PERSONAL EXPENSE TRACKER APPLICATION

TEAM ID: PNT2022TMID12530

TEAM LEADER: **Nandha Kishore V**

TEAM MEMBER 1:   **Manojkumar**

TEAM MEMBER 2:   **Rahul Raj D**

TEAM MEMBER 3:   **Harish N R**

ABSTRACT

The expense tracking app runs on Android. The user of this application can keep an electronic diary. application for tracking expenses that allows users to keep track of their daily spending. This tool not only keeps track of your spending but also breaks them down by category for you. This program allows users to keep track of their daily, weekly, and monthly spending. Because you are aware of your spending, this program will also offer a feature that will assist you in maintaining your budget. At the end of the month, the expense tracker program will provide a report that displays expenses graphically. We have also included a unique tool that will divide your spending into user-friendly categories.

TABLE OF FIGURES

INTRODUCTION:

1.1   Project overview

Personal Expense Tracker is a daily expense management tool that was created specifically for paid and non-salaried employees to keep track of their daily spending in a simple and efficient manner through a computerized system that tends to remove laborious paperwork. Additionally, it will organize records so that users may easily access the information that has been stored. We made an effort to create the product so that users may utilize it easily and without encountering any problems. Customers using Android-powered devices can actually use this app.

1.2 Purpose

This project was created with user convenience in mind. Because they include the application whenever they incur charges right away. One of the biggest problems with keeping personal spending is that we frequently have no idea where the money for everyday expenses goes. Some of the traditional approaches used to address this issue under typical conditions include the use of sticky notes by common users, the use of spreadsheets by proficient persons to track expenses, and the maintenance of vast volumes of data by experts alone using ledgers. We think that a practical design and a practical mobile application can solve these problems. Such an application is capable of keeping track of expenses, providing a broad view with an intuitive user interface, and is intelligent enough to display past expenses.

2. LITERATURE SURVEY

2.1 Existing problem

A. GIRISH BEKAROO AND SAMEER SUNFALOO "INTELLIGENT ONLINE BUDGET"PROCEEDINGS OF THE 2007COMPUTER SCIENCE AND IT EDUCATION CONFERENCE INTELLIGENT ONLINE BUDGET TRACKER GIRISH BEKAROO AND SAMEER SUNFALOO :

This application has been developed incrementally utilizing the well-known process, RUP, which has been tailored to the needs of the systems. The majority of the objectives outlined at the outset of the development have been accomplished. The design and development process has addressed security issues like web security, which has increased system reliability. Problems with quality management have also been satisfactorily resolved.

B. S.CHANDINI, T.POOJITHA, D.RANJITH, V.J.MOHAMMED AKRAM, M.S.VANI, V.RAJYALAKSHMI "ONLINE INCOME AND EXPENSE TRACKER" -MARCH 2019:

The user can utilize this application in his or her day-to-day activities. After use, updating and viewing daily spending and family expenses can become a part of daily life. Since the user is busy with their daily activities and cannot keep track of their incomes and expenses, this assists them in tracking and managing their expenses.

C. RAJAPRABHA.M"FAMILYEXPENSE MANAGER APPLICATION"- 2017:

The user can utilize this application in his or her day-to-day activities. After use, updating and viewing daily spending and family expenses can become a part of daily life. Due to their hectic daily schedules, users are unable to keep track of their incomes and expenses, therefore these aids in tracking and managing their expenses.

2.2 References

Like articles, websites, blogs.

1. https://ijirt.org/master/publishedpaper/IJIRT151474_PAPER.pdf
2. https://iopscience.iop.org/article/10.1088/1757-899X/263/4/042050
3. https://www.irjet.net/archives/V6/i3/IRJET-V6I31110.pdf
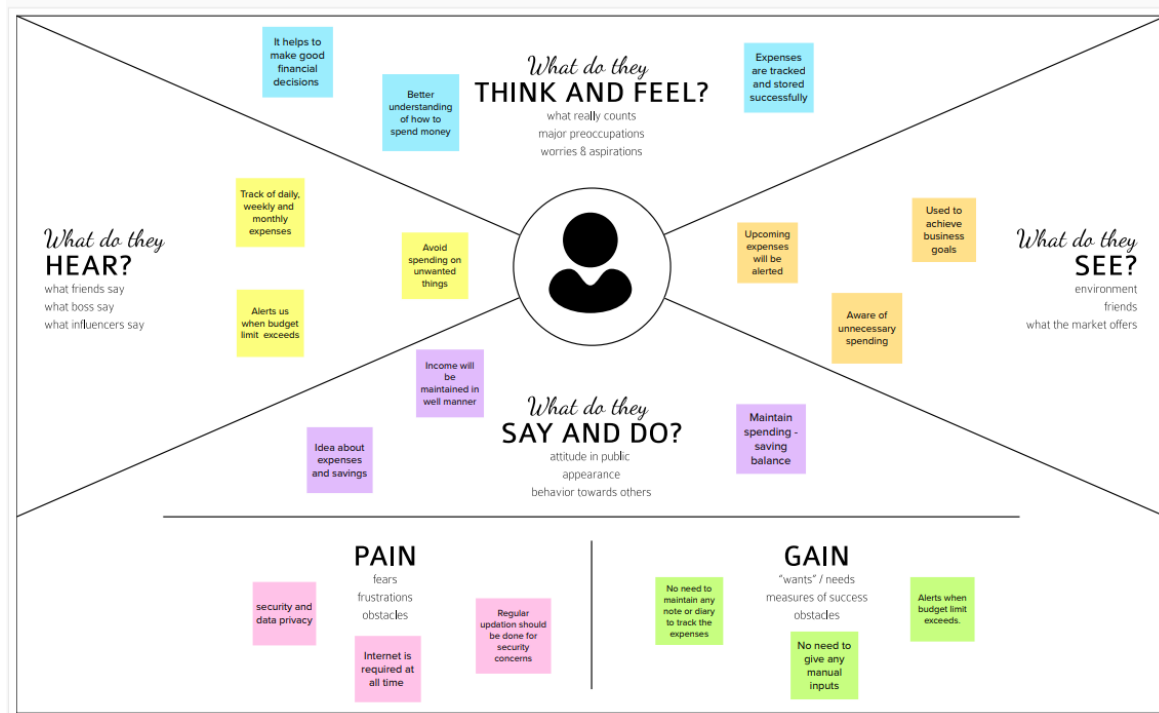
2.3 Problem Statement Definition

