PROJECT

PERSONAL EXPENSE TRACKER APPLICATION

DONE BY

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Source Code

GitHub & Project Demo Link

1. INTRODUCTON

Project Overview:

This project is based on an expense and income tracking system. This project aims to create an easy, faster and smooth tracking system between the expense and the income .This project also offers some opportunities that will help the user to how to manage the expenses in efficient way and also set have an option to set a limit for the amount to be used for that particular month. So, for the better expense tracking system, we developed our project that will help the users a lot.

Purpose :

An expense tracking app is an exclusive suite of services for people who seek to handle their earnings and plan their expenses and savings. 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 be fitting strategy of getting out of debt. 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. Literature Survey

Existing Problem :

In existing, we need to maintain the Excel sheets, CSV files for the user daily, weekly and monthly expenses and there is no as such complete solution to keep a track of its daily expenses easily. To do so a person as to keep a log in a diary or in a computer system, also all the calculations need to be done by the user which may sometimes results in mistakes leading to losses. The existing system is not user friendly because data is not maintained perfectly. A writing audit is a study of insightful sources on a particular research. We found various similar products that have already been developed in the market. Unlike all those products, Personal Expense tracker (PET) provides security and graphical results. We provide the user to enter their wish-list before any purchase. It generates notifications to notify user about their money management and put an limit to weekly, monthly, expenses.

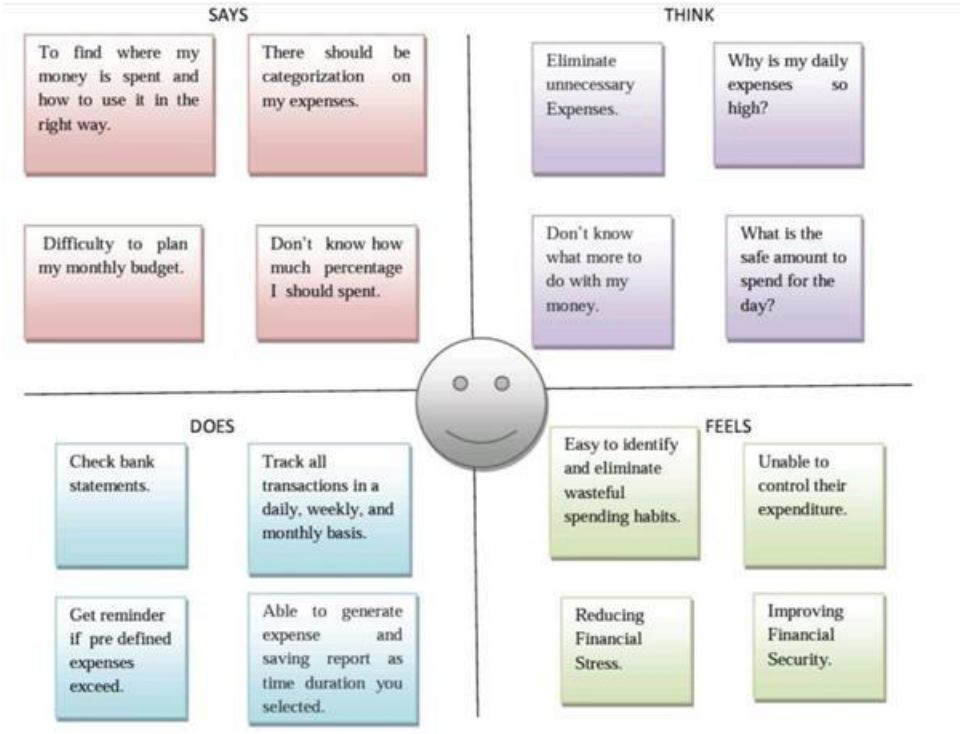
Problem Statement Definition :

Every earning people are mostly obsessed at the end of the month as they cannot remember where all of their money have gone when they have spent and ultimately have to sustain in little money minimizing their essential needs. There is no as such complete solution present easily to keep track of its daily expenditure easily and notify them if they are going to have money shortage. Personal finance applications will ask users to add their expenses and based on their expenses wallet balance will be updated which will be visible to 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 alert. the main purpose of our application is to track the user's expenses.

3 .Ideation and Proposed Solution

Empathy Map Canvas :

An empathy map canvas helps brands provide a better experience for users by helping teams understand the perspectives and mindset of their customers. Using a template to create an empathy map canvas reduces the preparation time and standardizes the process so you create empathy map canvases of similar quality



Ideation and Proposed Solution

Ideation and Brainstorming :

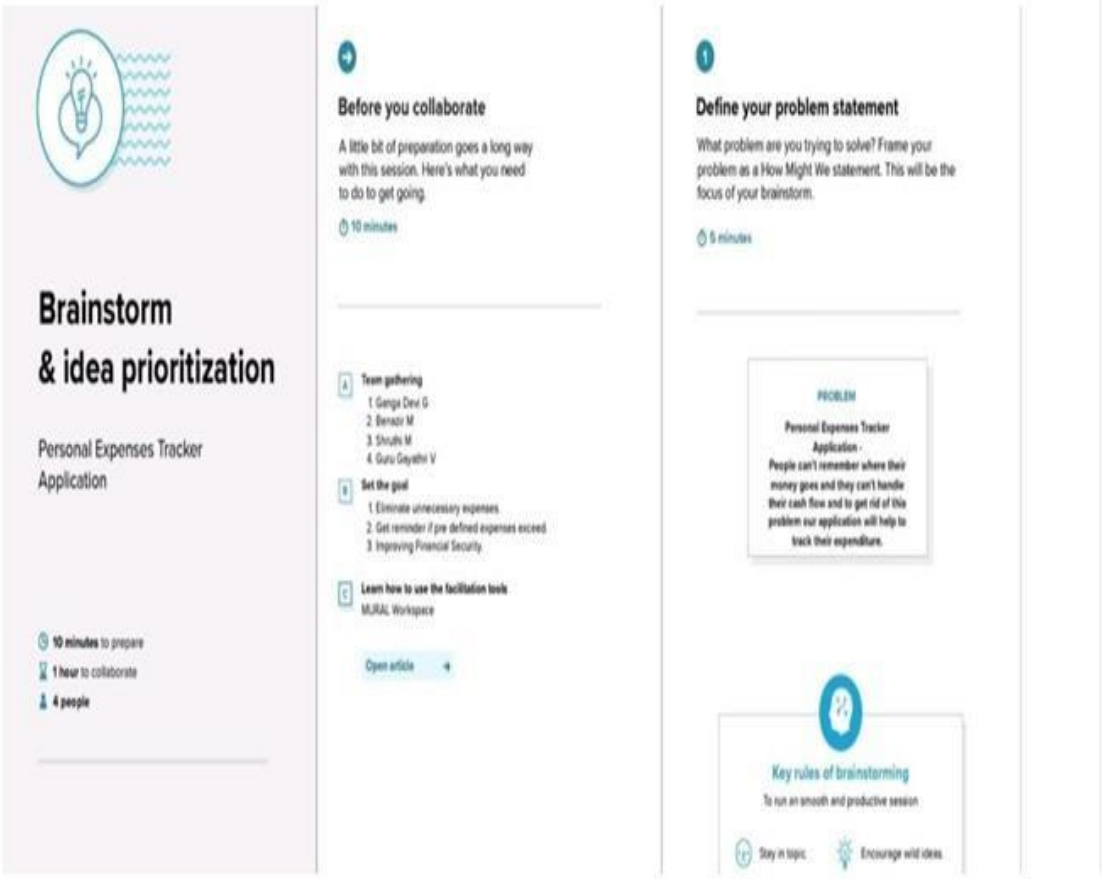
Brainstorming is a group activity where everyone comes together to discuss strategies for growth and improvement. You can exchange ideas, share important information and use these meetings as informal catch-up sessions with your co-workers. Brainstorming combines a relaxed, informal approach to problem solving with lateral thinking. It encourages people to come up with thoughts and ideas that can, at first, seem a bit crazy. Some of these ideas can be crafted into original, creative solutions to a problem, while others can spark even more ideas.

Ideation is the process where you generate ideas and solutions through sessions such as Sketching, Prototyping, Brainstorming, Brainwriting, Worst Possible Idea, and a wealth of other ideation techniques. Ideation is also the third stage in the Design Thinking process.

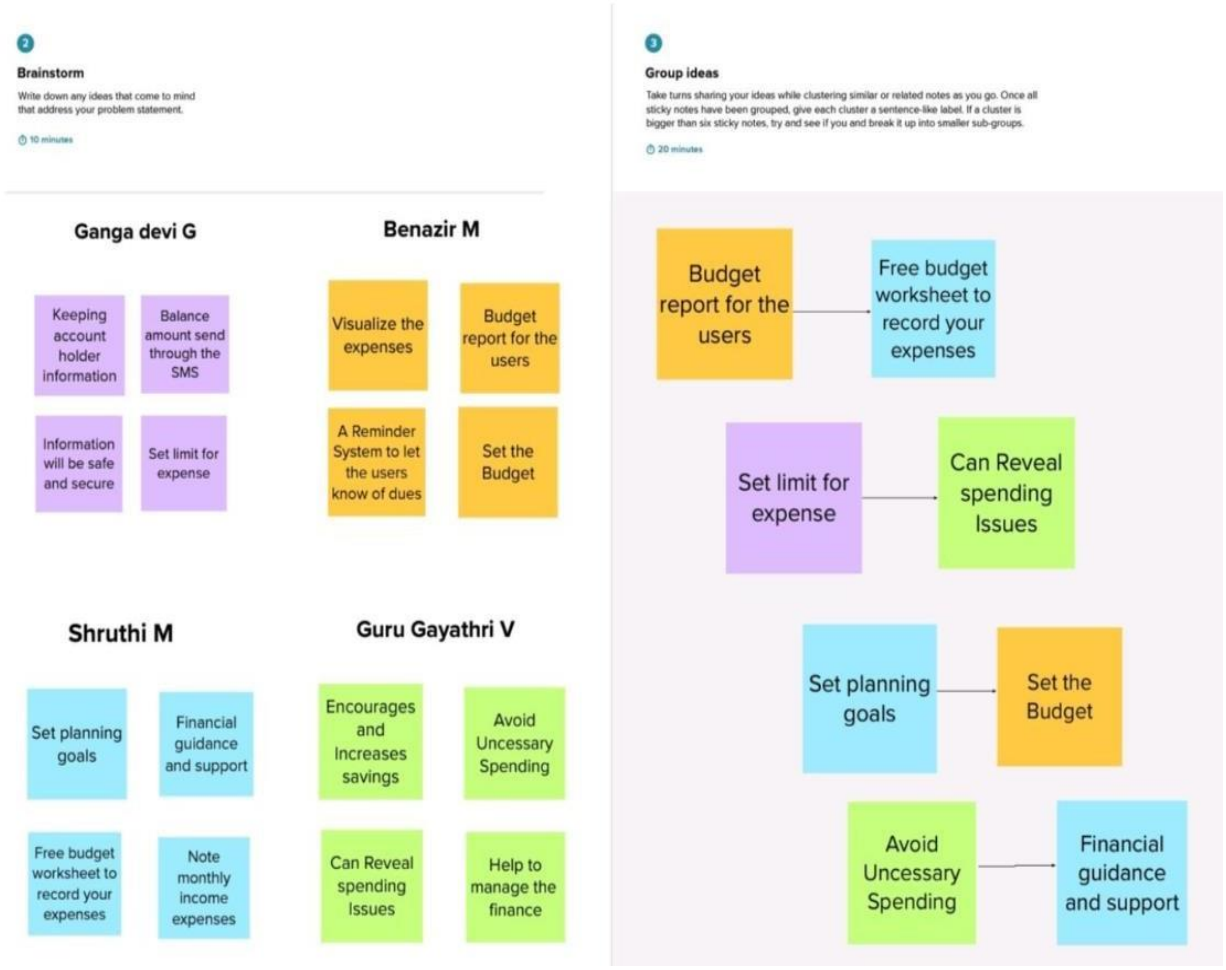
As you can see, ideation is not just a one-time idea generation or a brainstorming session. In fact, we can divide ideation in these three stages: generation, selection, and development.

i.

