

A Mini Project Report on
Expense Tracker Application

T.E. - I.T Engineering

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CERTIFICATE

This to certify that the Mini Project report on **Expense Tracker Application** has been submitted by Tanmay Poyekar (20104053), Jai Rao (20104097) and Sahil Vishwakarma (20104089) who are a Bonafede students of A. P. Shah Institute of Technology, Thane, Mumbai, as a partial fulfilment of the requirement for the degree in **Information Technology**, during the academic year **2022-23** in the satisfactory manner as per the curriculum laid down by University of Mumbai.

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ABSTRACT

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 sustain all financial activities like digital automated diary. So, for the better expense tracking system, we developed our project that will help the users a lot. Most of the people cannot track their expenses and income one way they face a money crisis, in this case daily expense tracker can help the people to track income-expense day to day and making life tension free. Money is the most valuable portion of our daily life and without money we will not last one day on the earth. So, using the daily expense tracker application is important to load a happy family. Daily expense tracker helps the user to avoid unexpected expenses and bad financial situations. This Project will save time and provide a responsible lifestyle. This system is made and supervised by the experts and satisfying by the user. HTML, CSS, Javascript, MySQL as database is used to develop the system. The system is tested by over 5 users, and 80% of them found the system useful.

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Chapter 1

1.Introduction

An Expense Tracker Application is one kind of digital diary that help to keep an eye on all of our money related transactions and also provide all financial activities report daily, weekly, monthly and yearly Expense tacker is a refined system which allows user to efficiently manage his/her expense with ease. Tracking expenses daily can really help to us save lot of money. Once we start off by tracking our expenses each day, we will be able to get a better idea where you are spending your money, so you stay in control and achieve your goal. It will be able to generate your expense and saving report as time duration you selected. There will be a reminder that will help to save money for your pre-defined expenses. User interface of the Expense Tracker is very simple and attractive so it is easy to understand and the best way to record our financial data.

‘Expense Tracker’ to efficiently manage house-old budget. Our system will allow user to keep track of their expenses. Some statistical analysis has to be done to be able to give users correct information on their expenses and help them spend better. This helps the society to help them from issues like bankruptcy and save time from manual calculations. For using such application, a user needs to provide his/her total income or the amount he/she is spending per day and each user details or information are going to be stored in a unique way. Every user is required to register on the system to create a record unique to the user.

This module of expense tracker uses statistical analysis which are going to keep a track of your expenses and would even give you results accordingly. If you spend too much on a particular day this smart feature will help you to sort things out it will minus the expenses from the next day or if it lesser then it will add your saved amount for that day in the savings. Tracking application will generate a report accordingly on monthly or weekly basis and would generate a statistical analysis of your expenses in a more sorted and easier to understand way.

1.1 Purpose:

In our daily life money is the most important portion and without it we cannot last one day on earth but if we keep on track all financial data then we can overcome this problem. Most of the people cannot track their expenses and income one way they face the money crisis and depression. Expense tracker apps help you identify where each category of expenses.

They help you be aware of how much you need to save every month to bridge this gap. Expense tracker application will generate report at the end of month to show Expense via a graphical representation. We also have added a special feature which will distribute your expenses in different categories suitable for the user.

An expense history will also be provided in application which will provide the suitable feature for any user to use it to identify their daily expenses and income.

1.2 Problem statement

Every earning people are mostly obsessed at the end of the month as they cannot remember where all of their money has 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 or we should say free of cost which enables a person to keep a track of its daily expenditure easily and notify them if they are going to have money shortage.

To do so a person has to keep a log in a diary or in a computer, also all the calculations need to be done by the user which may sometimes results in errors leading to losses. Due to lack of complete tracking system, there is a constant overload to rely on the daily entry of the expenditure and total estimation till the end of the month.

1.3 Objectives

- The Expense Tracker Application is the simplest way to manage your personal finance daily and budgeting.
- Flow-oriented interface to make it quick to enter and easy to enter the expense details and get an accurate picture of your expense and budget everytime.
- To save money for pre-defined expenses which will help planning on your future investments.
- To give the user clear review of their income and expense report with the help of comprehensible visuals, charts, and graphs.

- To study the limitations of the previous expense trackers and develop a more dated system.
- To develop an improved system in terms of the system being user-friendly.

1.4 Scope

This application can take a good market as it is usable by anyone who are willing to manage their expenses and aiming for the future investments and many more. There is not any range criteria or any kind of profession or gender are focused, it will be used hugely. Every user of the application has the option to add incomes and expenses accordingly. record should have details of the date of occurrence of item, details of items etc.

There is no as such full-fledged solution to keep a track of our daily expenses easily. Keeping a log in diary is a very monotonous process and also may sometimes lead into problems due to the manual calculations. Looking on all the above given conditions, we are trying to satisfy the user requirements by building a mobile application which will help them reduces their burdens.

“Expense Tracker Application” is an application where one can enter their daily expenses and end of the day, they know their expenses in charts.

Chapter 2

2. Literature review

An exhaustive literature survey on related topic suggest that earlier tracking was performed manually. These things were done in an old school way you can say more likely in a notebook or copybook these things were written as per the willingness of a person in simple words you can call is as “The quite manually stuff”. Then after that they have calculate the entire expenditure at the end of the month or week and a report is generated against the expenditure in comparison to the previous month or information related to that.

So, they face a certain problem that time:

- Data is not accurate
- Reports in not up to the mark
- A single mistake in a manual calculation and actually cost you much
- Its time consuming boring and most of the time insufficient
- Going through all the data back then rewriting them off actually makes way fussier
- It can be easily stolen or loss as well your information is not safe there

Paper 1: (Babad and Balachandran, 1993) states that traditional cost accounting systems maintain all overheads in one pool and give equal weight to all activities and costs in it We always have known that “pen is mightier than sword” but that thing doesn’t fit with every specific tasks it varies from need-to-need or tasks-to-tasks these days when the amount data is quite enormous. It becomes way more difficult to handle them off.