Many businesses use their own method to keep track of their income and expenses because they believe this to be the most important factor in how well their operations are doing. It is a good practice to keep track of daily spending, and tracking them over the course of a month is crucial since it gives insight into how money is spent and aids in creating a better budget for the days ahead. Because of this, monitoring and tracking personal expenses has never been easier.
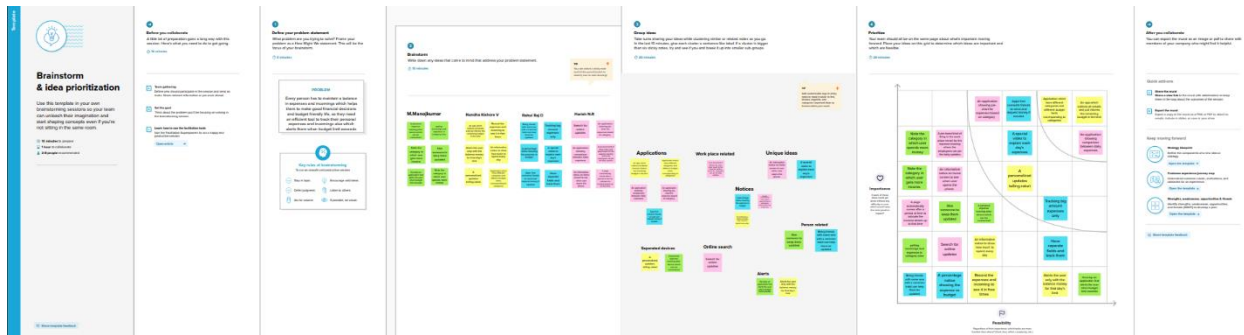
3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

3.2 Ideation & Brainstorming

3.3 Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Many Organizations have their own system to record their income and expenses. It is good for a person to record daily expenses and tracking the expenses throughout the month is essential. Thus, personal expense tracker application has made tracking and managing expenses a breeze.
2.	Novelty / Uniqueness	This app effectively works in providing financial management and helps in maintaining healthy and happier financial life fulfilling all needs and requirements as the user's comfort. This app provides a higher range of accuracy regarding real-time effectively and security.

3.	Feasibility of Idea	User can easily maintain their untracked expenses and the app helps the user to record their expenditure. This app can achieve economic feasibility and security feasibility with at most care and support to the user.
4.	Business Model (Revenue Model)	The application can be provided based on user required feature and the cost depends on the usage.
5.	Social Impact	This application can create awareness among common people about finance and stuffs. This application also helps user to be financially responsible.
6.	Scalability of the Solution	This application can handle large number of users and data with high performance and security at any given point of time

PROBLEM SOLUTION FIT

The issue-solution model Fit simply means that you have identified a customer-related issue and that the resolution you have developed genuinely addresses the issue. It aids business owners, marketers, and corporate innovators in spotting behavioral trends and figuring out what would be successful and why.

Problem Solution Fit		Personal Expense Tracker Application-Team ID - PNT2022TMID12530	
Define CS, fit into	**1. CUSTOMER SEGMENT(S)** `CS` Every man and woman	**6. CUSTOMER LIMITATIONS** `CC` Available devices Network connections	**5. AVAILABLE SOLUTIONS** `AS` Adding daily expenses to database Alerts the user when budget limit exceeds Database to maintain all those details	**Explore AS**
Focus on J&P, tap into BE, understand	**2. JOBS-TO-BE-DONE / PROBLEMS** `PR` To add, and update the daily expenses Alerts user when they exceeds the budget limit	**9. PROBLEM ROOT / CAUSE** `RC` Manual work consumes time and it is error prone Not much organized	**7. BEHAVIOUR** `BE` Get feedback and user's experience from customers who are using the application	**Focus on J&P, tap into BE, understand**
Identify strong TR & EM	**3. TRIGGERS TO ACT** `TR` Monotonous and error prone **4. EMOTIONS: BEFORE / AFTER** `EM` Before: Confusion, Frustration After: Stress free, Relaxation	**10. YOUR SOLUTION** `SL` A web application to manage daily expenses. Adding expenses to database, setting a daily and monthly budget limit to alert users. This helps users to save money and avoid unnecessary expenses	**8. CHANNELS of BEHAVIOUR** `CH` **8.1 ONLINE** Immediate accessiblity irrespective of place and time **8.2 OFFLINE** Access of previously downloaded information	**Extract online & offline CH of BE**