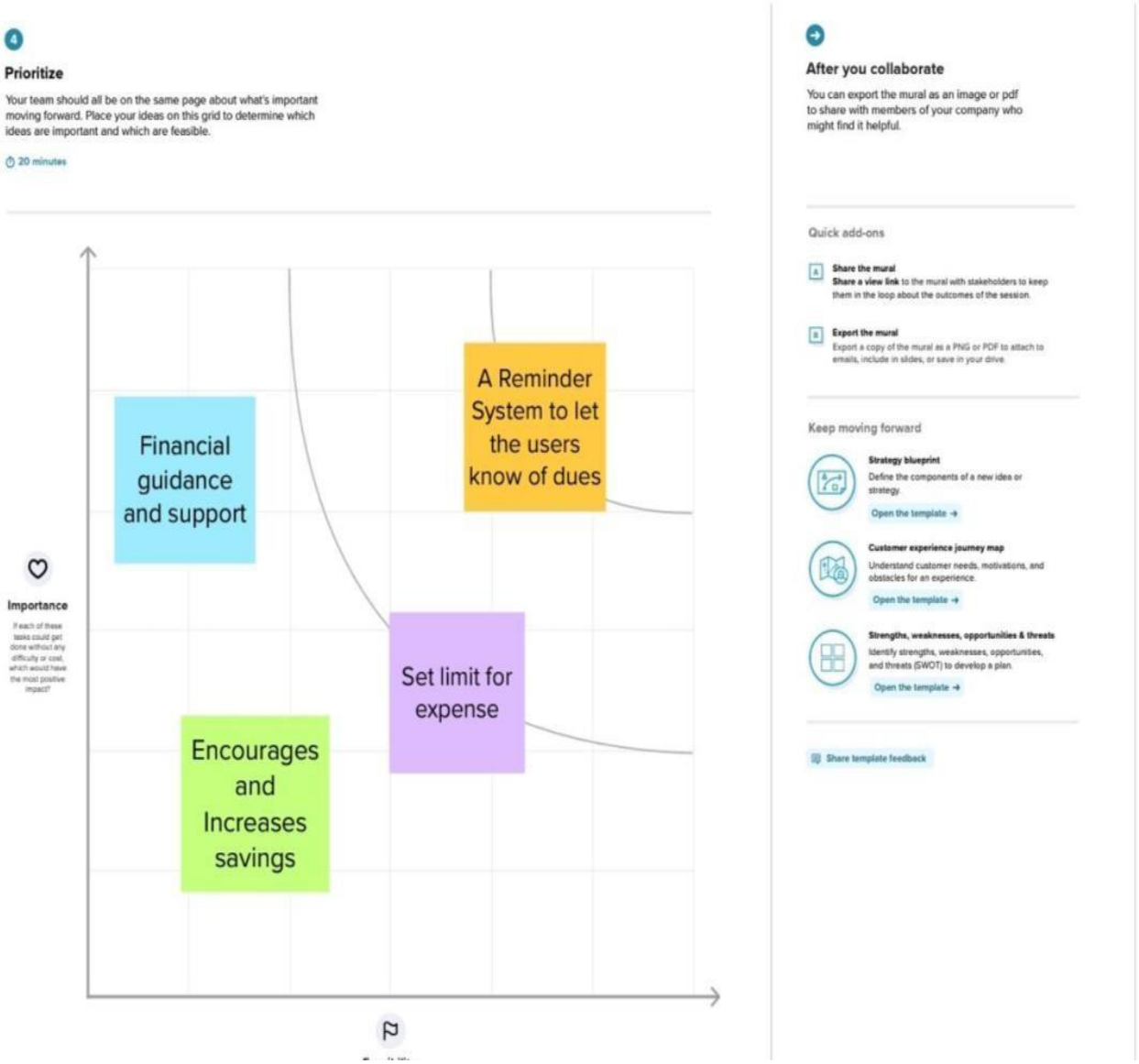
Step-1: Team Gathering, Collaboration and Select the Problem Statement



ii. Step-2: Brainstorm, Idea Listing and Grouping



iii. Step-3: Idea Prioritization



Ideation and Proposed Solution

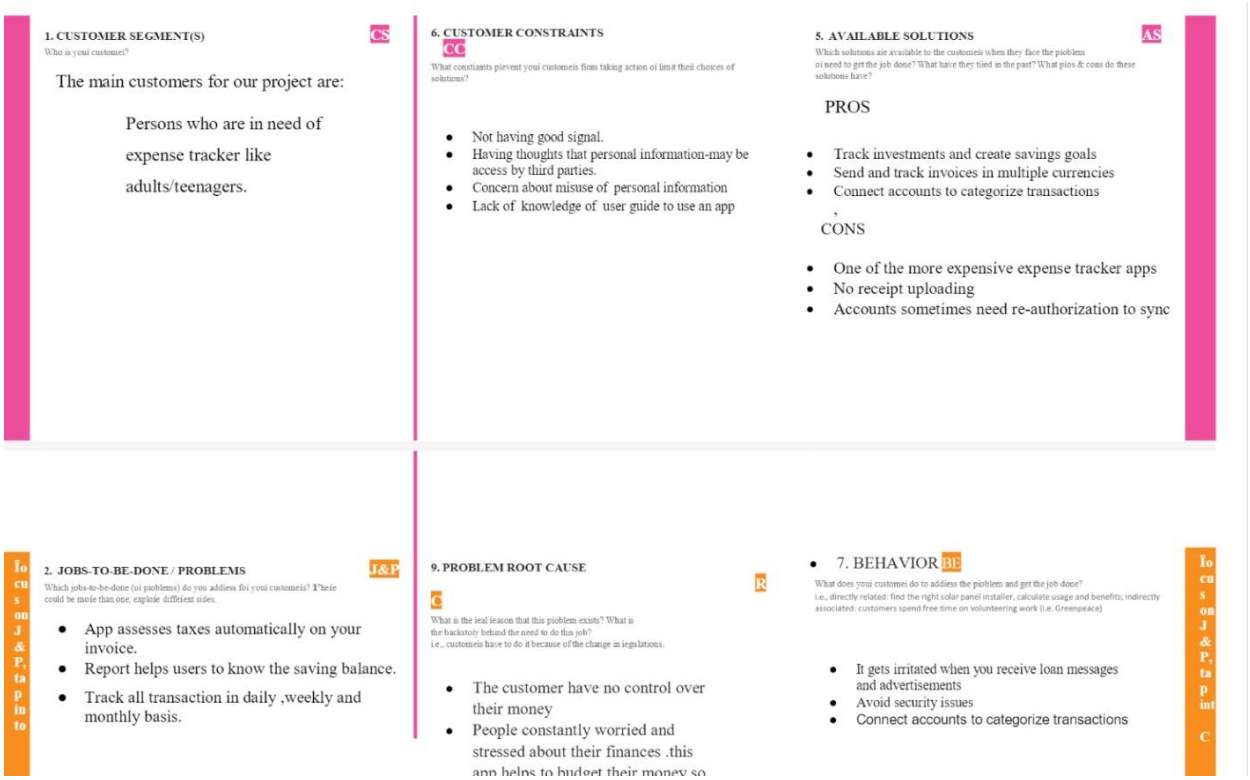
Proposed Solution :

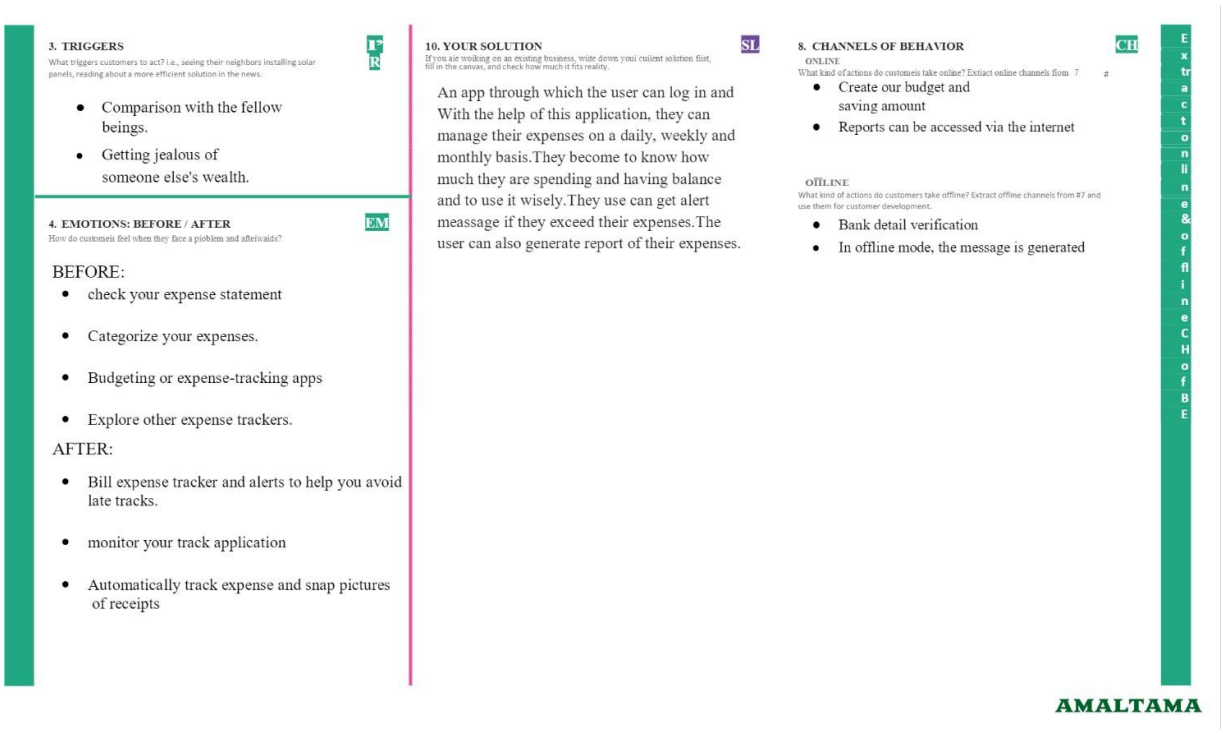
Expense Tracker is going to be a mobile application so that It can be accessed any time required. This application will have a two-tier architecture: first one is the database tier, where all the data and financial data will be stored. Second it will be the user interface which will support the application user communicate with the system and also store Information in the database. The proposed system should operate offline so it can be accessed at any time without internet availability. The proposed system should provide different categories for the user to select from and they can enter the amount and mode of payment. This system should be able to analyze the information, provide analytics on which category did the user spent most of their money. The proposed system should provide a user interface where the user could store and observe their past expenses. To 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

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Keeping Proper track of our daily expenses is becoming challenging in today's world. Without the proper money management knowledge people overspend on their wants instead of focusing on their needs. Especially when using online applications for purchasing their requirements consumers tend to over spend. This problem leads to improper distribution of their daily expenses. Without proper knowledge on managing money poor are becoming poorer and rich are becoming richer.

