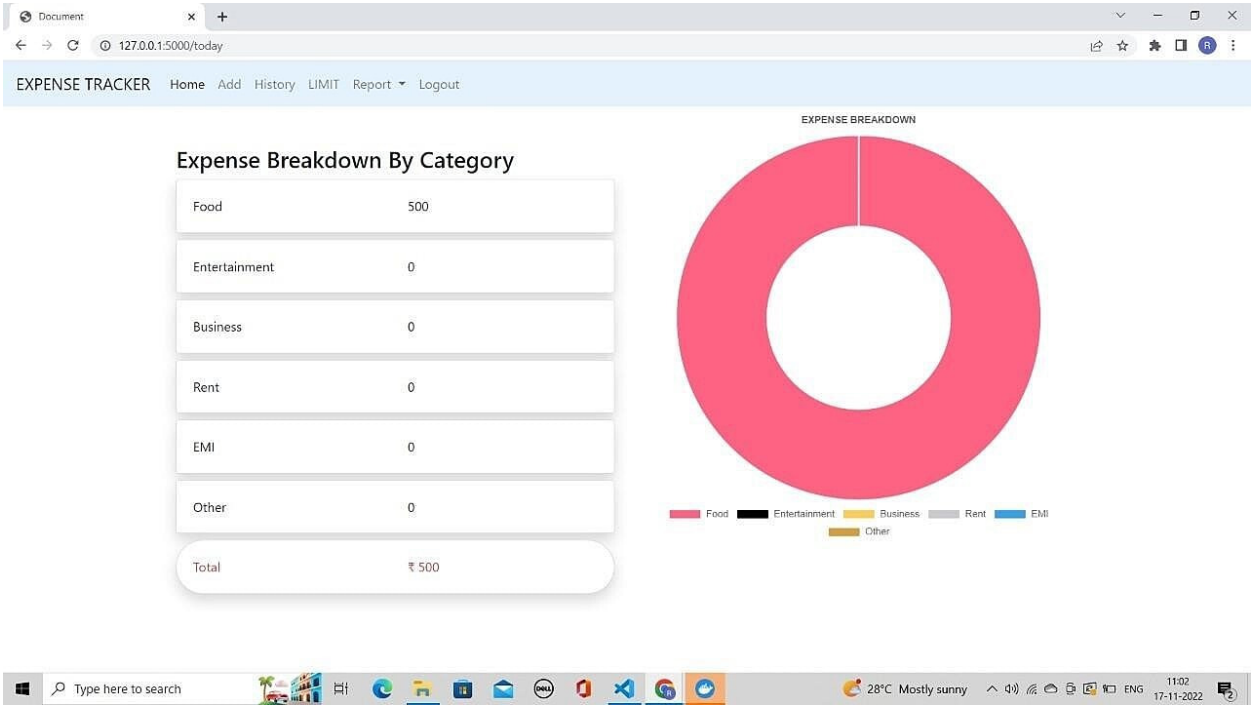
<label for="date" class="placeholder">Date</label>

<input id="expenseName" class="input" type="text" name="expenseName" placeholder=" " />

<label for="expenseName" class="placeholder">Expense Name</label>

<input id="expenseAmount" class="input" type="text" name="expenseAmount" placeholder=" " />

PROBLEMS 4
OUTPUT
TERMINAL
JUPYTER
DEBUG CONSOLE
127.0.0.1 - - [17/Nov/2022 10:54:12] "GET /static/AddExpense.css HTTP/1.1" 304 -
127.0.0.1 - - [17/Nov/2022 10:54:14] "GET /login HTTP/1.1" 200 -
127.0.0.1 - - [17/Nov/2022 10:54:14] "GET /static/login.css HTTP/1.1" 200 -
cmd
Code
OUTLINE
TIMELINE
Ln 15, Col 7 Spaces: 4 UTF-8 CRLF HTML Go Live
Type here to search
28°C Mostly sunny
ENG
10:54
17-11-2022