Soon excel also become a way on maintain a record of expenses and analysis. Though excel was an effective software to handle such stuff but still lacks in many things so some of the researchers even started using excel with certain tools designed by them.

Paper 2: A research at university on Tennessee on expense tracker of by (Dan Underwood, 2011): In which using excel accounting team designed a Cost Allocation tool 1 in which a spreadsheet is used to allocate the product category both by site and the cooperation and a Cost allocation tool 2 which is a developed to further integrate and allocate cost to identify which manufacturer is profitable or which is not. This research used excel and designed this CAT tool in which both the spreadsheets are required to use to identify where we could reduce expenses or better managed it.

Paper 3: (Girish Bekaroo, 2007) did a research on intelligent online budget that manages the expenses and used to give the graphical analysis of data.it uses a Rational Unified Method

(RUP) which was way more efficient and advantageous in the way it used to promote code reuse and encapsulation.in which CSS and xml technologies has been used.

Paper 4: Students of Sikkim Manipal University an income expense for housewives which not just counts the amount but also maintains date and calendar record of the person as well they used the clustering technique to maintain their data storage.

Paper 5:(Stephan snow and Dhayal Vyas, 2015) mentioned in his paper. “Managing finances is a practice carried out daily in homes across the world. Despite this, the practice is not yet a strong focus for HCI work in the home”.

Paper 6: Researchers of Nandha and Anna university (2016) created an android version of expense manager in with they used post and remark techniques for underlining the expenses and some of the data mining features for analyzing the market value well. (R N Rajprabha, 2017) created an android version of family budget manager with later evolved in PDA and tablet features.

Paper 7: (Ravi Sharma, 2017) stated users sometimes feels uncomfortable in sharing their personal information with an app and he suggested security and usability are two major concerns. Even the advanced UI needs to maintain retention.

Paper 8: Researchers of Mother Teresa university, Andhra Pradesh (2019) also stated an online income and budget tracker in a website mode but that project used csv mode to store data but that project had a drawback in its existing model as it can't handle the data efficiently in addition to that it wasn't user-friendly and an unpopulated data project.

All these researches above suggest some of the modern way of dealing with expense tracking. Many of the researches like these actually represents the evolution in ideas with time “evolution is not a necessity it's more like change in thinking and time” in which we analyze estimate and evaluate the things according to new requirements. But still the kind of technology used in it is kind of projects were used in previous days there are certain android apps as well still they too also have different consequences as well as drawbacks in itself. And I also feel like these should be way easier to handle to a desktop device. As sometimes android apps will provide in accurate results if the information is incorrect and many of the times, we almost got forget to enter details too and most them don't even provide notification for that as well.

Based on the literature review. This study shows the evolution as well as the comparison from selected researches according to the adopted knowledge in it. This paper suggests some effective changes that are still needed and why the transition is necessary.

Chapter 3

3. Proposed System

To reduce manual calculations, we propose an application. This application allows users to maintain a digital automated diary. Each user will be required to register on the system at registration time, the user will be provided id, which will be used to maintain the record of each unique user. Expense Tracker application which will keep a track of Income-Expense of a user on a day to day basis. The best organizations have a way of tracking and handling these reimbursements. This ideal practice guarantees that the expenses tracked are accurately and in a timely manner. From a company perspective, timely settlements of these expenses when tracked well will certainly boost employees' morale. Additional feature of Expense and income prediction helps to better budget management Advantages of the proposed system:

The proposed system has the following requirements:

- System needs store information about new entry of Expense.
- System needs to help the internal staff to keep information of Category and find them as per various queries.
- System needs to maintain quantity record.
- System needs to keep the record of Type.
- System needs to update and delete the record.
- System also needs a search area.

It also needs a security system to prevent data.

3.1 Features and Functionality

1. ADD EXPENSES-

This module deals with adding expenses. Here The user has adding daily expenses. But there is a condition if the user hasn't selected the category yet then the user can't enter expenses. When the user enters any transaction then that transaction will be added in Transaction tabs. If the user wants to delete that transaction, then the user has to long click the transaction will be deleted from tabs.

2.ADD CATEGORY-

In this module user can add the categories. Every expense stored under the categories. Then only we could filter the details easily. Already some categories pre-defined in the application. If user want to add more categories that also available in the application.

3.FILTER TRANSACTION VIEW-

In the transaction tab, the user can filter the transaction. In the tab, users could select the day, month and year then click the filter button and according to the day and month, year transactions will be appeared. If the user wants to filter the transactions only on the basis of that day, for example, user-selected Sunday then all transactions will appear that were made on Sunday.

4.VIEW ANALYTICS-

The user has pie chart option available for graphical representation. If the user clicks the view analytics it will redirect to the statistics. When the user rotates the phone statistics will initiated and it shows the graphical representation in the form of pie chart. Pie chart it could contain a colored and percentage view.

Features of the project Expense Tracker Application:

1. User Accounts to control the access and maintain security
2. Attachments &Additional Comments for more information
3. Various levels of report available with a lot of filter criteria's
4. Easy & fast retrieval of information.
5. Well-designed reports.
6. Easy to update information

Chapter 4

4. Requirement Analysis

4.1 Data Collection Methods

4.1.1 Source of Data -User

1.Interview:

Interviews were carried out with some of the students in our college asking about the expense that they do in day-to-day life. While taking those samples we got that they always broke off at the end of the month, which means they do not end up calculating those expenses that they spend day to day. So, in order to control the unnecessary spending habits expense tracker is must. While using this tracker they can control their expenses and some of those too.

2.Questionnaire:

Set of questionnaires were prepared to gain knowledge about how people track their budget. This process concludes that maximum of them do not plan for what they have earned and no track at all.