2.	Idea / Solution description	An attempt to develop an app to manage our daily expenses and give us insights on managing our money would be a good idea. This app will be able to track expenses on various online platforms and apps. The app can help with proper budgeting and give alerts when the user over spends or crosses the limit previously set by them. This will lead to proper spending habits and make them knowledgeable about money management. IBM cloud can be used to handle the data safely.
3.	Novelty / Uniqueness	The speciality for the app will be the data security with IBM cloud being used for data storage and this app genuinely helps with the money management. The proper and personalized budgeting of the user's money leads them to trust the app and they wouldn't have to worry about their expenditure on unnecessary things.
4.	Social Impact / Customer Satisfaction	People using the app will be becoming better at their spending habits and will be able to save more than their peers who are not using the app. This application aims to improve the users' savings sustainably and steadily which leads them to trust the app without worrying about their money
5.	Business Model (Revenue Model)	This application leads to a business model, theuser can be suggested the right products to buybased on their budget and this can lead to targeted business approaching the right consumers. The model leads to systematic andstructured expenses of the user and also leads to predictive analysis of the future expenses ofthe consumer. This model makes the user more careful with expenses as they are provided with the money management insights
6.	Scalability of the Solution	This application can be created as a multi user model nationwide. The model can also be modified based on the country's law on applications and data security which leads to international implementation of this application by maintaining proper gateway rules. This app when developed for multiple nations can be modified to their requirements. The app can also be modified for a particular group of people or organization

Problem Fit:


1. CUSTOMER SEGMENT(S)
CS
Who is your customer?
The main customers for our project are:
Persons who are in need of expense tracker like adults/teenagers.
6. CUSTOMER CONSTRAINTS
CC
What constraints prevent your customers from taking action or limit their choices of solutions?
Not having good signal.
Having thoughts that personal information-may be access by third parties.
Concern about misuse of personal information
Lack of knowledge of user guide to use an app
5. AVAILABLE SOLUTIONS
AS
Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have?
PROS
Track investments and create savings goals
Send and track invoices in multiple currencies
Connect accounts to categorize transactions
CONS
One of the more expensive expense tracker apps
No receipt uploading
Accounts sometimes need re-authorization to sync
Focus on J & P, tap into
2. JOBS-TO-BE-DONE / PROBLEMS
J&P
Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one, explore different sides.
App assesses taxes automatically on your invoice.
Report helps users to know the saving balance.
Track all transaction in daily ,weekly and monthly basis.
9. PROBLEM ROOT CAUSE
RC
What is the real reason that this problem exists? What is the backstory behind the need to do this job? i.e., customers have to do it because of the change in regulations.
The customer have no control over their money
People constantly worried and stressed about their finances .this app helps to budget their money so
7. BEHAVIOR
BE
What does your customer do to address the problem and get the job done? i.e., directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)
It gets irritated when you receive loan messages and advertisements
Avoid security issues
Connect accounts to categorize transactions
Focus on J & P, tap int C


3. TRIGGERS
TR
What triggers customers to act? i.e., seeing their neighbors installing solar panels, reading about a more efficient solution in the news.
Comparison with the fellow beings.
Getting jealous of someone else's wealth.
4. EMOTIONS: BEFORE / AFTER
EM
How do customers feel when they face a problem and afterwards?
BEFORE:
check your expense statement
Categorize your expenses.
Budgeting or expense-tracking apps
Explore other expense trackers.
AFTER:
Bill expense tracker and alerts to help you avoid late tracks.
monitor your track application
Automatically track expense and snap pictures of receipts
10. YOUR SOLUTION
SL
If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
An app through which the user can log in and With the help of this application, they can manage their expenses on a daily, weekly and monthly basis.They become to know how much they are spending and having balance and to use it wisely.They use can get alert meassage if they exceed their expenses.The user can also generate report of their expenses.
8. CHANNELS OF BEHAVIOR
CH
ONLINE
What kind of actions do customers take online? Extract online channels from #7
Create our budget and saving amount
Reports can be accessed via the internet
OFFLINE
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.
Bank detail verification
In offline mode, the message is generated
Extract online & offline CH of BE
AMALTAMA

4. Requirement Analysis

Functional Requirments :

FR No.	Functional Requirement	Description
FR-1	**Register**	Registration is the process of the user to complete the application's form. Certain details must be submitted such as e-mail address, password, and password confirmation. The user is identified using these details.
FR-2	**Login**	The login screen is used to verify the identity of the user. The account can be accessed using the user's registered email address and password.
FR-3	**Categories**	On the main page, we can see overall revenue and spending, as well as the balance remaining after expenditure, as well as the user's entire categories namely Entertainment, Cloth, Food and Drinks, Health and Fitness and so on.
FR-4	**Update Daily Expensive**	The user can upload the daily expensive details what they are spending on each day. The details such as cloth, entertainment, food, health etc.,

FR-5	**View Expensive Chart**	This module used to see a pictorial depiction of all details in the form of a pie chart, where each slice of the pie chart represents that the viewer to gain an approximatenotion of which category has the highest expenses.
NFR-6	**Set Alert**	When a user attempts to spend more than the pre-defined amount limit, the app will automatically send an alert if the threshold amount they selected for an alert is exceeded.

Non-Functional Requirments:

NFR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The system shall allow the users to access the system with pc using web application. The system uses a web application as an interface. The system is user friendly which makes the system easy.
NFR-2	**Security**	A security requirement is a statement of needed security functionality that ensures one of many different security properties of software is being satisfied.

NFR-3	**Reliability**	he system has to be 100% reliable due to the importance of data and the damages that can be caused by incorrect or incomplete data. The system will run 7 days a week. 24 hours a day.
NFR-4	**Performance**	The information is refreshed depending upon whether some updates have occurred or not in the application. The system shall respond to the member in not less than two seconds from the time of the request submittal. The system shall be allowed to take more time when doing large processing jobs. Responses to view information shall take no longer than 5 seconds to appear on the screen.
NFR-5	**Availability**	The system is available 100% for the user and isused 24 hrs a day and 365 days a year. The system shallbe operational 24 hours a day and 7 days a week.
NFR-6	**Scalability**	Scalability is the measure of a system's ability toincrease or decrease in performance and cost in response to changes in application and system processing demands.

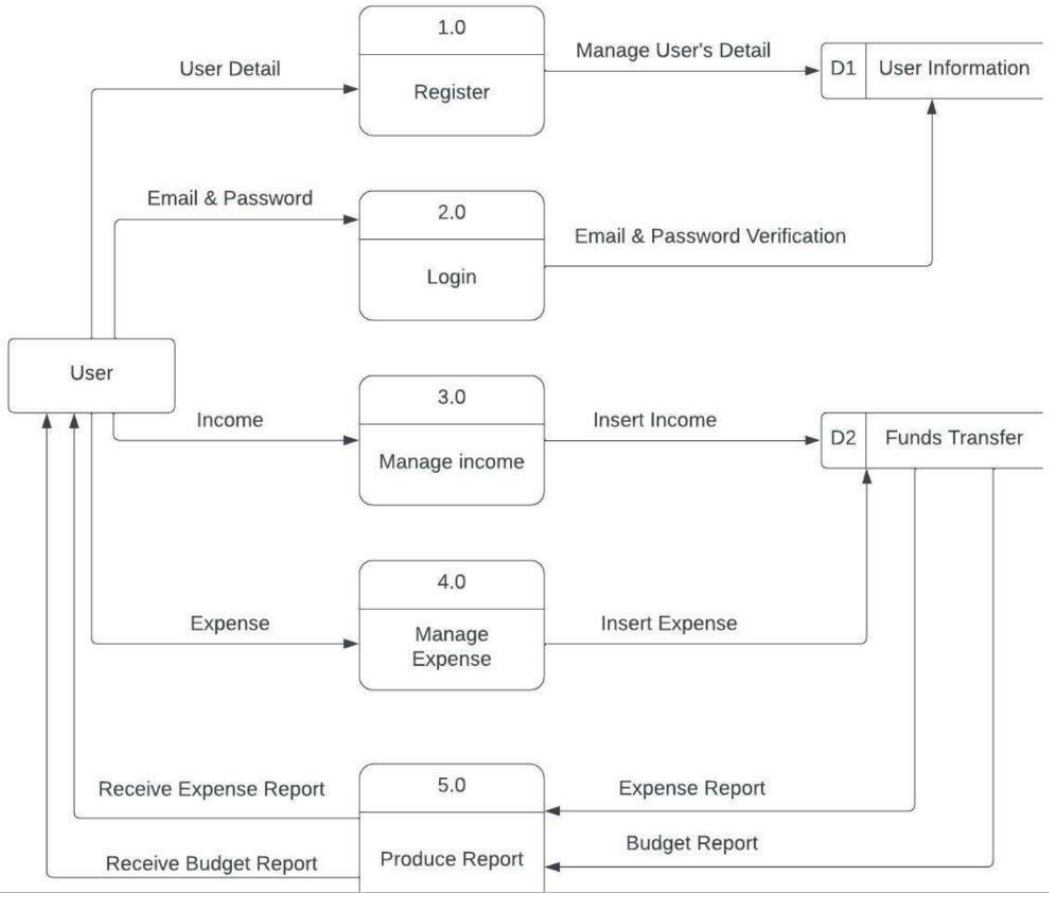
5. Project Design

Data flowDiagrams:

A data flow diagram (DFD) is a graphical or visual representation using a standardized set of symbols and notations to describe a business's operations through data movement. Data flow diagrams provide a straightforward, efficient way for organizations to understand, perfect, and implement new processes or systems. They're visual representations of your process or system, so they make it easy to understand and prune.

- It shows the login process of the system in details. User is required to enter the details needed in order to use the system.
- The process above means that user can enter their income, edit and delete if needed.
- it shows the process to generate a report based on data has been entered in income and expenses. The data from these data store will be retrieve to display a report and forecast next month budget.