4. REQUIREMENT ANALYSIS

4.1 Functional Requirements:

Following are the functional requirements of the proposed solution

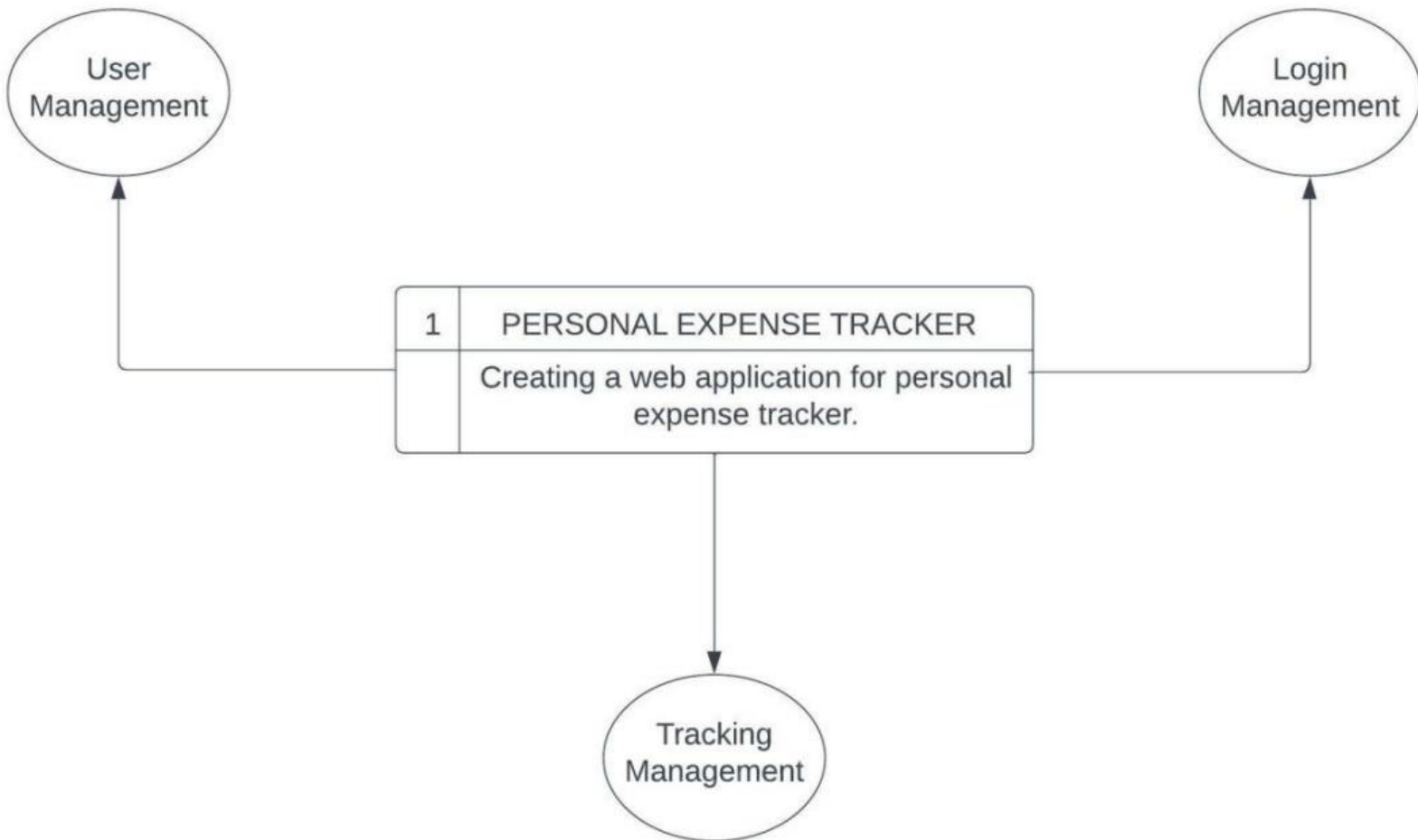| FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Financial Accounts	Account Details Verification of Details
FR-4	User Dashboard	Expense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