4.2 Requirement specification

4.2.1 Functional Requirements

1.Dashboard panel

The system shall authenticate the user and then display panel based on the particular.

2. Add income

The system shall allow user to add their income from their different source of income.

3.Add expense

The system shall allow user to add their expense details based on the user's need to track the type or categories of expenses.

3.Budget planner

The system should graphically represent the daily figure based on the user's current expenses and user's own budget share.

4.Expense tracker

The system should graphically represent the daily expense numbers in form of different charts and graph in the income section.

5.Category

The system shall allow users to add categories of their income, expense and budget plan's.

4.2.2 Non-Functional requirements

1.Usability

There is a consistency in all the modules and webpages. To ease the navigation there is a back tab to provide access to previous page. There is proper instruction on each page.

2.Reliability

Each data record is stored on a well-built efficient database schema. There is no risk of data loss. The internal evaluation of data is well coded.

3.Supportability

The system is well built to support any machine. Maintainability of the system is easy.

4.Performance

In order to ease the accessibility, the types of expenses are categorized along with an option to name on the own. Throughput of the system is increased due to light weight database support.

5.Availability

The system is available all the time, no time constraint.

Chapter 5

Project Design

In this phase, a logical system is built which fulfils the given requirements. The design phase of software development deals with transforming the client's requirements into a logically working system. Normally, design is performed by the following two steps.

1. Primary Design Phase:

In this phase, the system is designed at the block level. The blocks are created based on analysis done in the problem identification phase. Different blocks are created for different functions emphasis is put on minimizing the information flow between blocks. Thus, all activities which require more interaction are kept in one block.

2. Secondary Design Phase:

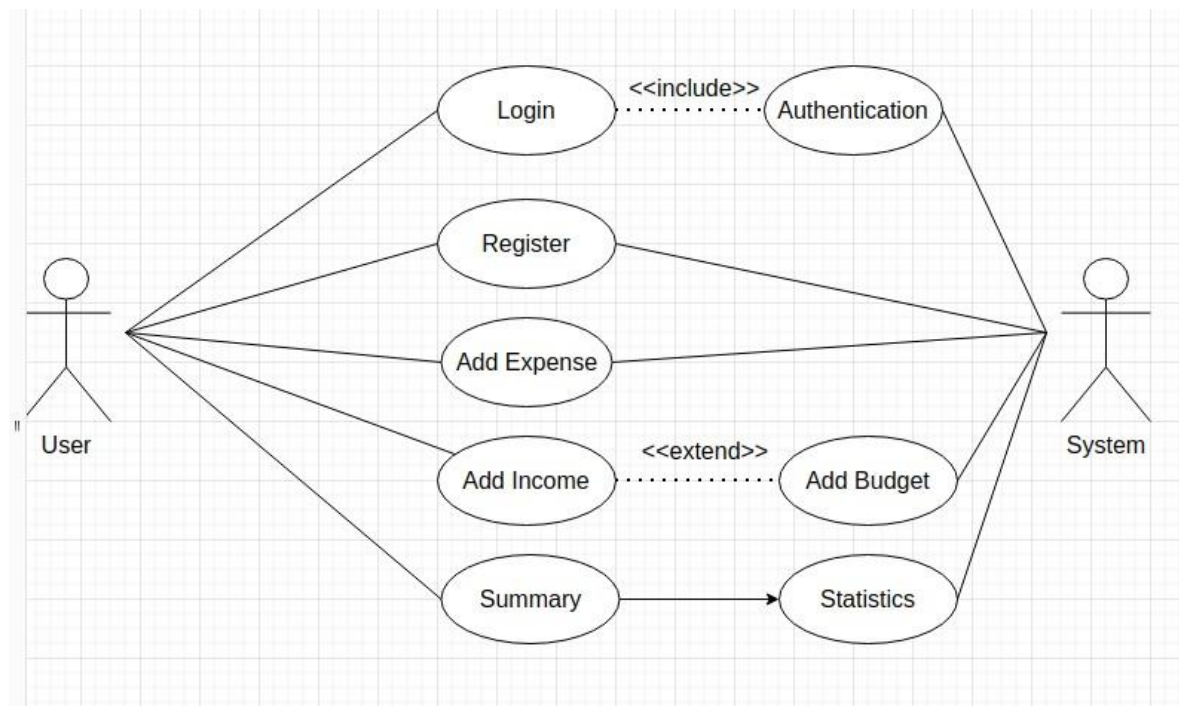
In the second phase, the detailed design of every block is performed. The general tasks involved in the design process are the following:

1. Design various blocks for overall system processes.
2. Design smaller, compact and workable modules in each block.
3. Design various database structures.
4. Specify details of programs to achieve the desired functionality.
5. Design the form of inputs, and outputs of the system.
6. Perform documentation of the design.
7. System reviews.

Project design is the process of defining the architecture, modules, and data for a system to satisfy specified requirements. System design could be seen as the application of system theory to product development. It includes the overall view of the project by showing the modules through use case diagram, Data Flow Diagram (DFD) and system architecture for the better view of the design of the project.