DFD Level 1

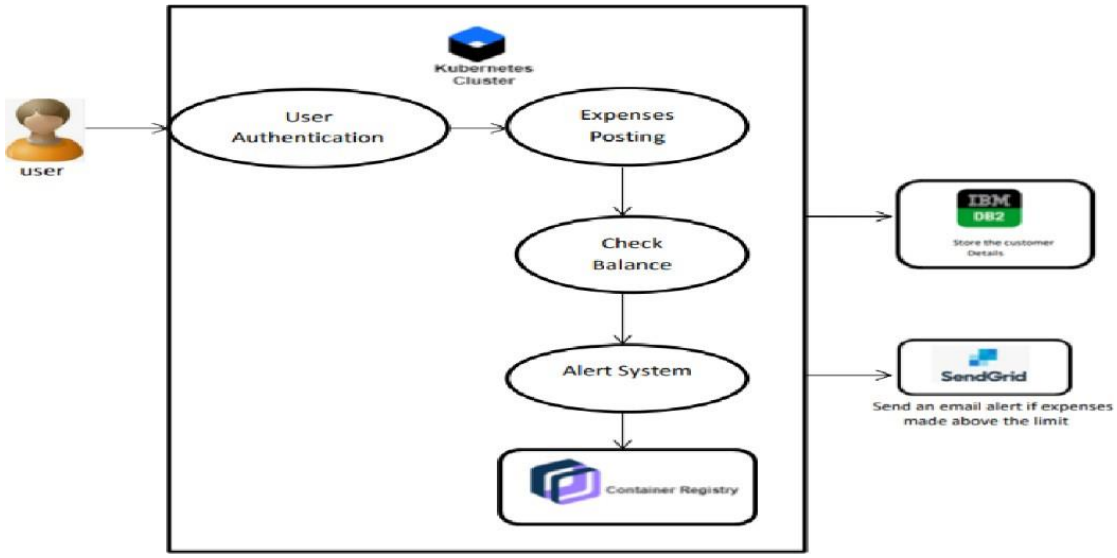


Solution & Technical Architecture:

Technical Architecture (TA) is a form of IT architecture that is used to design computer systems. It involves the development of a technical blueprint with regard to the arrangement, interaction, and interdependence of all elements so that system-relevant requirements are met.

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.



User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority
Customer (web user)	Registration	USN-1	As a user, I can register for the application by entering mail id and password	I can access my account/ dashboard	High
		USN-2	As a user,I will receive a confirmation email once I have registered for the email and click application	I can receive a confirmation email	High
		USN-3	As a user, I can access using mail	I can register through mail	Low
	Login	USN-4	As a user, I can login application by entering application using email and password	I can access the application	High
	Dashboard	USN-5	As a user,I can view 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 login issue and other issues of the solution at any application	I can provide support	Medium
Administrator	Application	USN-7	As an administrator,I can upgrade or update the application	I can fix the bug	Medium

6. Project Planning & Scheduling

Sprint Plainning & Estimation:

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 , new password and confirming the same password.	2	High	Benazir Guru Gayathri
		USN -2	As a user , I will receive confirmation email once I have registered for the application.	1	Low	
	Login	USN -3	As a user , I can log into the application by entering email and password / Google OAuth.	2	High	Ganga Devi Shruthi
	Dashboard	USN -4	Logging in takes the user to their dashboard.	1	Low	
Sprint - 2		USN -5	As a user ,I will update my salary at the start of each month.	1	Medium	Ganga Devi
		USN -6	As a user , I will set a target/limit to keep track of my expenditure.	1	Medium	Benazir
	Workspace	USN -7	Workplace for personal expense tracking	1	Medium	Shruthi
	Charts	USN -8	Graphs to show weekly and everyday expenditure	2	High	Guru Gayathri
		USN -9	As a user , I can export raw data as csv file.	1	Medium	Ganga Devi

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint - 3	IBM DB2	USN -10	Linking database with dashboard	2	High	Benazir
		USN -11	Making dashboard interactive with JS	2	High	Shruthi
	Watson Assistant	USN -12	Embedding Chatbot to clarify user's queries.	1	Low	Guru Gayathri
	BCrypt	USN -13	Using BCrypt to store passwords securely.	1	Medium	Ganga Devi
	SendGrid	USN -14	Using SendGrid to send mail to the user. (To alert or remind)	1	Medium	Benazir
Sprint - 4	Integration	USN -15	Integrating frontend and backend.	2	High	Shruthi
	Docker	USN -16	Creating Docker image of web app.	2	High	Guru Gayathri
	Cloud Registry	USN -17	Uploading docker image to IBM cloud registry.	2	High	Ganga Devi
	Kubernetes	USN -18	Creating container using docker and hosting the webapp.	2	High	Benazir
	Exposing Deployment	USN -19	Exposing IP/Ports for the site.	1	Medium	Shruthi

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		
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022		
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022		
Sprint-5	20	6 Days	21 Nov 2022	27 Nov 2022		

Sprint Delivery Schedule:

A sprint schedule is a document that outlines sprint planning from end to end. It'sone of the first steps in the agile sprint planning process—and something that requires adequate research, planning, and communication.

S.NO	MILESTONES	ACTIVITIES	DATE
1.	**Preparation Phase**	Pre-requisites	24 Aug 2022
		Prior Knowledge	25 Aug 2022
		Project Structure	23 Aug 2022
		Project Flow	23 Aug 2022
		Project Objectives	22 Aug 2022
		Registrations	26 Aug 2022
		Environment Set-up	27 Aug 2022
2.	**Ideation Phase**	Literature Survey	29 Aug 2022 – 03 Sept 2022
		Empathy Map	5 Sept 2022 - 7 Sept 2022
		Problem Statement	8 Sept 2022 - 10 Sept 2022
		Ideation	12 Sept 2022 – 16 Sept 2022

4.	**Project Design Phase - 2**	Customer Journey Map	03 Oct 2022 – 08 Oct 2022
		Requirement Analysis	09 Oct 2022 – 11 Oct 2022
		Data Flow Diagrams	11 Oct 2022 – 14 Oct 2022
		Technology Architecture	15 Oct 2022 - 16 Oct 2022
5.	**Project Planning Phase**	Milestones & Tasks	17 Oct 2022 – 18 Oct 2022
		Sprint Schedules	19 Oct 2022 – 22 Oct 2022
6.	**Project Development Phase**	Sprint - 1	24 Oct 2022 – 29 Oct 2022
		Sprint – 2	31 Oct 2022 – 05 Nov 2022
		Sprint – 3	07 Nov 2022 – 12 Nov 2022
		Sprint – 4	14 Nov 2022 – 19 Nov 2022

PHASE 1:

- Register for the application by entering email , new password and confirming the same password
- Receive confirmation email once I have registered for the application.
- Log into the application by entering email and password / Google Auth

PHASE 2:

- Update the salary at the start of each month.
- Set a target/limit to keep track of expenditure
- Track the expense
- Graphs to show weekly and everyday expenditure

PHASE 3:

- Linking database with dashboard
- Chatbot linking to clear user queries
- Secure the passwords
- Reminder alerts to user

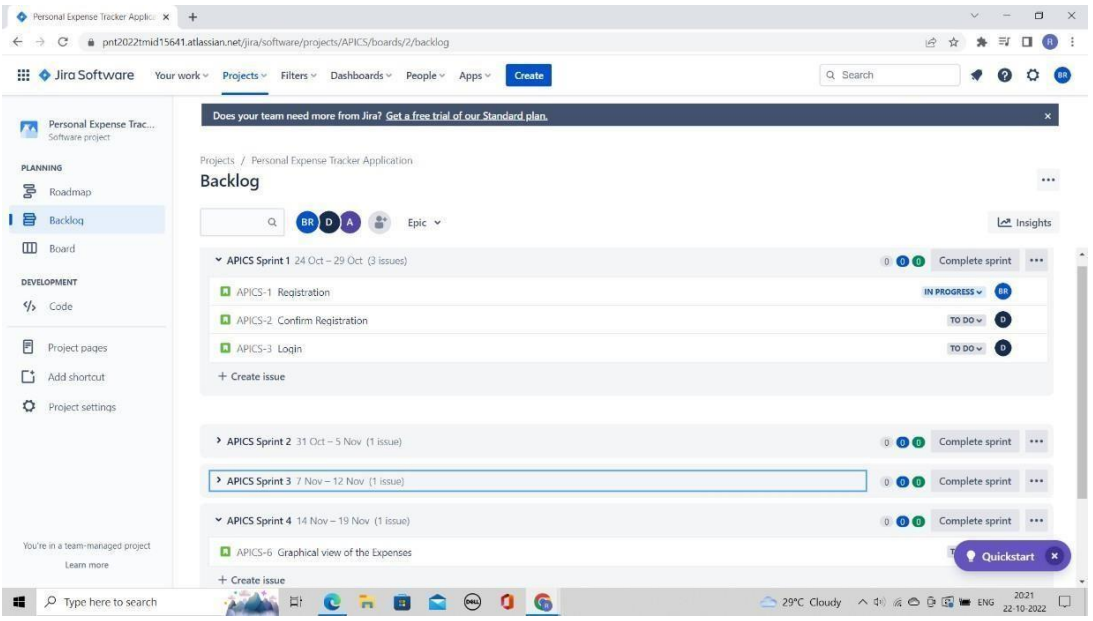
PHASE 4:

- Integration
- Use Docker and IBM cloud to host the web app

Reports from JIIRA:

JIIRA is a software application used for issue tracking and project management. The tool, developed by the Australian software company Atlassian, has become widely used by agile development teams to track bugs, stories, epics, and other tasks

i.


Personal Expense Tracker Applic
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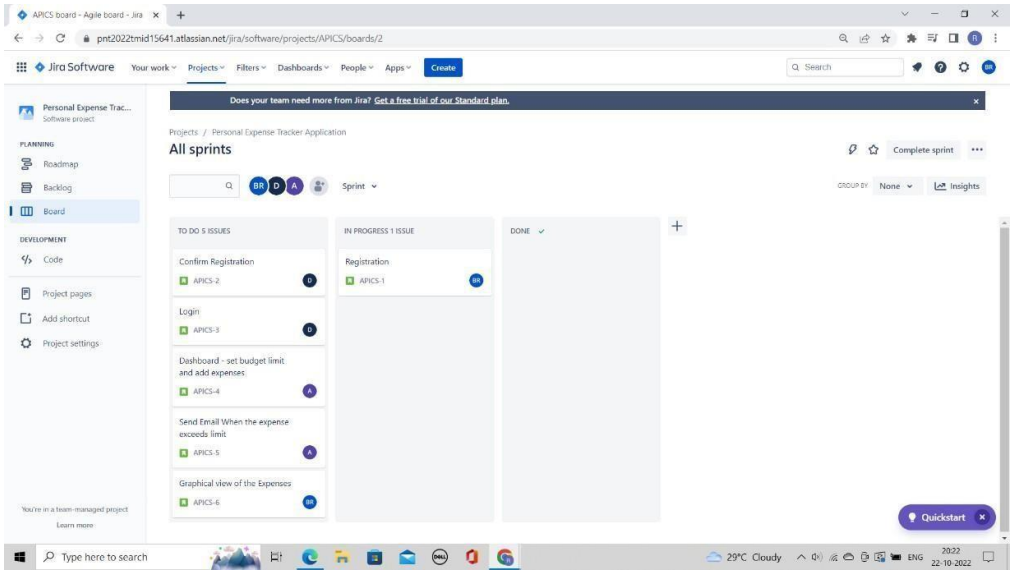
Jira Software
Your work
Projects
Filters
Dashboards
People
Apps
Create
Search
Personal Expense Trac...
Software project
PLANNING
Roadmap
Backlog
Board
DEVELOPMENT
Code
Project pages
Add shortcut
Project settings
You're in a team-managed project
Learn more
Does your team need more from Jira? Get a free trial of our Standard plan.
Projects / Personal Expense Tracker Application
Backlog
Epic
Insights
APICS Sprint 1 24 Oct – 29 Oct (3 issues)
Complete sprint
APICS-1 Registration
IN PROGRESS
APICS-2 Confirm Registration
TO DO
APICS-3 Login
TO DO
Create issue
APICS Sprint 2 31 Oct – 5 Nov (1 issue)
Complete sprint
APICS Sprint 3 7 Nov – 12 Nov (1 issue)
Complete sprint
APICS Sprint 4 14 Nov – 19 Nov (1 issue)
Complete sprint
APICS-6 Graphical view of the Expenses
Create issue
Quickstart
Type here to search
29°C Cloudy
ENG
2021
22-10-2022

ii.