4.2 Non-functional Requirements:

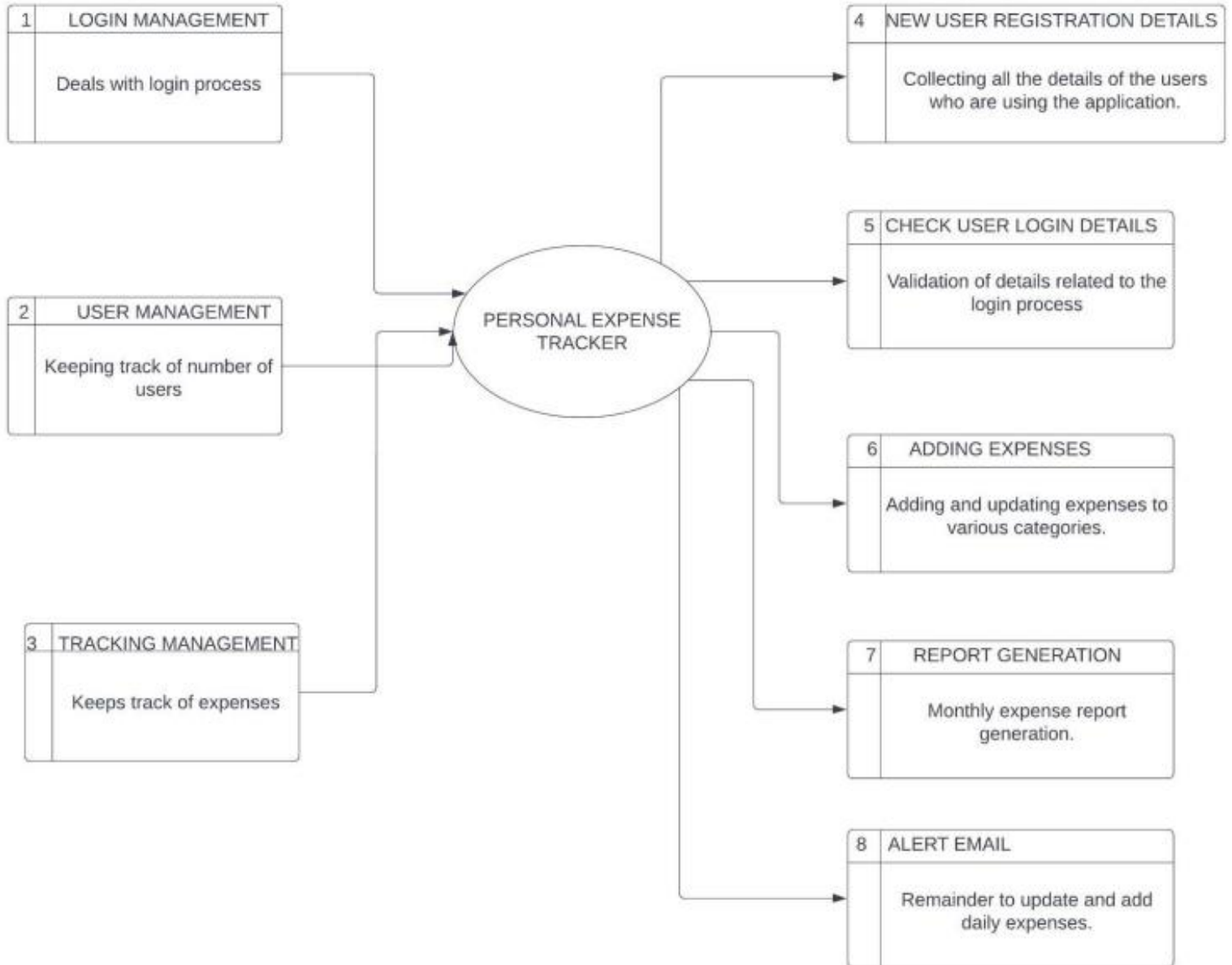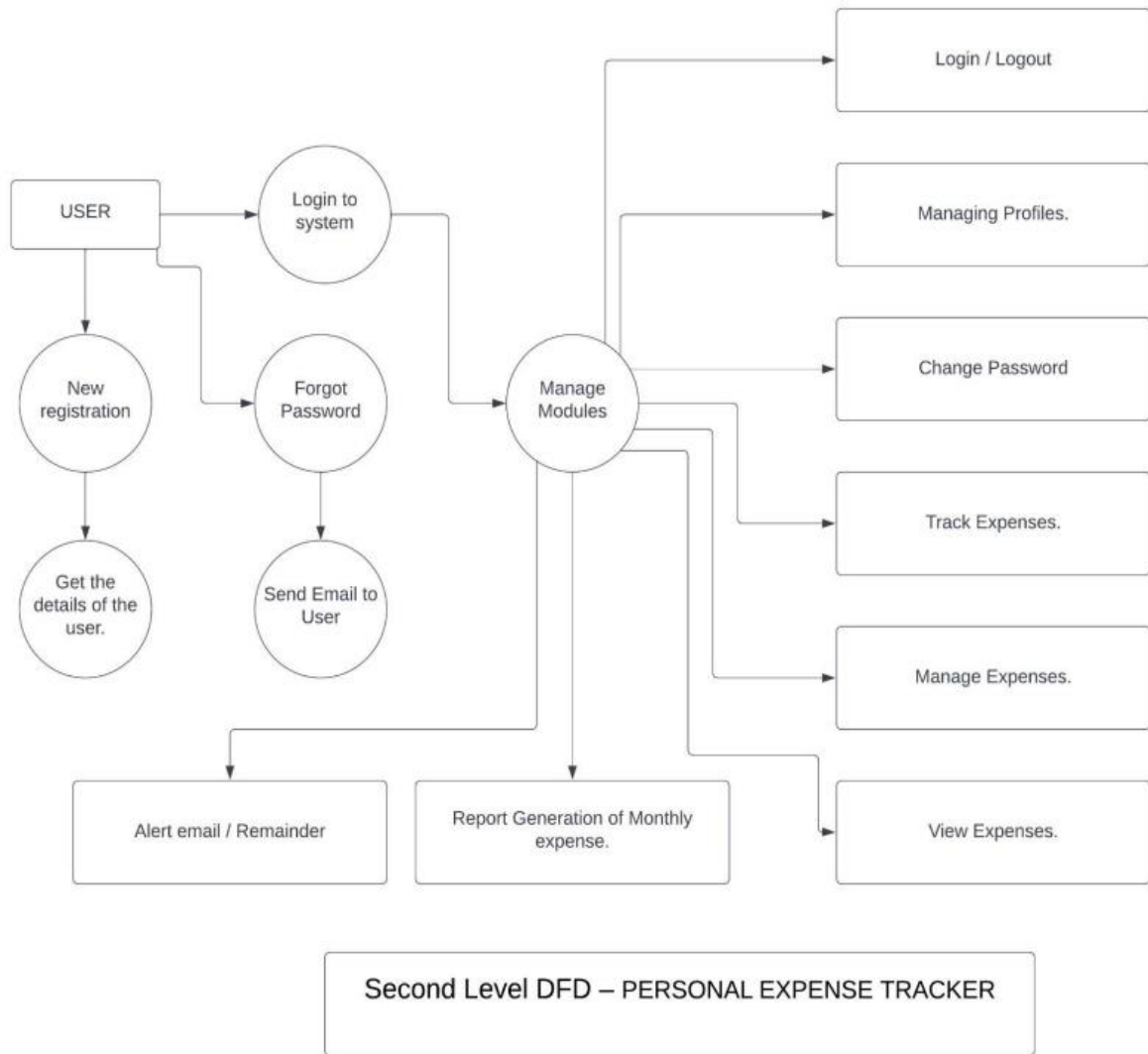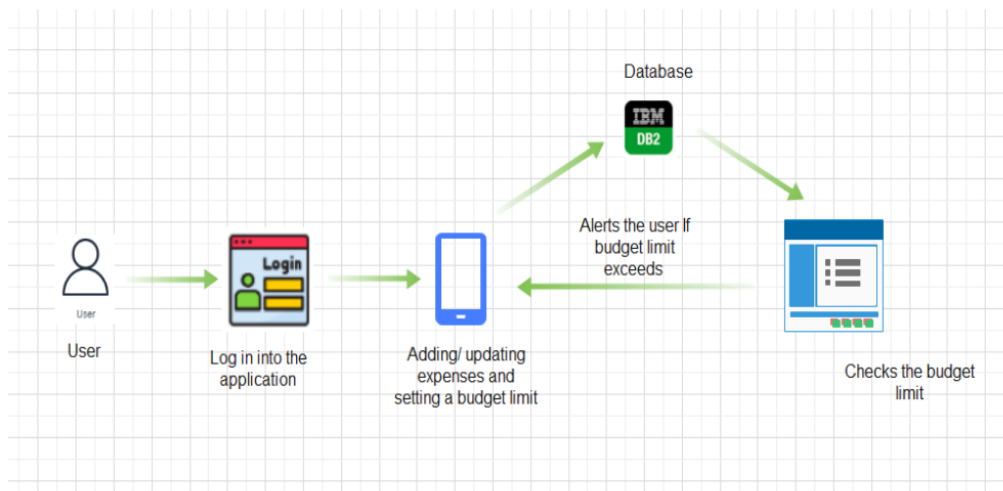| FR No.	Non-Functional Requirement	Description
NFR-1	Usability	By using this application, the user can keep track of their expenses and can ensure that user's money is used wisely.
NFR-2	Security	Maintain user personal details in a encrypted manner by using data security algorithms .
NFR-3	Reliability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