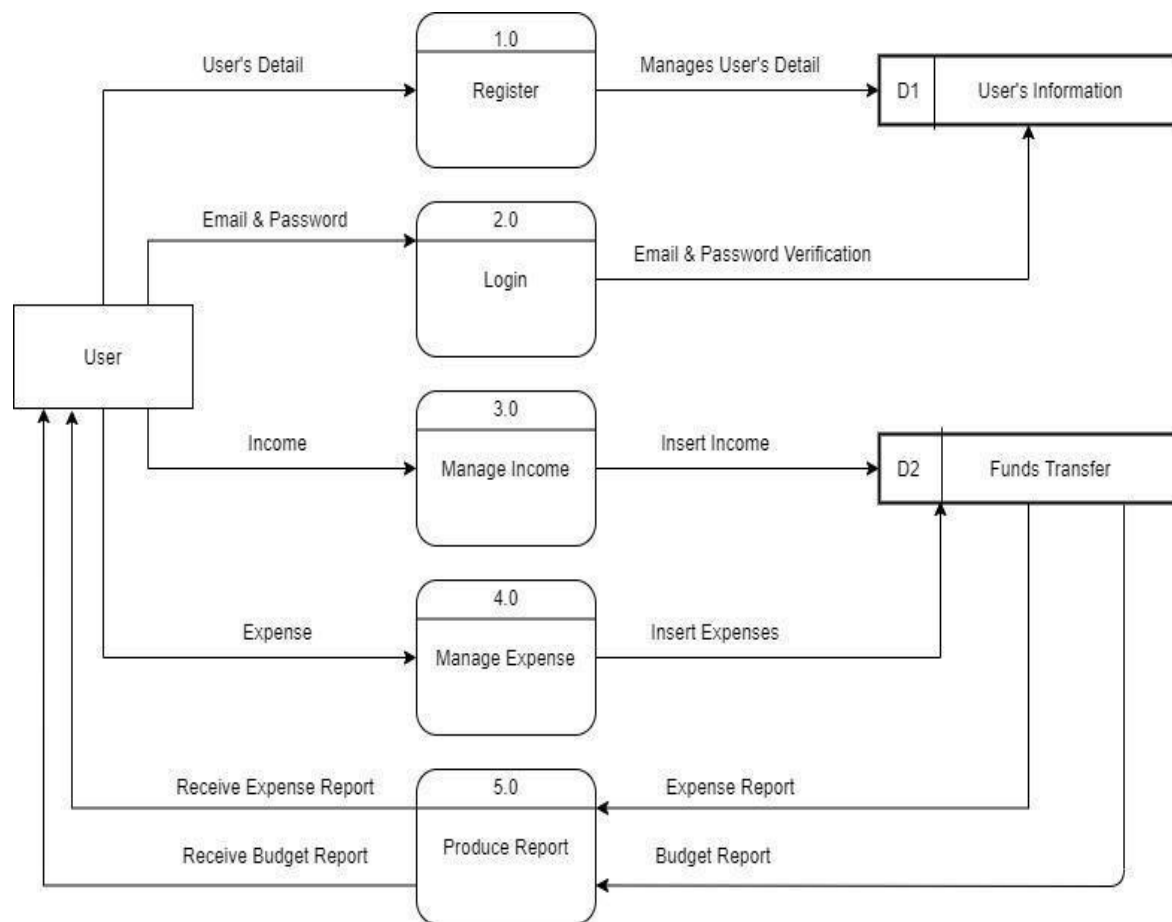
5.1. Use Case Diagram:

In the Unified Modeling Language (UML), a use case diagram can summarize the details of your system's users (also known as actors) and their interactions with the system. To build one, you'll use a set of specialized symbols and connectors.



5.2 Data Flow Diagram (DFD) Level 0

The DFD helps represent the system. For Expense Tracker, DFD shows that the system has one entity which is user. The processes include register, login, manage income, manage expense and produce report. As for data store, there are two data store which is user's information and funds transfer.



Chapter 6

7. Technical specification

Hardware and Software Requirements:

Hardware Required :

1. Standard computer with at least i3 processor Standard computer with 4GB of RAM
2. Standard computer with 100GB of free space
3. Active Internet Connectivity with good bandwidth

Software Required :

1. HTML, CSS, JavaScript
2. Visual Studio Code
3. MYSQL

Operating System:

1. Windows 10

Chapter 7

Project Scheduling

Sr. No	Group Member	Time duration	Work to be done
<u>1</u>	Tanmay Poyekar Sahil Vishwakarma Jai Rao	1 st week of january	Implementing Welcome Module Signup & Login page
		2 nd week of january	Implementing Add Expense Income Expense Module
<u>2</u>	Tanmay Poyekar Sahil Vishwakarma Jai Rao	3 rd week of january	Implementing Summary / Visualization of Data Module
<u>3</u>	Tanmay Poyekar Sahil Vishwakarma Jai Rao	By the end of march month	Connecting Modules and Testing

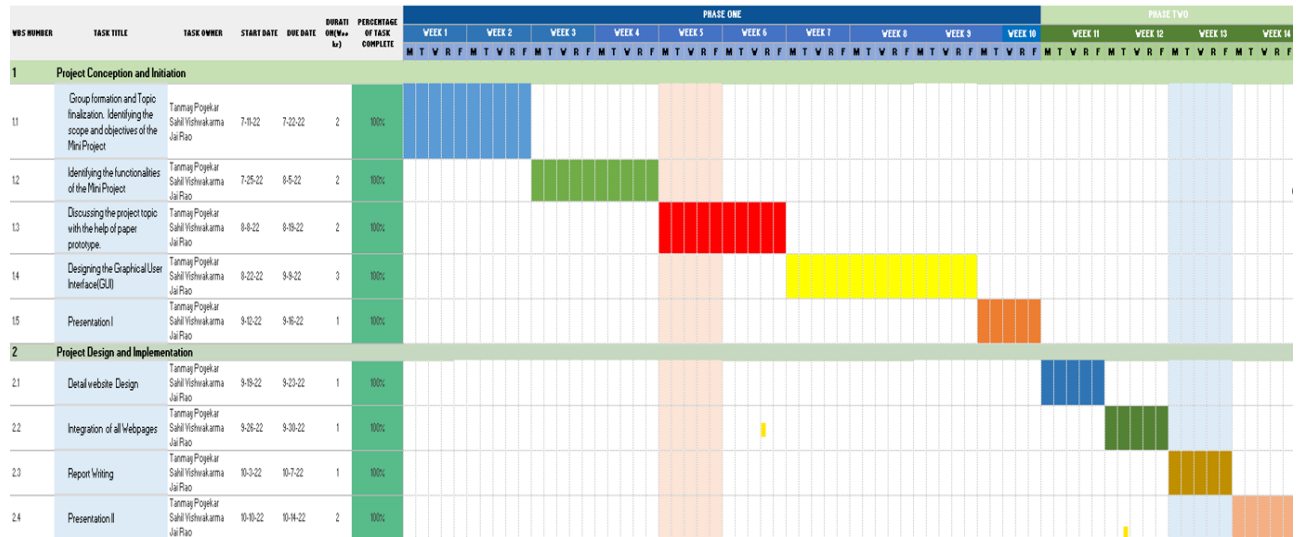
Gantt Chart

GANTT CHART TEMPLATE

Smartsheet Tip ⁴ A Gantt chart's visual timeline allows you to see details about each task as well as project dependencies.