Document
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Add
History
LIMIT
Report
Logout
Expense Breakdown By Category
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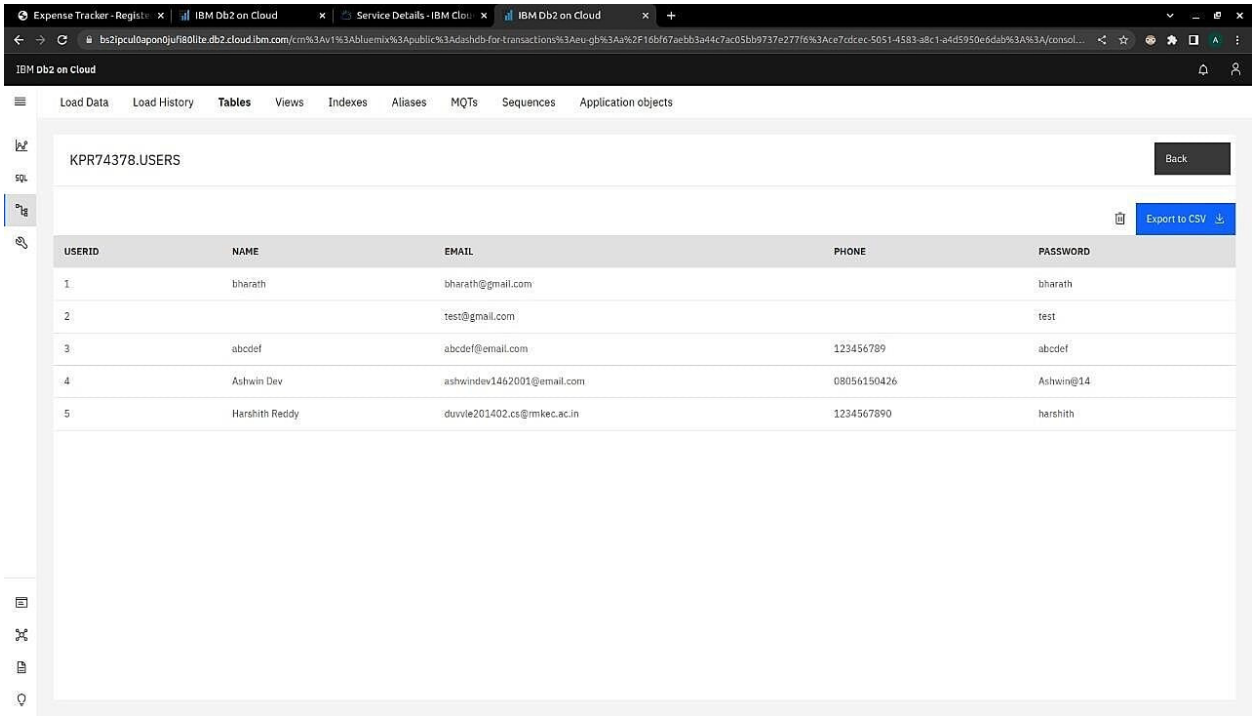
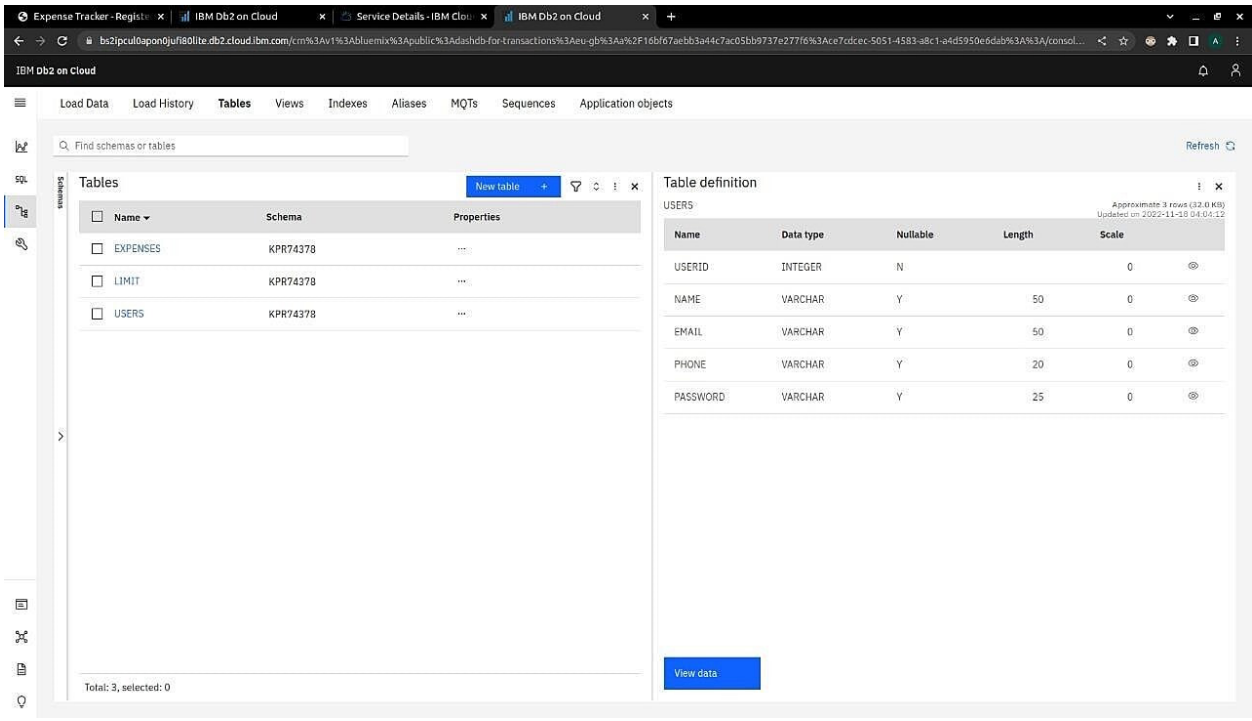
Entertainment 0
Business 0
Rent 0
EMI 0
Other 0
Total ₹ 500
EXPENSE BREAKDOWN
Food
Entertainment
Business
Rent
EMI
Other
Type here to search
28°C Mostly sunny
ENG
11:02
17-11-2022