5. PROJECT DESIGN

5.1 Data Flow Diagrams

Zero Level DFD –PERSONAL EXPENSE TRACKER

FIrst Level DFD – PERSONAL EXPENSE TRACKER

1	LOGIN MANAGEMENT
	Deals with login process

2	USER MANAGEMENT
	Keeping track of number of users

3	TRACKING MANAGEMENT
	Keeps track of expenses

PERSONAL EXPENSE TRACKER

4	NEW USER REGISTRATION DETAILS
	Collecting all the details of the users who are using the application.

5	CHECK USER LOGIN DETAILS
	Validation of details related to the login process

6	ADDING EXPENSES
	Adding and updating expenses to various categories.

7	REPORT GENERATION
	Monthly expense report generation.

8	ALERT EMAIL
	Remainder to update and add daily expenses.

Second Level DFD – PERSONAL EXPENSE TRACKER

5.2 Solution & Technical Architecture

5.3 User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story/Task	Acceptance criteria	Priority	Release
Customer	Registration	USN-1	As a user, I can register for the application by entering email, password and confirming my password	I can access my account/ dashboard	High	Sprint-1
	Login	USN-2	As a user, I can log into the application by entering email & password	I can access my account/ dashboard	High	Sprint-1
	Dashboard	USN-3	Once logged in, based on user's expenses and data records, graphical representation is acheived	I can view my updated dashboard	Low	Sprint-2
	Financial account	USN-4	As a user, I can add and remove any financial accounts	I can manage financial accounts	Low	Sprint-2
Admin	Updating database	USN-5	Updating the changes that are made in any finacial accounts	As a admin or server ,they would be able to update for each changes made	High	Sprint-3

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	As a user, I can register for the application by entering my email, password, and confirming my password.	10	High	M Manojkumar Nandha Kishore V Rahul Raj D Harish N R
Sprint-1	Login	USN-2	As a user, I can log into the application by entering email & password.	10	High	M Manojkumar Nandha Kishore V Rahul Raj D Harish N R
Sprint-2	Dashboard	USN-3	Logging in takes the user to their dashboard.	20	Low	M Manojkumar Nandha Kishore V Rahul Raj D Harish N R
Sprint-3	IBM DB2	USN-4	Linking database with dashboard.	20	High	M Manojkumar Nandha Kishore V Rahul Raj D Harish N R
Sprint-4	Deployment	USN-5	Deploying the work model in the cloud environment.	20	High	M Manojkumar Nandha Kishore V Rahul Raj D Harish N R

6.2 SPRINT DELIVERY SCHEDULE:

Sprint	Total Story Points	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	24 Oct 2022	29 Oct 2022	5	29 Oct 2022
Sprint-2	20	31 Oct 2022	05 Nov 2022	7	10 Nov 2022
Sprint-3	20	06 Nov 2022	11 Nov 2022	8	15 Nov 2022
Sprint-4	20	13 Nov 2022	17 Nov 2022	10	20 Nov 2022

7. CODING AND SOLUTION

7.1 Coding

7.2 Solution

7.3 OTHER FEATURES

Track your spending whenever and whenever. Manage your finances and budget without having to fill out any papers. Simply click to submit your receipts and invoices. Anytime, anywhere access, submission, and approval of bills is possible. By scanning your tickets and bills and putting them in the app, you can prevent data loss. Real-time approval of bills and expenses with rapid notification. A streamlined and automated billing process allows for quick claim resolution and fewer human errors.

8. TESTING

8.1 Testing

1. Login and register page
   Make both the login and register page functional.
2. Login (UI)
3. Add expense page
   To make sure that the expense page present in the dashboard is functional.

8.2 User Acceptance Testing

1. **Purpose of Document:**
    This report's objective is to provide a concise explanation of the project's coverage and outstanding issues as of the time of the delivery to User Acceptance Testing (UAT)
2. **Defect Analysis:**

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	5	3	2	5	15
Duplicate	1	0	3	0	4
External	2	3	0	1	6
Fixed	11	2	4	20	37
Not Reproduced	0	0	0	0	0
Skipped	0	0	0	1	0
Won't Fix	0	5	2	1	7
Totals	19	13	11	25	69

3. Test Case Analysis:

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	10	0	0	10
Client Application	51	0	0	51
Security	0	0	0	0