APICS board - Agile board - Jira
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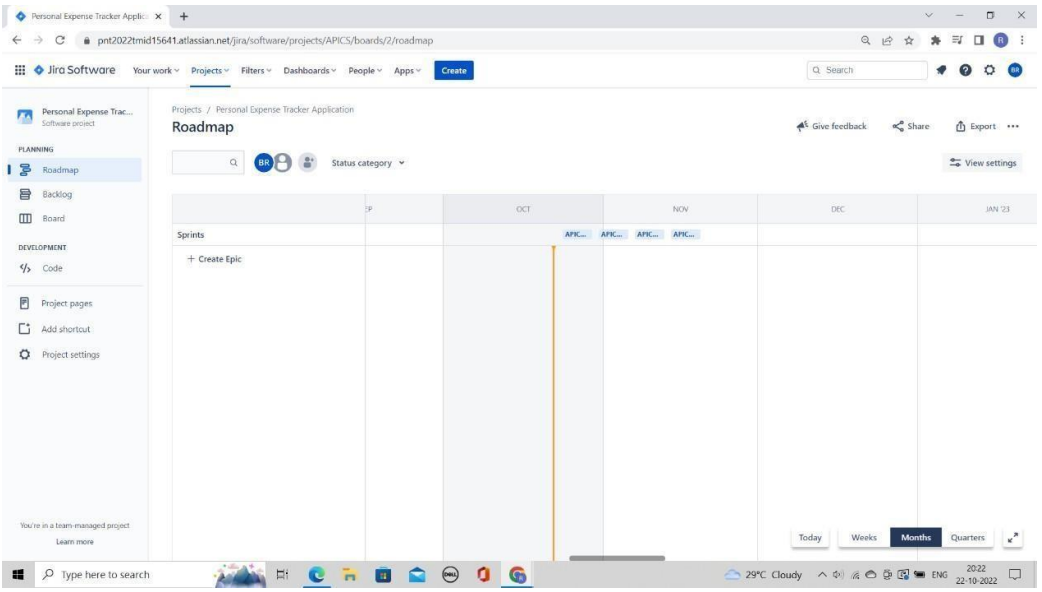
Jira Software
Your work
Projects
Filters
Dashboards
People
Apps
Create
Search
Personal Expense Trac...
Software project
PLANNING
Roadmap
Backlog
Board
DEVELOPMENT
Code
Project pages
Add shortcut
Project settings
You're in a team-managed project
Learn more
Does your team need more from Jira? Get a free trial of our Standard plan.
Projects / Personal Expense Tracker Application
All sprints
Complete sprint
Sprint
GROUP BY
None
Insights
TO DO 5 ISSUES
Confirm Registration
APICS-2
Login
APICS-3
Dashboard - set budget limit and add expenses
APICS-4
Send Email When the expense exceeds limit
APICS-5
Graphical view of the Expenses
APICS-6
IN PROGRESS 1 ISSUE
Registration
APICS-1
DONE
Quickstart
Type here to search
29°C Cloudy
ENG
2022
22-10-2022

iii.


Personal Expense Tracker Applic...
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Jira Software
Your work
Projects
Filters
Dashboards
People
Apps
Create
Search
Personal Expense Trac...
Software project
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Roadmap
Backlog
Board
DEVELOPMENT
Code
Project pages
Add shortcut
Project settings
You're in a team-managed project
Learn more
Projects / Personal Expense Tracker Application
Roadmap
Give feedback
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View settings
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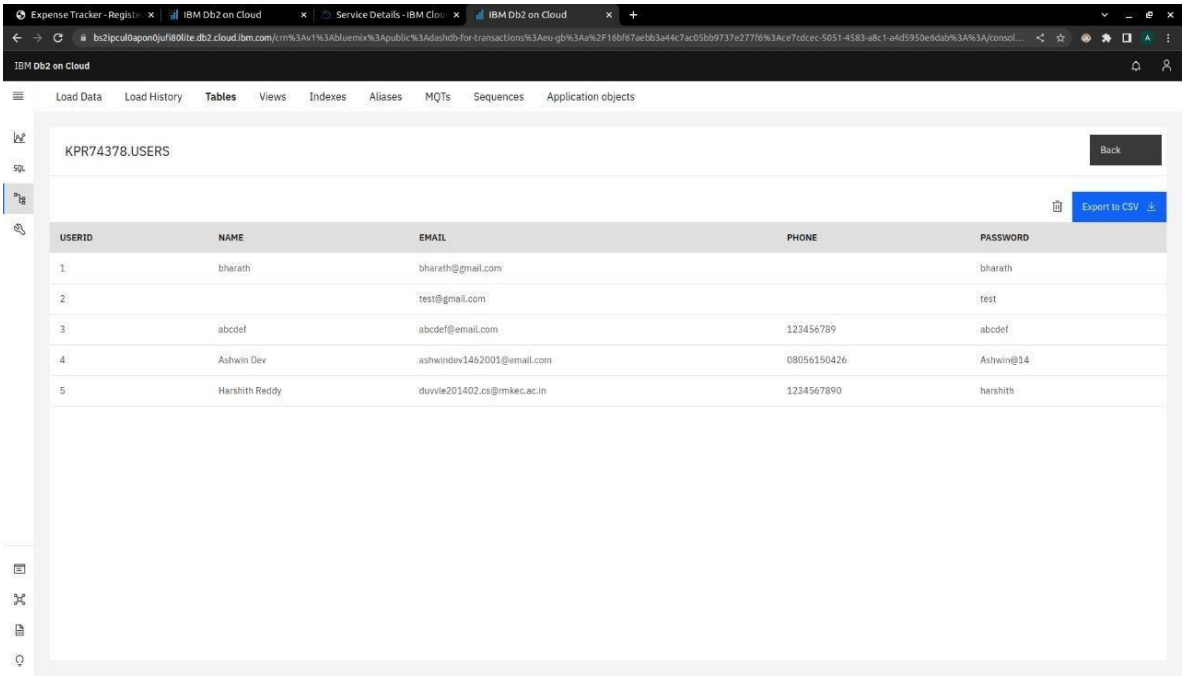
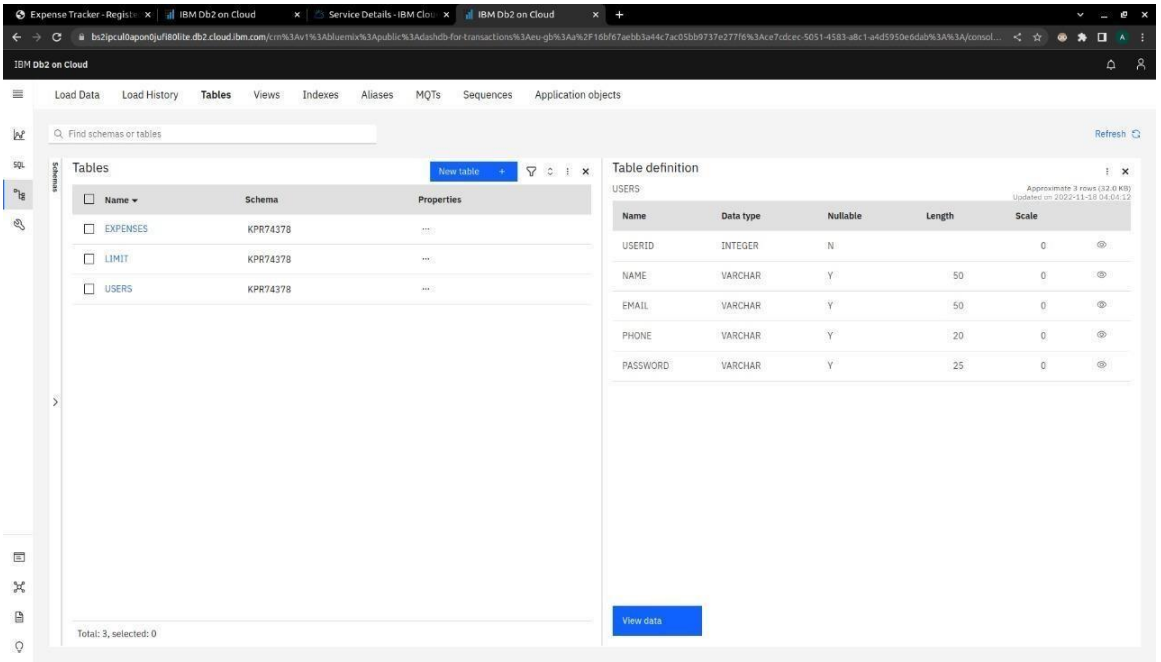
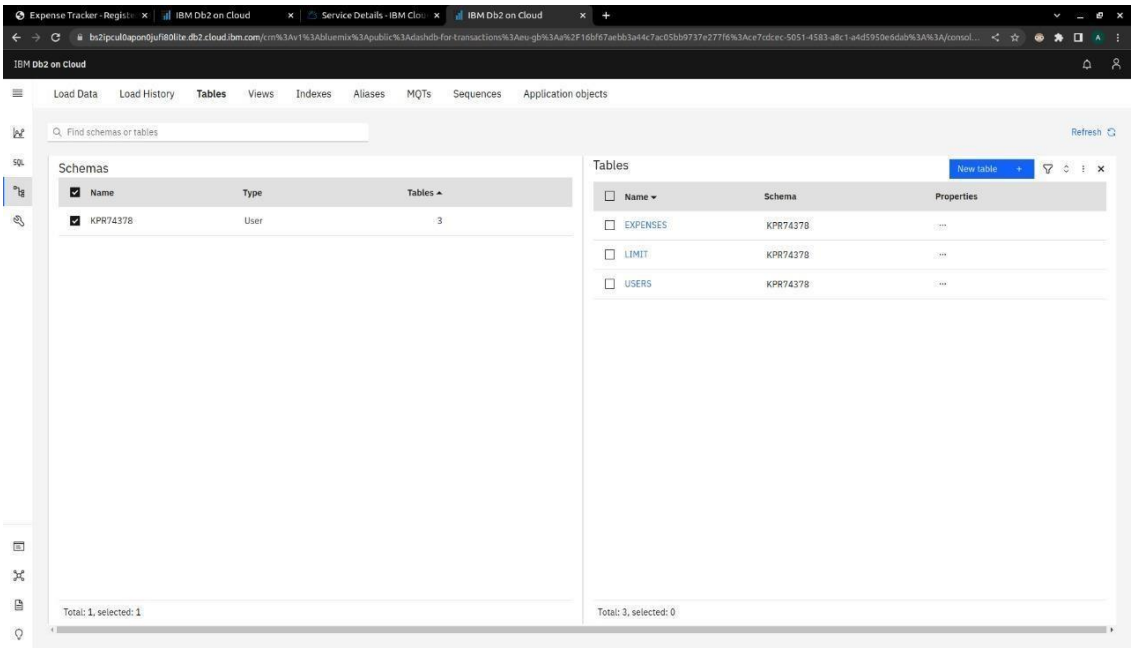
DEC
JAN '23
Sprints
APIC...
APIC...
APIC...
APIC...
Create Epic
Today
Weeks
Months
Quarters
Type here to search
29°C Cloudy
ENG
20:22
22-10-2022