PROJECT TITLE: Expense Tracker Applical
PROJECT GUIDE: Prof.Manjisha Kashikar

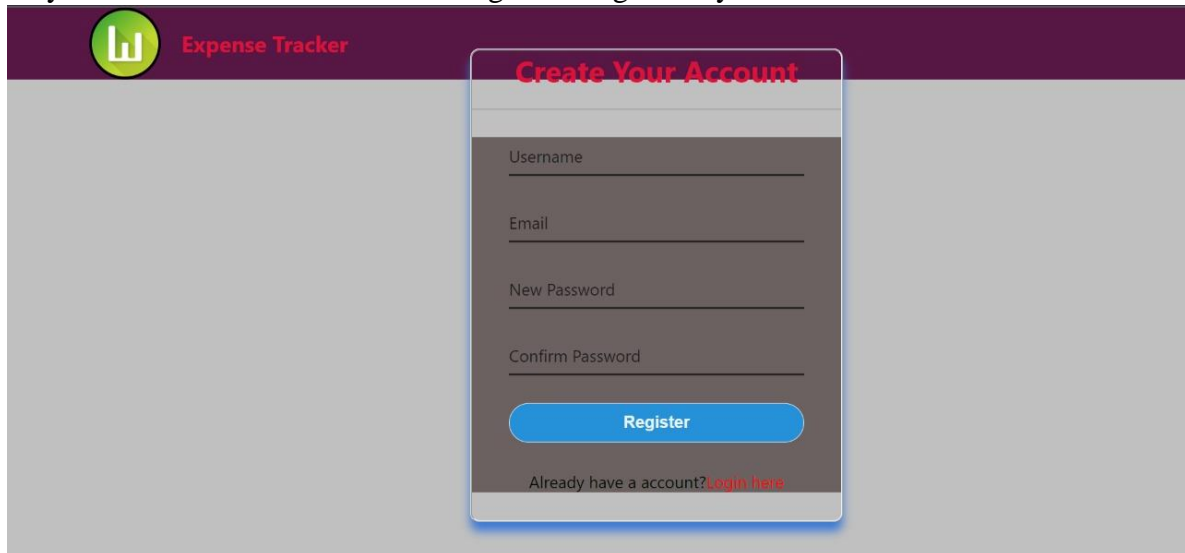
INSTITUTE & DEPARTMENT: AP SHAH INSTITUTE OF TECHNOLOGY (Information T)
DATE: 10-14-22



Chapter 8

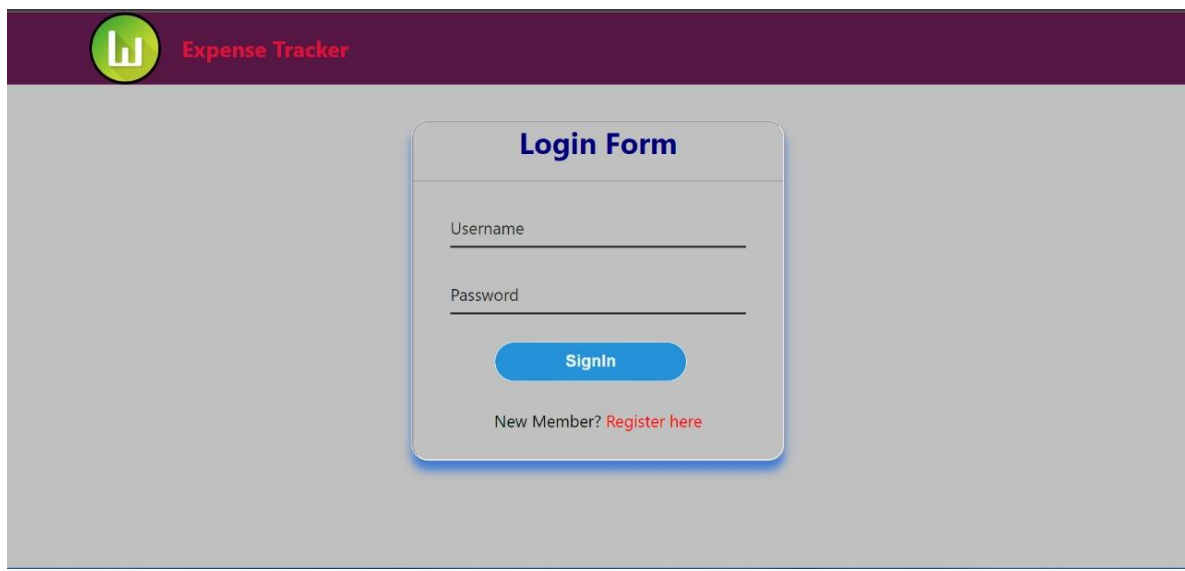
Implementation

1.It is the first page user will see when they open the expense tracker application where they have to create their account to log in through our system.