CHAPTER 9

Results
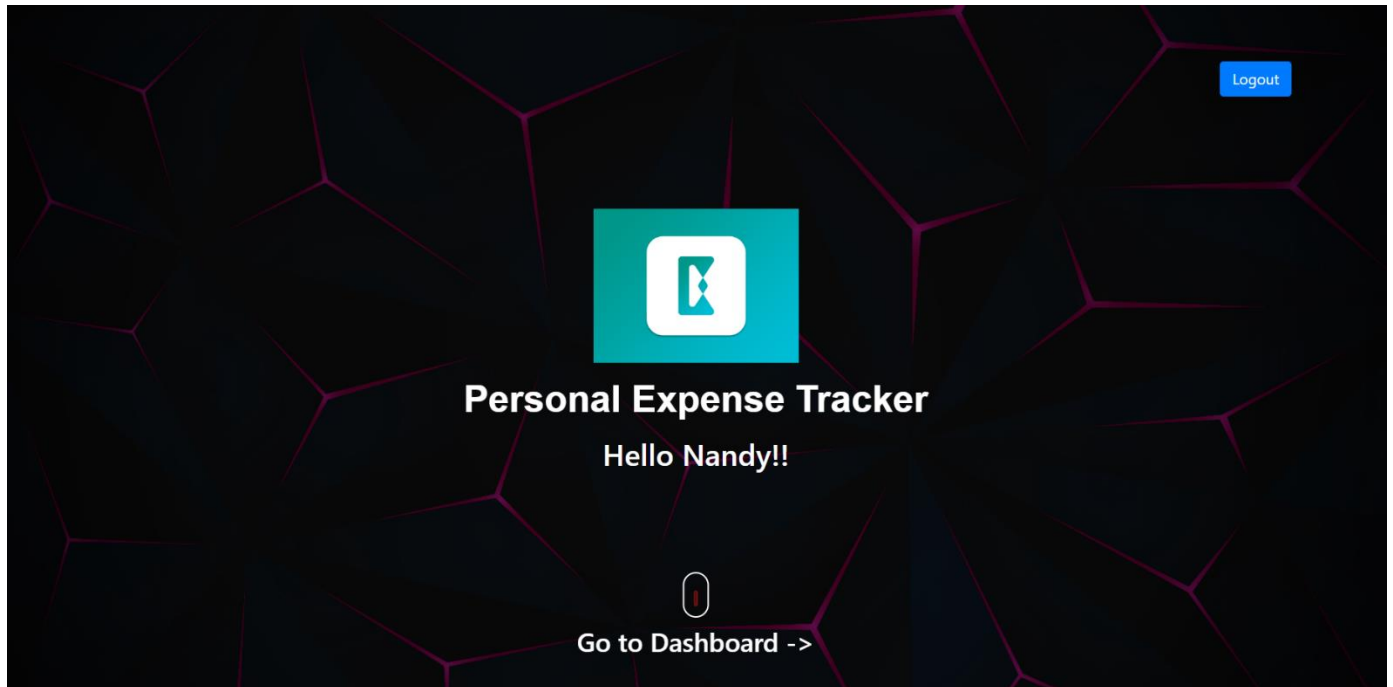
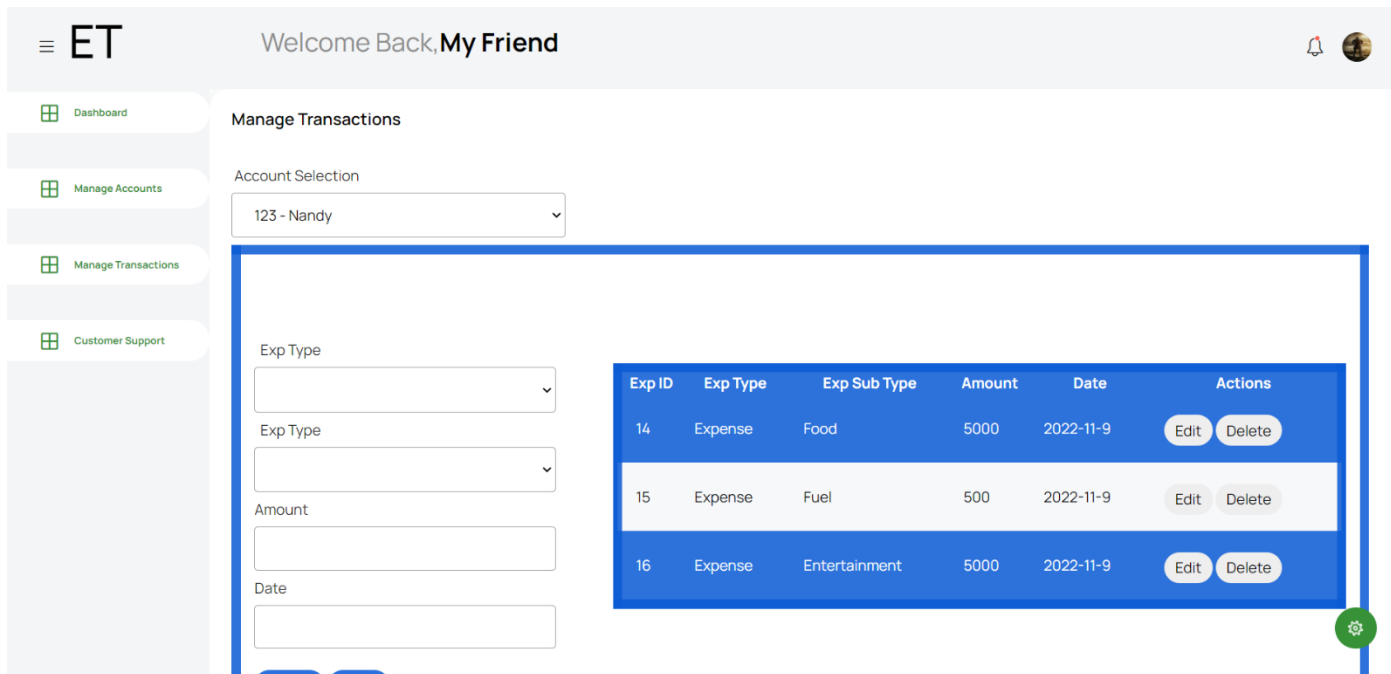**9.1 Login page**