7.7 Database Schema (if Applicable)





8. TESTING

8.1 Test Cases

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.

Test case ID	Feature Type	Component	Test Scenario	Pre-Requisi	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Comments	TC for Automation(Y/N)	BUG ID
LoginPage_TC_001	Functional	Home Page	Verify user is able to see the Login/Signup popup when user clicked on My account button	None	1. Go to Homepage	Username: Rithika password: rithi123 Username: Aishwarya password: aish Username: Deepika password: deepika123	Login/Signup popup should display	Working as expected	Pass	Nil	N	Nil
LoginPage_TC_002	UI	Home Page	Verify the UI elements in Login/Signup popup	Home	1.Go to website 2.Enter details and click login		Application should show below UI elements: a.email text box b. password text box c.Login button with orange colour d.New customer? Create account link	Working as expected	Pass	Nil	N	Nil
LoginPage_TC_003	Functional	Home page	Verify user is able to login with Valid credentials	Username and password	1.Go to website 2.Enter details and click login	Username: Rithika password: rithi123	User should navigate to user account homepage	Working as expected	Pass	Nil	N	Nil
LoginPage_TC_004	Functional	Login page	Verify user is able to login with Invalid credentials	Username and password	1.Go to website 2.Enter details and click login	Username: Rithika password: rith1234	Application should show 'Incorrect email or password' validation message.	Working as expected	Pass	Nil	N	Nil
LoginPage_TC_004	Functional	Login page	Verify user is able to login with Invalid credentials	Login First	1.Go to website 2.Enter details and click login	Username: Rithika password: rith1234	Application should show 'Incorrect email or password' validation	Working as expected	Pass	Nil	N	Nil
LoginPage_TC_005	Functional	Login page	Verify user is able to login with InValid credentials	Login First	1.Go to website 2.Enter details and click login	Username: Rithika password: rith1234	Application should show 'Incorrect email or password' validation	Working as expected	Pass	Nil	N	Nil

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 functionalities serve the purpose of development.

1. 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).