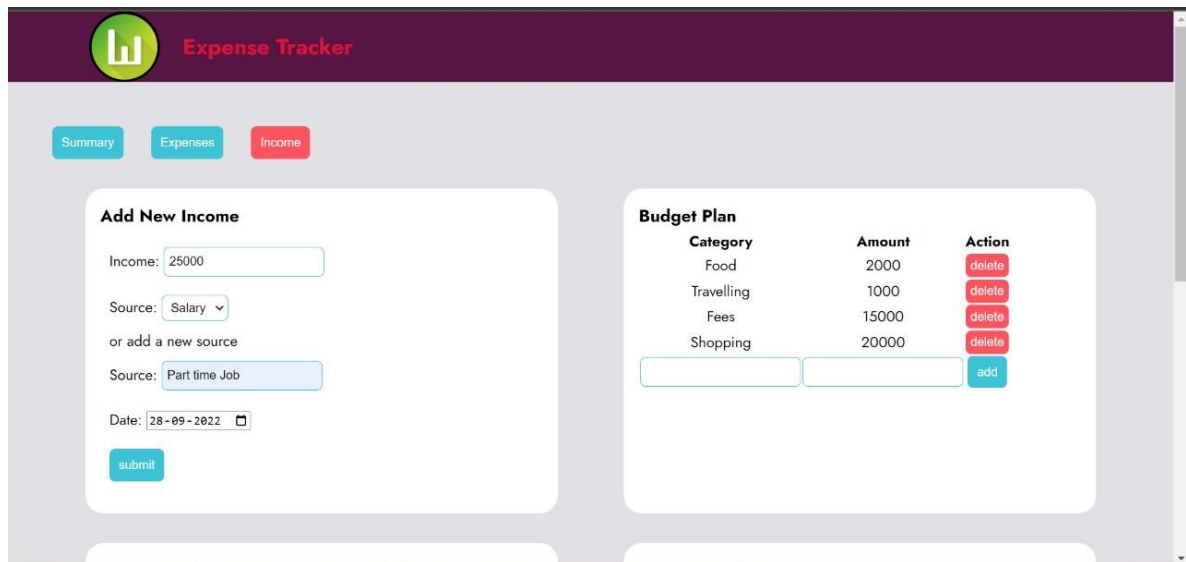
The image shows the 'Create Your Account' form of the Expense Tracker application. The form is centered on a light gray background. At the top left, there is a green circular logo with a white bar chart icon, followed by the text 'Expense Tracker' in red. The form itself has a white header with the title 'Create Your Account' in red. Below the header, there are four input fields: 'Username', 'Email', 'New Password', and 'Confirm Password'. Each field has a horizontal line for text entry. Below these fields is a blue rounded button with the text 'Register' in white. At the bottom of the form, there is a link that says 'Already have a account? [Login here](#)' in red text.

2.After creating an account user will be directed to login page where they have to put their credentials of username and password as they created to use the application.



The image shows the 'Login Form' of the Expense Tracker application. The form is centered on a light gray background. At the top left, there is a green circular logo with a white bar chart icon, followed by the text 'Expense Tracker' in red. The form has a white header with the title 'Login Form' in blue. Below the header, there are two input fields: 'Username' and 'Password'. Each field has a horizontal line for text entry. Below these fields is a blue rounded button with the text 'SignIn' in white. At the bottom of the form, there is a link that says 'New Member? [Register here](#)' in red text.

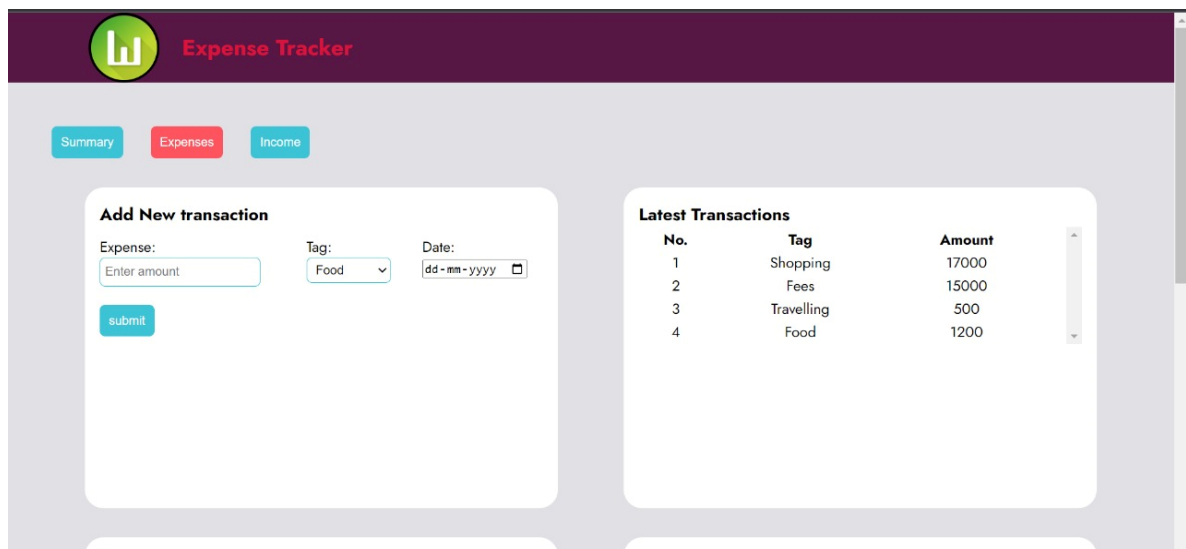
3.This is the first window user will be able to after they logged in through their credentials where they will have a glance of every part of the expense tracker application.



The screenshot shows the 'Expense Tracker' application interface. At the top, there is a dark purple header with a green logo and the text 'Expense Tracker'. Below the header, there are three tabs: 'Summary' (blue), 'Expenses' (teal), and 'Income' (red). The 'Income' tab is currently selected. The main content area is divided into two sections. On the left, there is a form titled 'Add New Income'. It includes an 'Income' input field with the value '25000', a 'Source' dropdown menu with 'Salary' selected, a text input for 'or add a new source' with the value 'Part time Job', and a 'Date' input field with the value '28-09-2022'. A 'submit' button is at the bottom. On the right, there is a table titled 'Budget Plan'. The table has three columns: 'Category', 'Amount', and 'Action'. The data rows are: Food (2000), Travelling (1000), Fees (15000), and Shopping (20000). Each row has a red 'delete' button in the 'Action' column. At the bottom of the table, there are two empty input fields and a blue 'add' button.