7. Coding & Solutioning

7.1 Database Schema :






Expense Tracker - Regist
IBM Db2 on Cloud
Service Details - IBM Clou
IBM Db2 on Cloud
IBM Db2 on Cloud
Load Data
Load History
Tables
Views
Indexes
Aliases
MQTs
Sequences
Application objects
Find schemas or tables
Refresh
Schemas
Name
Type
Tables
KPR74378
User
3
Total: 1, selected: 1
Tables
New table
Name
Schema
Properties
EXPENSES
KPR74378
LIMIT
KPR74378
USERS
KPR74378
Total: 3, selected: 0

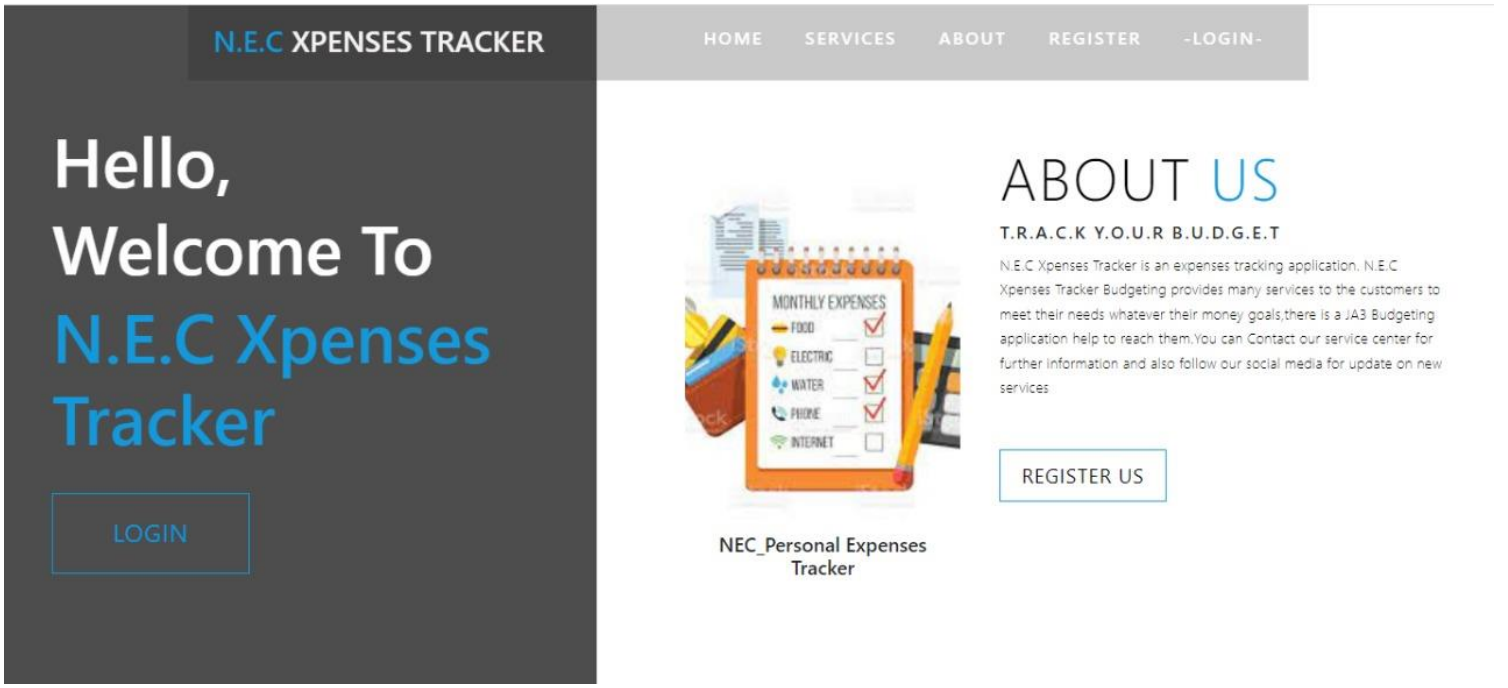
8. Testing

Testing is the process of evaluation a software item to detect differences between given input and expected output. Testing is a process should be done during the development phase.

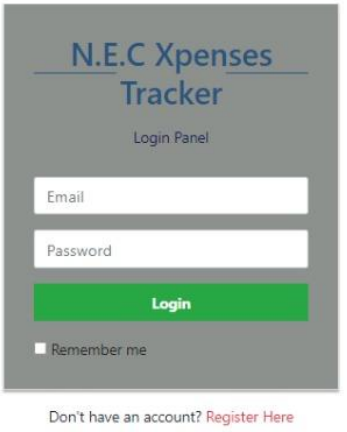
Test Case Id	Test Description	Input Test Data	Expected Result	Actual Result	Remarks
TC-1	Install PET app in android phone	Transfer PET app	Open Application with it home page	Application executed with home page	Pass
TC-2	Enter valid data in username and password field	ashwin	Show home page for user ashwin	Displayed home page for user ashwin	Pass
TC-3	Enter a valid data in username and leave password field empty	ashwin	Show error	Didn't show any error	Pass