2. Defect Analysis

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 Reproduced	0	0	1	0	1

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 severity level, and how they were resolved

Skipped	0	0	1	1	2
Won't Fix	0	5	2	1	8
Totals	24	13	12	25	74

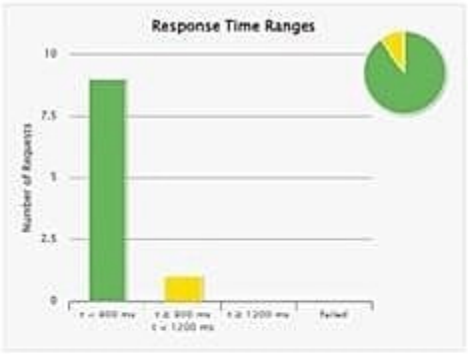
3. Test Case Analysis

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



Gatling Version

Version: 3.8.4
Released: 2022-09-13

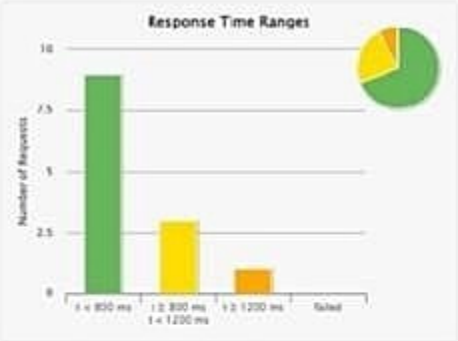
Run Information

Date: 2022-11-12 13:40:09 GMT
Duration: 47s
Description: —

Expand all groups | Collapse all groups

Requests	Executions					Response Time (ms)							
	Total	OK	KO	% KO	Cnt/s	Min	50th pct	75th pct	95th pct	99th pct	Max	Mean	Std Dev
All Requests	10	10	0	0%	0.208	115	365	553	757	829	847	415	221
request_0	1	1	0	0%	0.021	115	115	115	115	115	115	115	0
request_6	1	1	0	0%	0.021	646	646	646	646	646	646	646	0
request_1	1	1	0	0%	0.021	124	124	124	124	124	124	124	0
request_2	1	1	0	0%	0.021	315	315	315	315	315	315	315	0
request_3	1	1	0	0%	0.021	519	519	519	519	519	519	519	0
request_5	1	1	0	0%	0.021	248	248	248	248	248	248	248	0
request_4	1	1	0	0%	0.021	847	847	847	847	847	847	847	0
request_7	1	1	0	0%	0.021	357	357	357	357	357	357	357	0
request_13	1	1	0	0%	0.021	413	413	413	413	413	413	413	0
request_13 Redirect 1	1	1	0	0%	0.021	564	564	564	564	564	564	564	0