Category	Amount	Action
Food	2000	delete
Travelling	1000	delete
Fees	15000	delete
Shopping	20000	delete

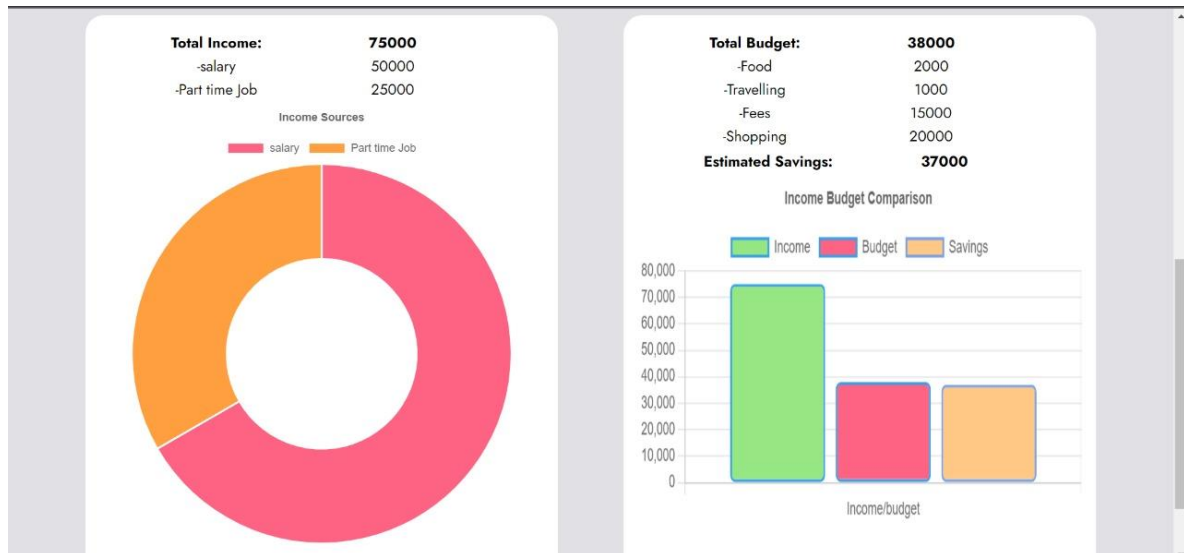
4.As the user has added their income and budget plan next is the expense tab where they will add their expense with tag such as food, travel and other commodities and they can add as much entry as they want.



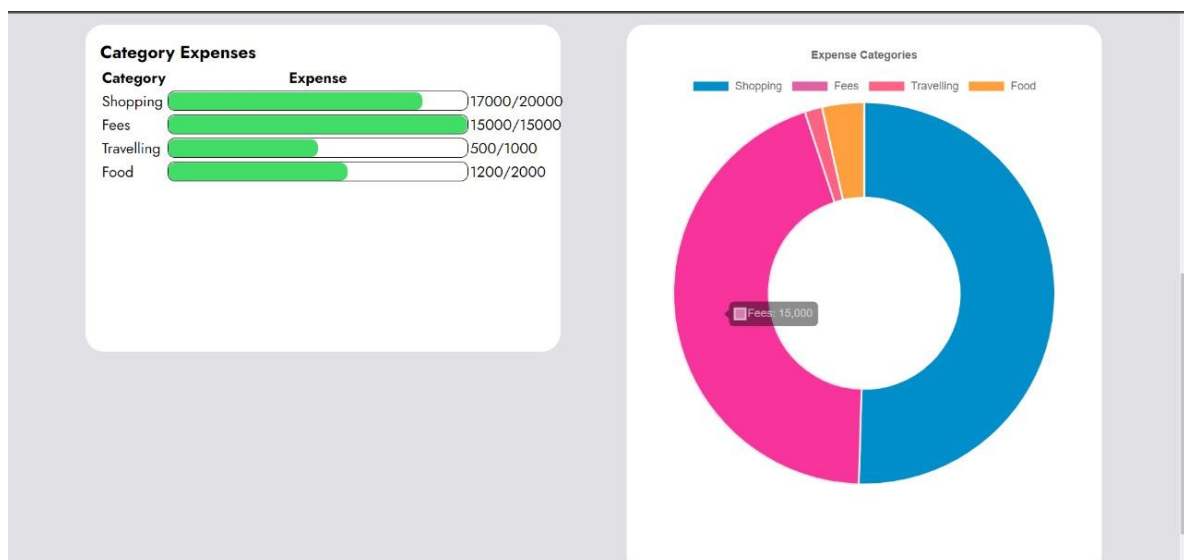
The screenshot shows the 'Expense Tracker' application interface with the 'Expenses' tab selected. The 'Add New transaction' form on the left includes an 'Expense' input field with the placeholder 'Enter amount.', a 'Tag' dropdown menu with 'Food' selected, and a 'Date' input field with the placeholder 'dd-mm-yyyy'. A 'submit' button is at the bottom. On the right, there is a table titled 'Latest Transactions'. The table has three columns: 'No.', 'Tag', and 'Amount'. The data rows are: 1 Shopping 17000, 2 Fees 15000, 3 Travelling 500, and 4 Food 1200.