9. Results

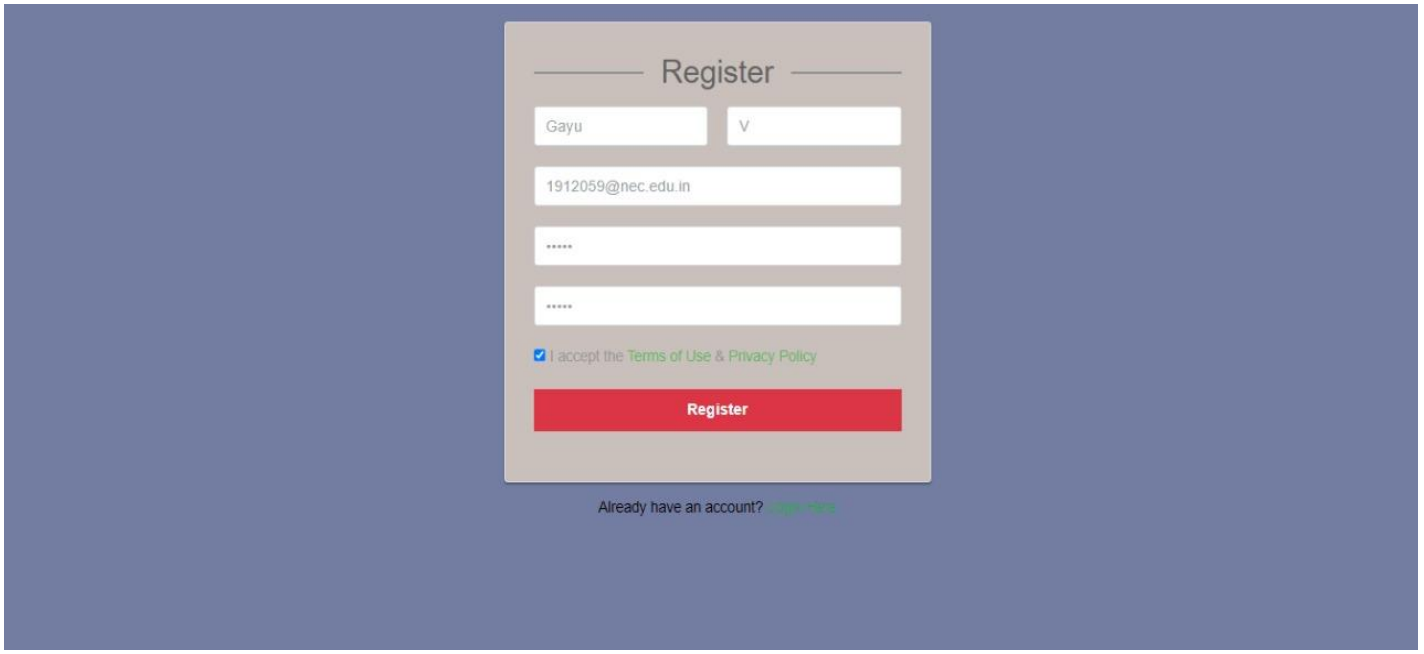
HOME PAGE



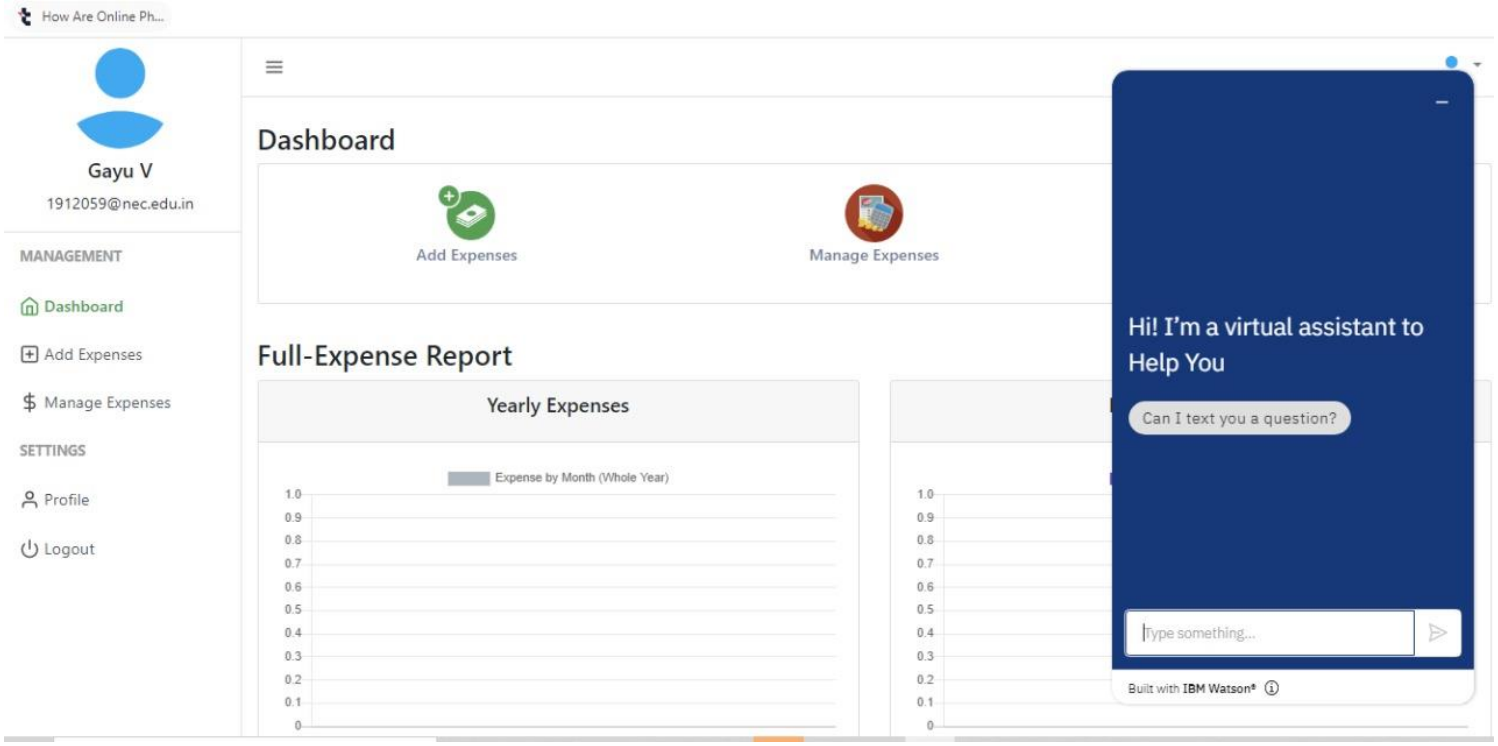
LOGIN PAGE



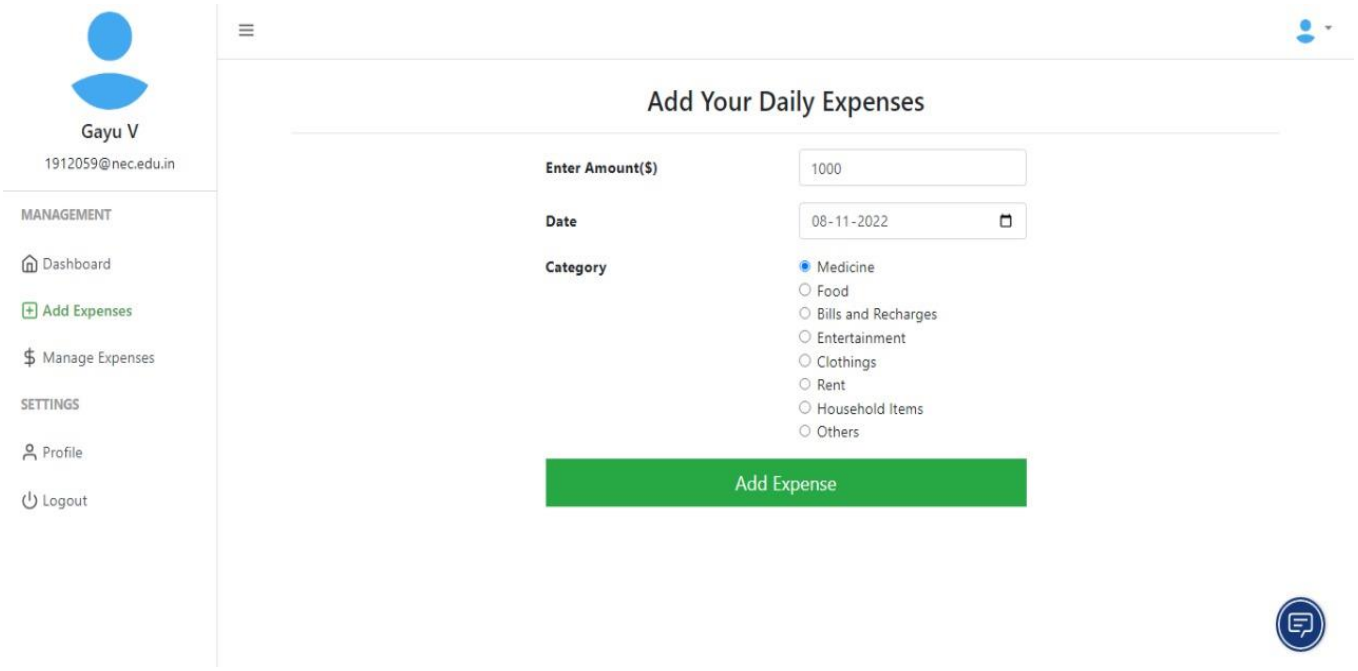
REGISTER PAGE

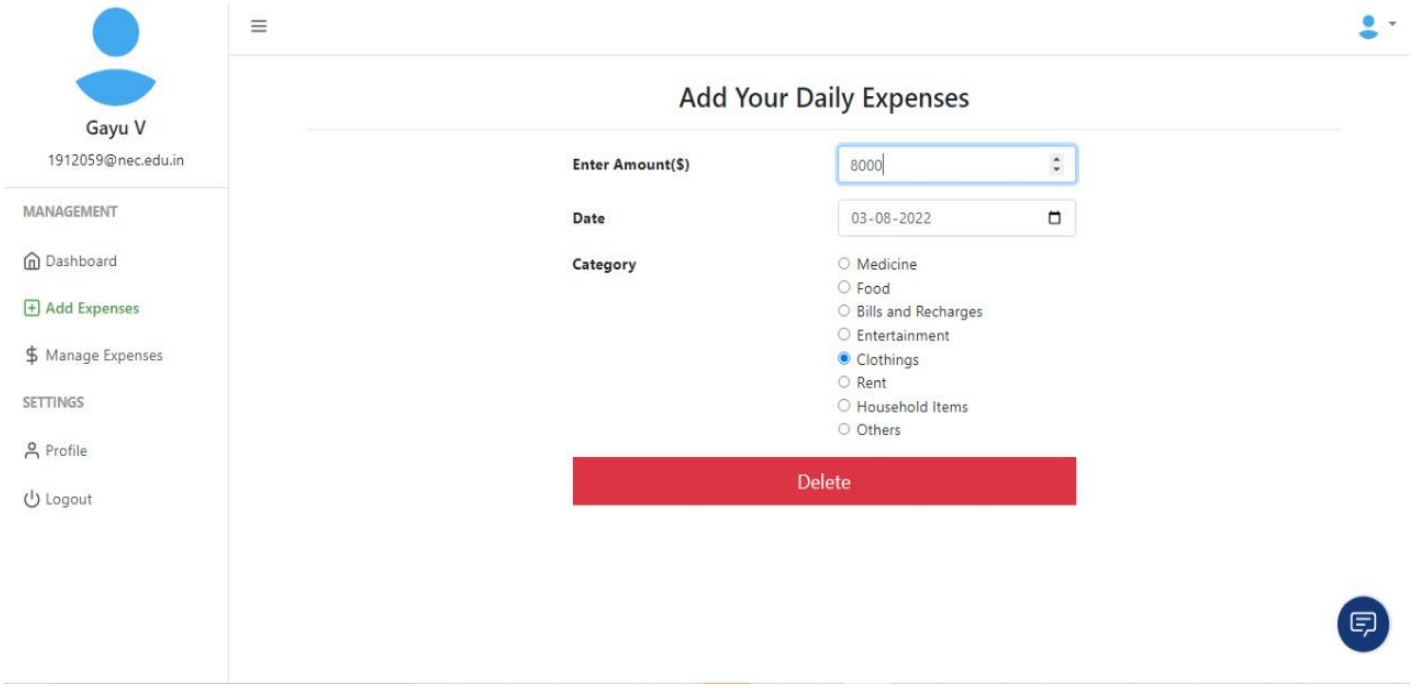


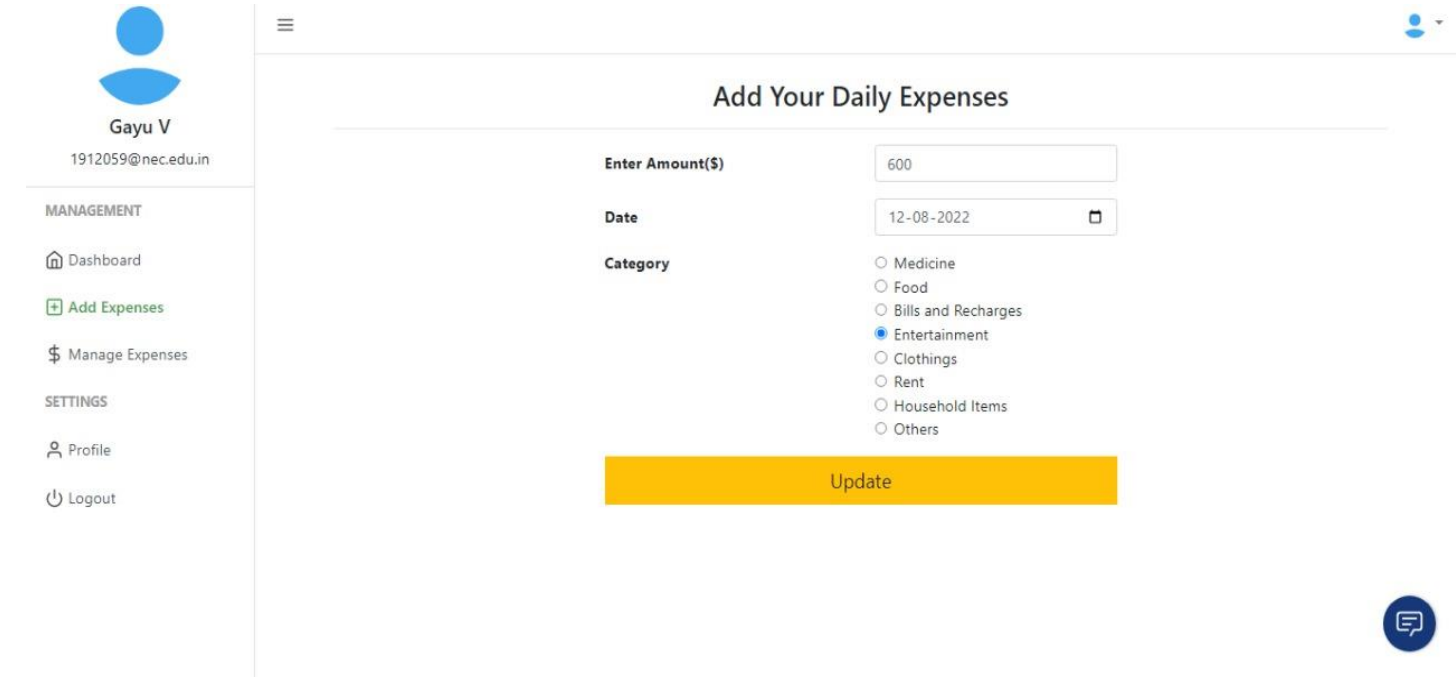
DASHBOARD



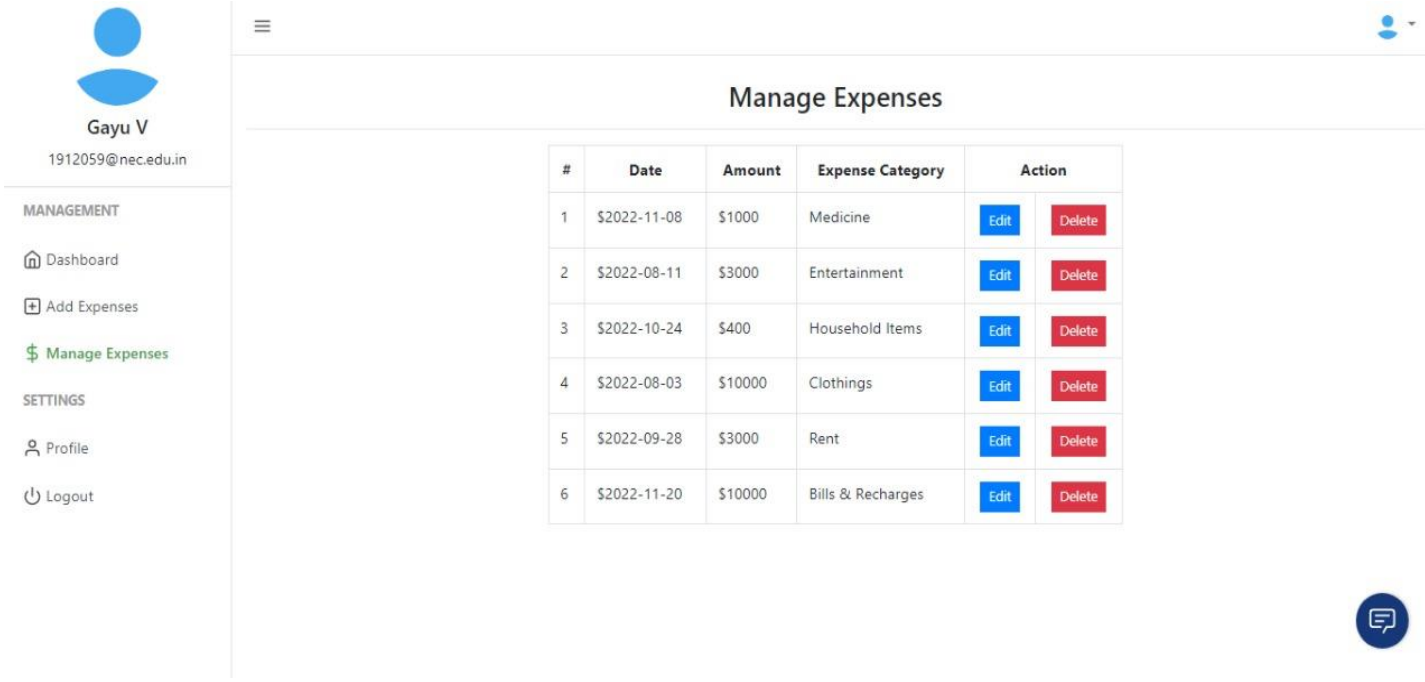
ADD EXPENSE


Gayu V
1912059@nec.edu.in
MANAGEMENT
Dashboard
Add Expenses
Manage Expenses
SETTINGS
Profile
Logout
Add Your Daily Expenses
Enter Amount($)
1000
Date
08-11-2022
Category
Medicine
Food
Bills and Recharges
Entertainment
Clothings
Rent
Household Items
Others
Add Expense

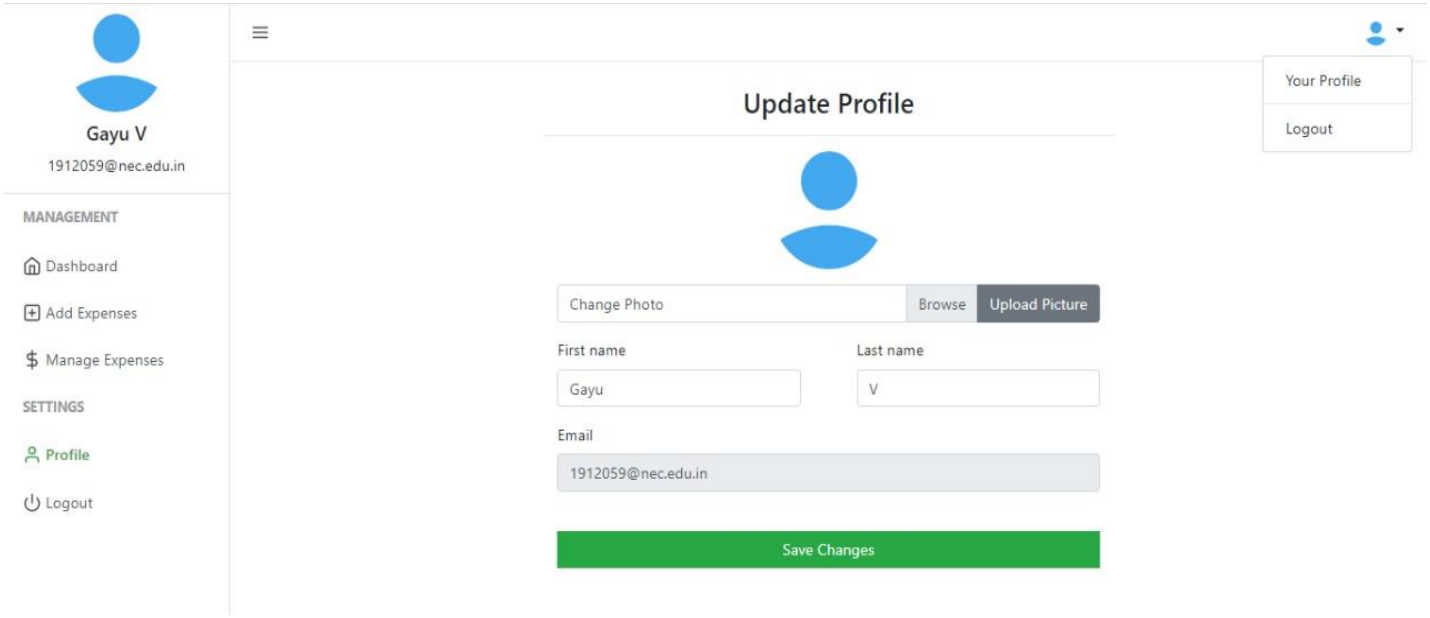

Gayu V
1912059@nec.edu.in
MANAGEMENT
Dashboard
Add Expenses
Manage Expenses
SETTINGS
Profile
Logout
Add Your Daily Expenses
Enter Amount($)
8000
Date
03-08-2022
Category
Medicine
Food
Bills and Recharges
Entertainment
Clothings
Rent
Household Items
Others
Delete



MANAGE EXPENSE



UPDATE PROFILE



Source Code:

#app.py

```
from turtle import st
from flask import Flask, render_template, request, redirect, url_for, session
from markupsafe import escape

import ibm_db

conn = ibm_db.connect(
    "DATABASE=bludb;HOSTNAME=98538591-7217-4024-b027-
8baa776ffad1.c3n41cmd0nqnrk39u98g.databases.appdomain.cloud;PORT=30875;SECURITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=xkm46449;P
WD=agj8QpL2r0Mp1y33",
    '', '')

app = Flask(__name__)


@app.route('/')
def home():
    return render_template('loginpage.html')


@app.route('/add')
def new_student():
    return render_template('registration.html')


@app.route('/addrec', methods=['POST', 'GET'])
def addrec():
    if request.method == 'POST':

        name = request.form['name']
        email = request.form['email']
        password = request.form['password']

        sql = "SELECT * FROM registration WHERE email =?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt, 1, email)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)

        if account:
            return render_template('loginpage.html', msg="You are already a member, please login using your details")
        else:
            insert_sql = "INSERT INTO registration VALUES (?,?,?)"
            prep_stmt = ibm_db.prepare(conn, insert_sql)
            ibm_db.bind_param(prep_stmt, 1, name)
            ibm_db.bind_param(prep_stmt, 2, email)
            ibm_db.bind_param(prep_stmt, 3, password)

            ibm_db.execute(prep_stmt)

        return render_template('loginpage.html', msg=" Data saved successfuly..")

@app.route('/addre', methods=['POST', 'GET'])
def addre():
    if request.method == 'POST':



        email = request.form['emailid']
        password = request.form['password']

        sql = "SELECT * FROM registration WHERE email =?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt, 1, email)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)

        if account:
            return render_template('index.html')
        else:
            return render_template('registration.html')
```

```python
@app.route('/finance')
def finance():
    return render_template('Financialaccount.html')
@app.route('/addFinanceAccount', methods=['POST', 'GET'])
def addFinanceAccount():
    if request.method == 'POST':

        user_id = request.form['add_account_user_id']
        holders_name = request.form['add_account_holders_name']
        account_no = request.form['add_account_acc_num']
        # acc_id user_id holders_name account_no is_active

        sql = "SELECT * FROM financial_account order by id desc"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.execute(stmt)
        financial_account = ibm_db.fetch_assoc(stmt)