DASHBOARD



Gatling Version

Version: 3.8.4
Released: 2022-09-13

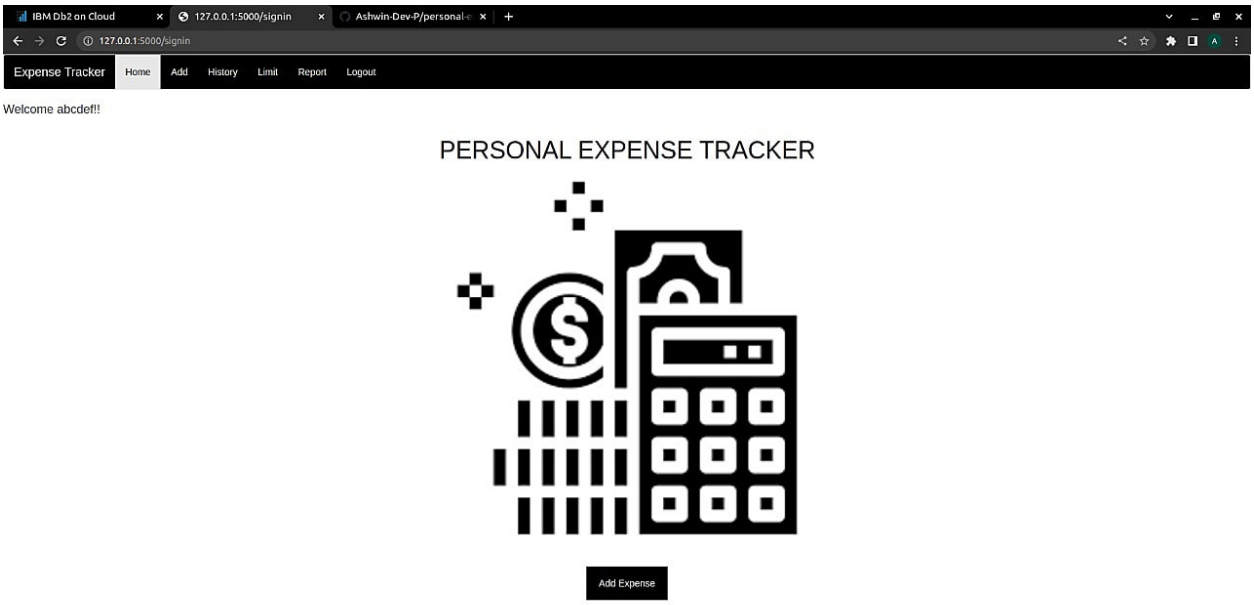
Run Information

Date: 2022-11-13 04:57:52 GMT
Duration: 26s
Description: —

Expand all groups | Collapse all groups

Requests	Executions					Response Time (ms)							
	Total	OK	KO	% KO	Cnt/s	Min	50th pct	75th pct	95th pct	99th pct	Max	Mean	Std Dev
All Requests	13	13	0	0%	0.481	104	440	609	1371	1727	1816	614	438
request_0	1	1	0	0%	0.037	104	104	104	104	104	104	104	0
request_6	1	1	0	0%	0.037	883	883	883	883	883	883	883	0
request_2	1	1	0	0%	0.037	359	359	359	359	359	359	359	0
request_3	1	1	0	0%	0.037	271	271	271	271	271	271	271	0
request_5	1	1	0	0%	0.037	343	343	343	343	343	343	343	0
request_4	1	1	0	0%	0.037	268	268	268	268	268	268	268	0
request_1	1	1	0	0%	0.037	609	609	609	609	609	609	609	0
request_7	1	1	0	0%	0.037	440	440	440	440	440	440	440	0
request_8	1	1	0	0%	0.037	440	440	440	440	440	440	440	0
request_8 Redirect 1	1	1	0	0%	0.037	1816	1816	1816	1816	1816	1816	1816	0
request_11	1	1	0	0%	0.037	1078	1078	1078	1078	1078	1078	1078	0
request_25	1	1	0	0%	0.037	759	759	759	759	759	759	759	0
request_26	1	1	0	0%	0.037	211	211	211	211	211	211	211	0

ERROR HANDLING



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

b. **Transaction Receipts:** Capture and organize your payment receipts to keep track of your expenditure.

c. **Organizing Taxes:** Import your documents to the expense tracking app, and it will streamline your income and expenses under the appropriate tax categories.

d. **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.

e. **Reports:** The expense tracking app generates and sends reports to give a detailed insight about profits, losses, budgets, income, balance sheets, etc.,

f. **Ecommerce integration:** Integrate your expense tracking app with your E-commerce store and track your sales through payments received via multiple payment methods.

g. **Vendors and Contractors**: Manage and track all the payments to the vendors and contractors added to the mobile app.

h. **Access control:** Increase your team productivity by providing access control to particular users through custom permissions.

i. **Track Projects:** Determine project profitability by tracking labor costs, payroll, expenses, etc., of your ongoing project.

j. **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.

k. **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.

l. **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:

1. **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 .
2. **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.

1. **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.
2. **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.

3. **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.
4. **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 skils.

Disadvantages:

a. 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.

b. 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.

c. Personally, I have no problem with that, but if you do, then make sure you avoid the 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 track 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 there 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

1.GitHub Link

https://github.com/IBM-EPBL/IBM-Project-25632-1659969341

2.Project Demo Link

https://drive.google.com/file/d/1F-OBWsAlyftaxhbmCCSpF12G9psJcTwd/view?usp=share_link