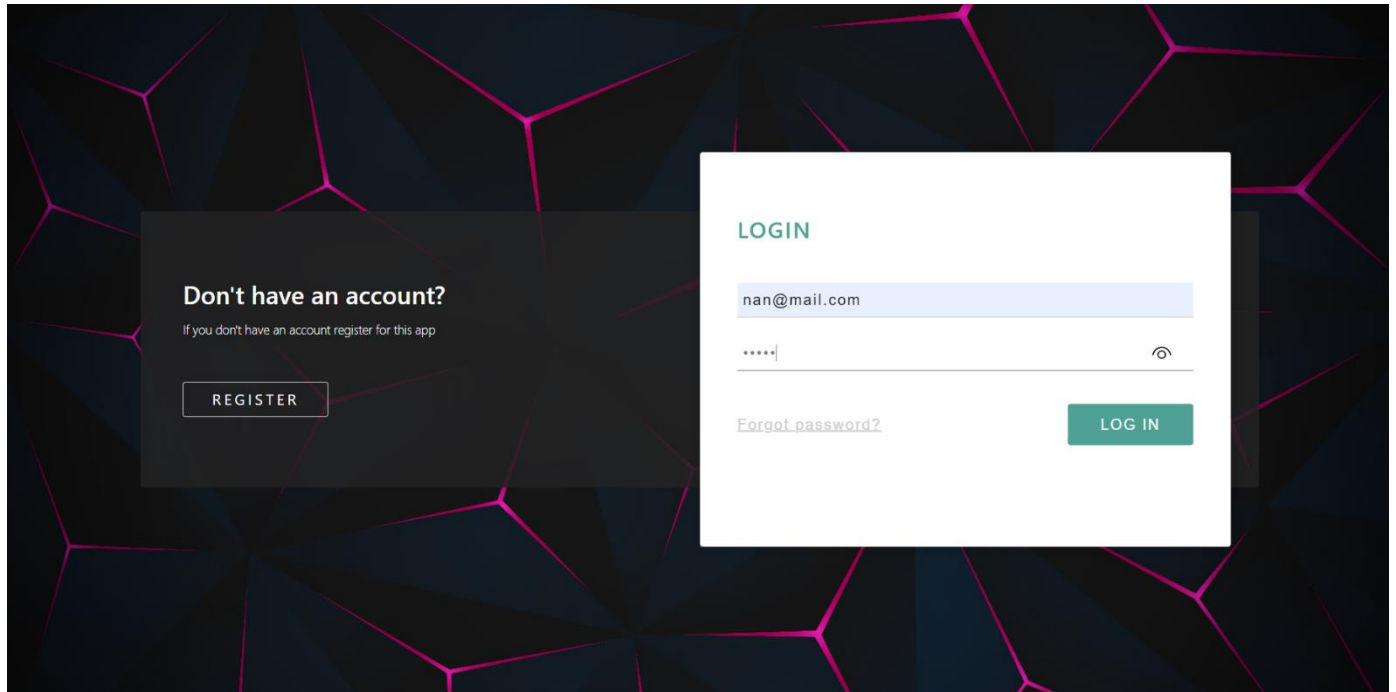
9.2 Register page
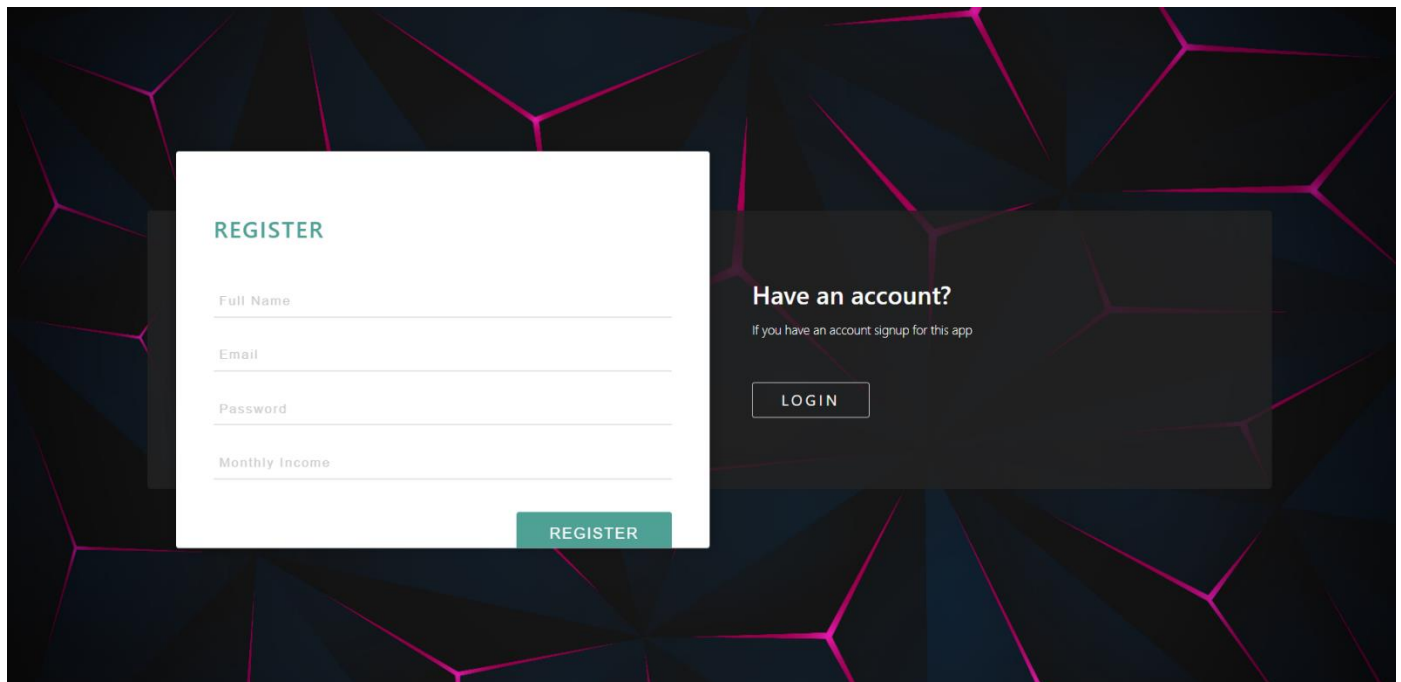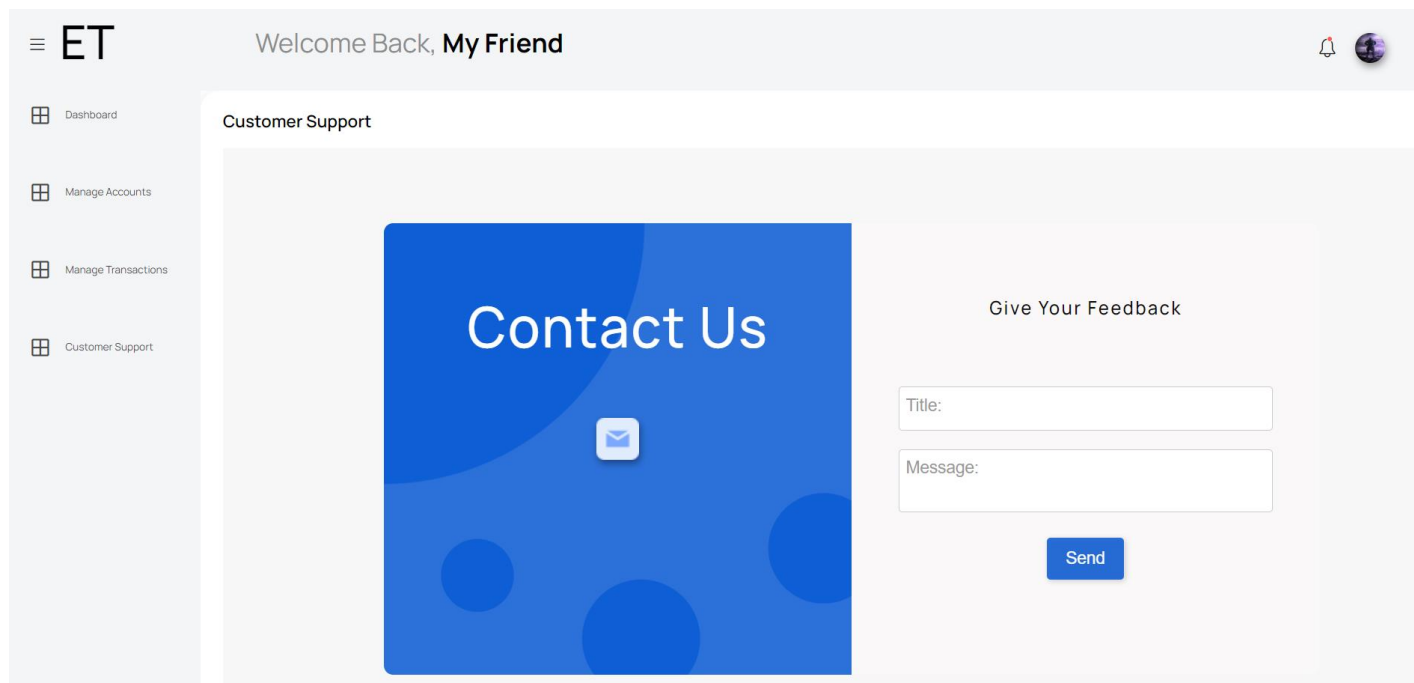
9.3 Homepage