        id = 1
        while financial_account != False:
            id1 = financial_account.get("id")
            financial_account = ibm_db.fetch_assoc(stmt)
        id1 = id + 1



        insert_sql = "INSERT INTO financial_account VALUES (?,?,?,?)"
        prep_stmt = ibm_db.prepare(conn, insert_sql)
        ibm_db.bind_param(prep_stmt, 1, id1)
        ibm_db.bind_param(prep_stmt, 2, user_id)
        ibm_db.bind_param(prep_stmt, 3, holders_name)
        ibm_db.bind_param(prep_stmt, 4, account_no)

        ibm_db.execute(prep_stmt)

        print("Financial Account Data saved successfuly..")
        # return render_template('manageExpenses.html')
        return render_template('index.html')



@app.route('/expense')
def expense():
    return render_template('addexpense.html')

@app.route('/addExpense', methods=['POST', 'GET'])
def addExpense():
    if request.method == 'POST':
        user_id = request.form['add_expense_user_id']
        acc_id = request.form['add_expense_acc_id']
        exp_type = request.form['add_expense_type']
        sub_type = request.form['add_expense_sub_type']
        amount = request.form['add_expense_amount']
        date = request.form['add_expense_date']



        # acc_id user_id holders_name account_no is_active

        sql = "SELECT * FROM expenses order by exp_id desc limit 1"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.execute(stmt)
        expenses = ibm_db.fetch_assoc(stmt)

        id = 0
        while expenses != False:
            id = expenses.get("exp_id")
            expenses = ibm_db.fetch_assoc(stmt)
        id = id + 1

        insert_sql = "INSERT INTO expenses VALUES (?,?,?,?,?,?,?)"
        prep_stmt = ibm_db.prepare(conn, insert_sql)
        ibm_db.bind_param(prep_stmt, 1, id)
        ibm_db.bind_param(prep_stmt, 2, user_id)
        ibm_db.bind_param(prep_stmt, 3, acc_id)
        ibm_db.bind_param(prep_stmt, 4, exp_type)
        ibm_db.bind_param(prep_stmt, 5, sub_type)
        ibm_db.bind_param(prep_stmt, 6, amount)
        ibm_db.bind_param(prep_stmt, 7, date)



        ibm_db.execute(prep_stmt)
```

```
        print("Expenses  Data saved successfuly..")
        # return render_template('manageExpenses.html')
        return render_template('index.html')
@app.route("/result")
def result():
    expenses = []
    sql = "SELECT * FROM expenses"
    stmt = ibm_db.exec_immediate(conn, sql)
    dictionary = ibm_db.fetch_both(stmt)
    while dictionary != False:
        # print ("The Name is : ",  dictionary)
        expenses.append(dictionary)
        dictionary = ibm_db.fetch_both(stmt)

    if expenses:
        return render_template("result.html",expenses=expenses)


@app.route('/analysis', methods=['POST', 'GET'])
def analysis():
    if request.method == 'POST':
        userid = request.form['userid']
        salary = request.form['sal']
    return render_template('res.html',msg="you have enough money to spend")
```

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 ina wise manner so that you can create financial goals and ensure you meet them.

3. **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.

4. **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.

5. **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 thefuture.

6. **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 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

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

Github & Project Demo Link:

https://github.com/IBM-EPBL/IBM-Project-24528-1659944210

https://drive.google.com/file/d/1WtiNid1Q_osszUDOTYr6qttHzKZr7xkt/view?usp=share_link