No.	Tag	Amount
1	Shopping	17000
2	Fees	15000
3	Travelling	500
4	Food	1200

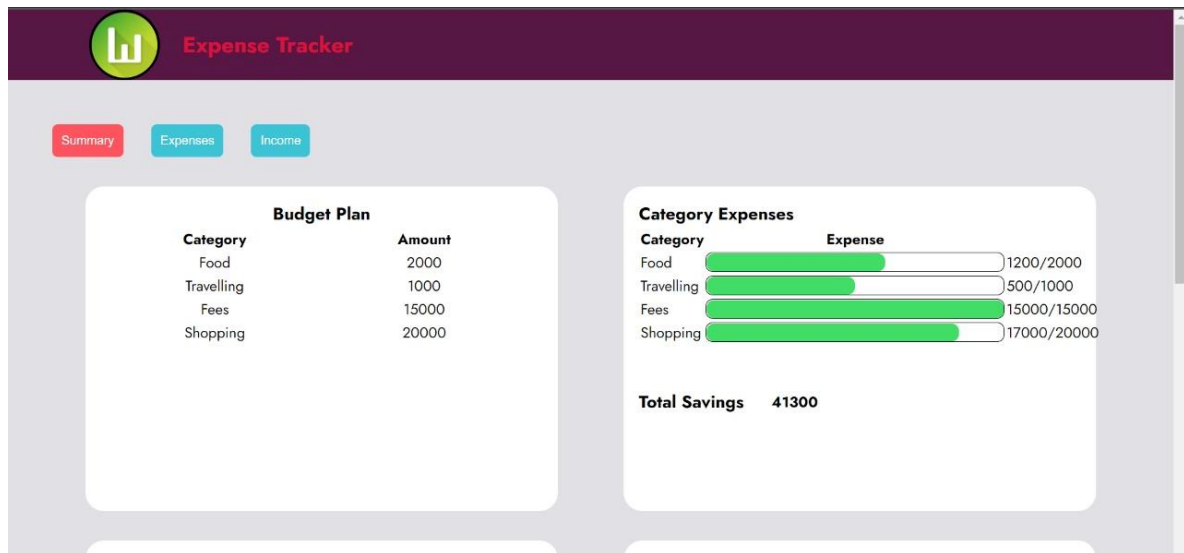
5. In this window user can see their income in the form of donut chart and beside this is the budget plan and the estimated saving after the summary of both their income and the expense.



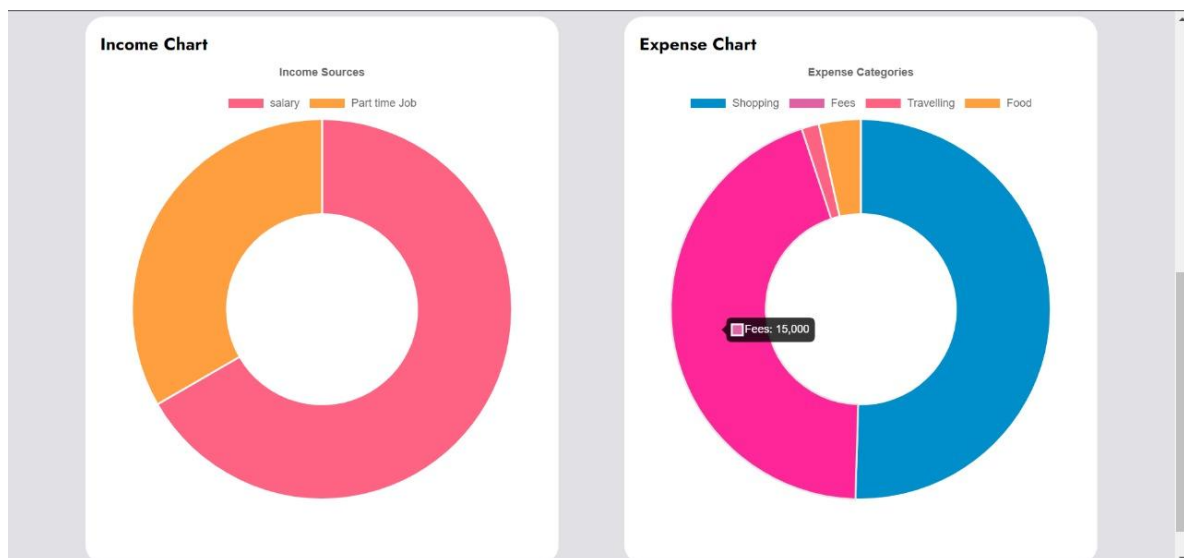
6. The detailed analysis of the expense with their categories are shown in this tab where user can easily locate their expense with their categories.



7. In this window user can have the detailed analysis of their expense tracking in summary tab with the total saving there is remaining.



8. It is the continuation part of the summary tab where user can see both their income and expense chart.



Chapter 9

Result and Discussion

- As the project continues the user will have ease to use the interface as it is more user-friendly and every modules have been connected to each other . It starts off with users managing their account by inserting the personal data such as username, email and password. Later on, user will have to insert their income, expenses and budget in order for the system to operate functionally.
- After making this application we assure that this application will help its users to manage the cost of their daily expenditure. It will guide them and aware them about their daily expenses.
- It will prove to be helpful for the people who are frustrated with their daily budget management, irritated because of amount of expenses and wishes to manage money and to preserve the record of their daily cost which may be useful to change their way of spending money.

Chapter 10

Conclusion

Monitoring your everyday expenses can set aside your cash, yet it can likewise help you set your monetary objectives for what's to come. On the off chance that you know precisely where your sum is going much of a stretch see where a few reductions and bargains can be made. Expense Tracker project is for keeping our day-to-day expenditures will helps us to keep record of our money daily. The project what we have created is work more proficient than the other income and expense tracker. The project effectively keeps away from the manual figuring for trying not to ascertain the pay and cost each month. It's a user-friendly application. It will guide them and aware them about their daily expenses. It will prove to be helpful for the people who are frustrated with their daily budget management, irritated because of amount of expenses and wishes to manage money and to preserve the record of their daily cost which may be useful to change their way of spending money. In short, this application will help its users to overcome the wastage of money.

Future Scope

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

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