9.4 Dashboard

9.5 Feedback page

10. ADVANTAGES & DISADVANTAGES

Advantages: -

Keeping accurate records of personal spending is crucial for a variety of reasons, including

- ➢ planning for future large purchases; creating a monthly budget
- ➢ realizing where you're spending more than you think you are figuring out how to cut back on your spending
- ➢ knowing how much extra debt payments you can make
- ➢ planning for retirement and creating an investment strategy with extra money.
- ➢ In other words, knowing where each dollar will go before you spend it will help it stay in your bank account for longer.

Disadvantages: -

Any system for tracking spending has the drawback that it may be started, then slacked off until it is completely forgotten. This risk exists for any new objective, including attempting to lose weight or stop smoking. The monitoring objective can be useful if someone creates a budget plan first, then puts money in saves before spending any new pay period or month. This reduces the amount of time needed to manage expenditures and make sure all receipts are accounted for to once or twice per month. There is no assurance that one will achieve their financial goals, even with ongoing tracking of their spending patterns. Although this can be viewed as a drawback of spending tracking, it could be turned into a benefit if one decides to maintain attempting to handle all finances effectively. Errors can also be a disadvantage while spending is being recorded, but if tracking is done often, this drawback might be turned into a plus. Frequent monitoring of cash expenditures can help one identify and fix mistakes, enabling the budget plan to still be followed despite the error.

11.Conclusion:

Clarity and conviction in judgement are necessary for the implementation of a thorough money management strategy. To understand your business and personal finances, you will need a specific objective and a distinct vision. An expense tracking app enters the picture at that point. A specialized package of services called an expense tracking software is available to those who want to effectively manage their income and budget their spending and savings. It enables you to keep track of all transactions on a daily, weekly, and monthly basis, including bills, refunds, wages, receipts, taxes, etc.

12.Future Scope:

➢ Use a custom mobile app that is made just for your company to achieve your business goals.
➢ Expand at the same rate as your firm is expanding.
➢ Provide exceptional customer service by giving the app more authority.
➢ Maintain security of your client and business information.
➢ Use free tools like push alerts to open direct marketing channels.
➢ Increase the efficiency of all organizational procedures.
➢ Boost productivity and customer satisfaction with a customer-focused app.
➢ Integrate seamlessly with current infrastructure.
➢ The capacity to offer insightful commentary.
➢ By improving data collection, optimize sales processes to increase revenue.

13. APPENDIX

The Code was in the following GitHub Link.

Demo

Demo link: Link