OOP CEP Report

"Personal Expense Tracker"

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Introduction

Personal spending tracker is an app that aids users in managing their finances by tracking earnings and expenses, enhancing financial control in the increasingly complex world of personal finances.

Problem Statement/Abstract

Managing personal finances is an important part of financial management, as many people feel it difficult to keep track of their spending, maintaining their own finances is an essential part of financial management.

To solve this issue, we are making an app of Personal Expense Tracker which will manage and track the spending of the user and save them in a table so that user can easily access their spending whenever they want to track their spending's according to category or date wise.

Design:

For a long time, individuals have maintained a record of their own expenses, manually but as technology has advanced, the demand for digital spending tracking systems has increased. With functions including adding, editing, and removing expense, the Expense Tracker aims to offer a user-friendly interface while maintaining the privacy and security of financial information. Using a personal expense tracker helps people become more aware of how they spend money, discover that how they increase their savings, and finally get closer to their financial goals.

Implementation:

The front end of the application is created in Java, as it is platform independent, allowing application to operate on several operating systems without requiring any changes. It offers interactive GUI building libraries such as Swing and JavaFX, which facilitate the creation of Expense Tracker application user interfaces.

The back end database management is handled by MySQL Workbench providing the capacity to create and visualize database schemas, which enables to create standardized and effective database structures making it easier to store, manage, and retrieve data for the Expense Tracker application.

Code Structure:

The program opens with a login screen. If the user already has an account, they can log in immediately to the application by entering their login credentials; if not, they must first create one. Following registration, they must log into their account.

Upon logging in, users are presented with a dashboard that offers four options: Add Expense, Add Category, View Spending, and Log Out.

When you select Add Expense, a new window labeled Spending tracker opens. Enter the date, category, and amount, then click Add. On the same interface, the cost is added to the table provided below. In case you need to add a category first, you can click on the Add New Category option on the same frame, which will open a new frame with the name "category." After writing the category you wish to add, select Add. Shut down the category frame. Then, hit the refresh button on the spending tracking frame to view the most current additions.

You can view spending for a certain category for any month or between any two dates by using the view spending frame feature.
To logout click the designated button on the dashboard or just end the application to log out.

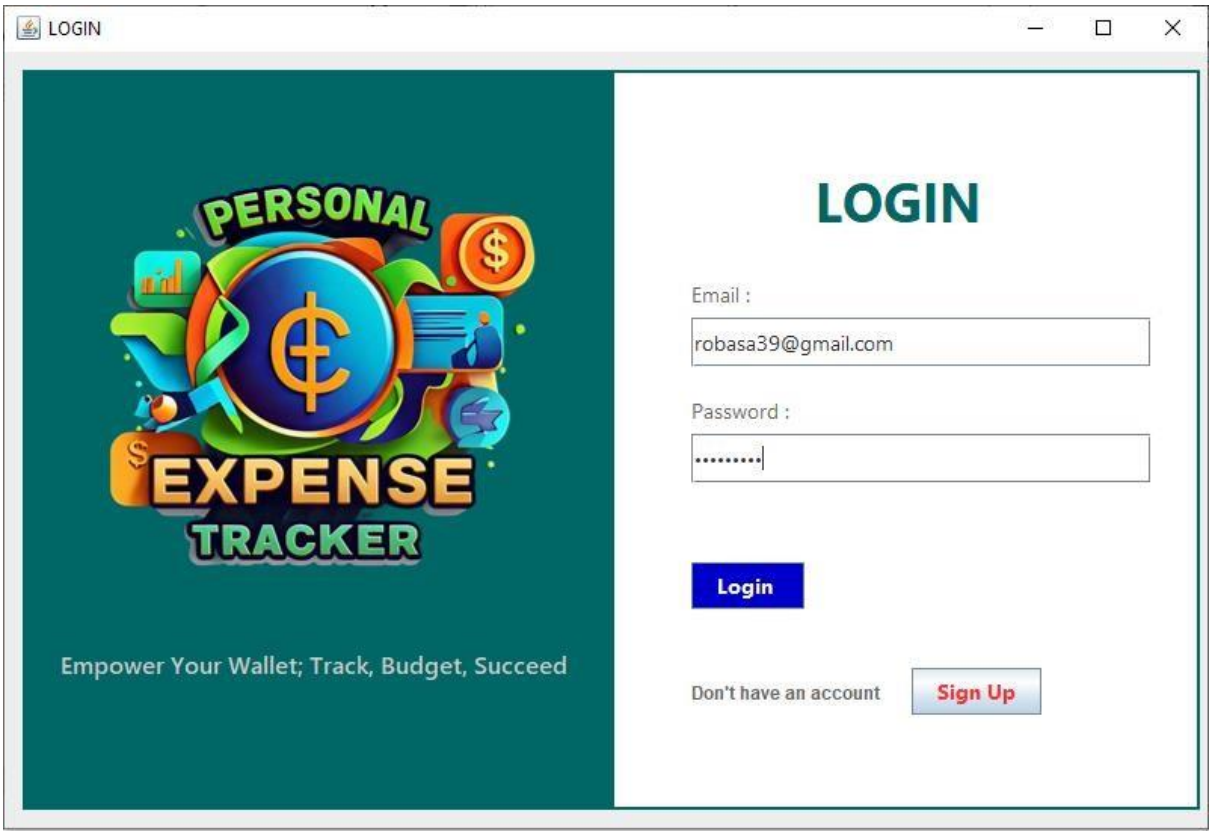
Testing and Validation:

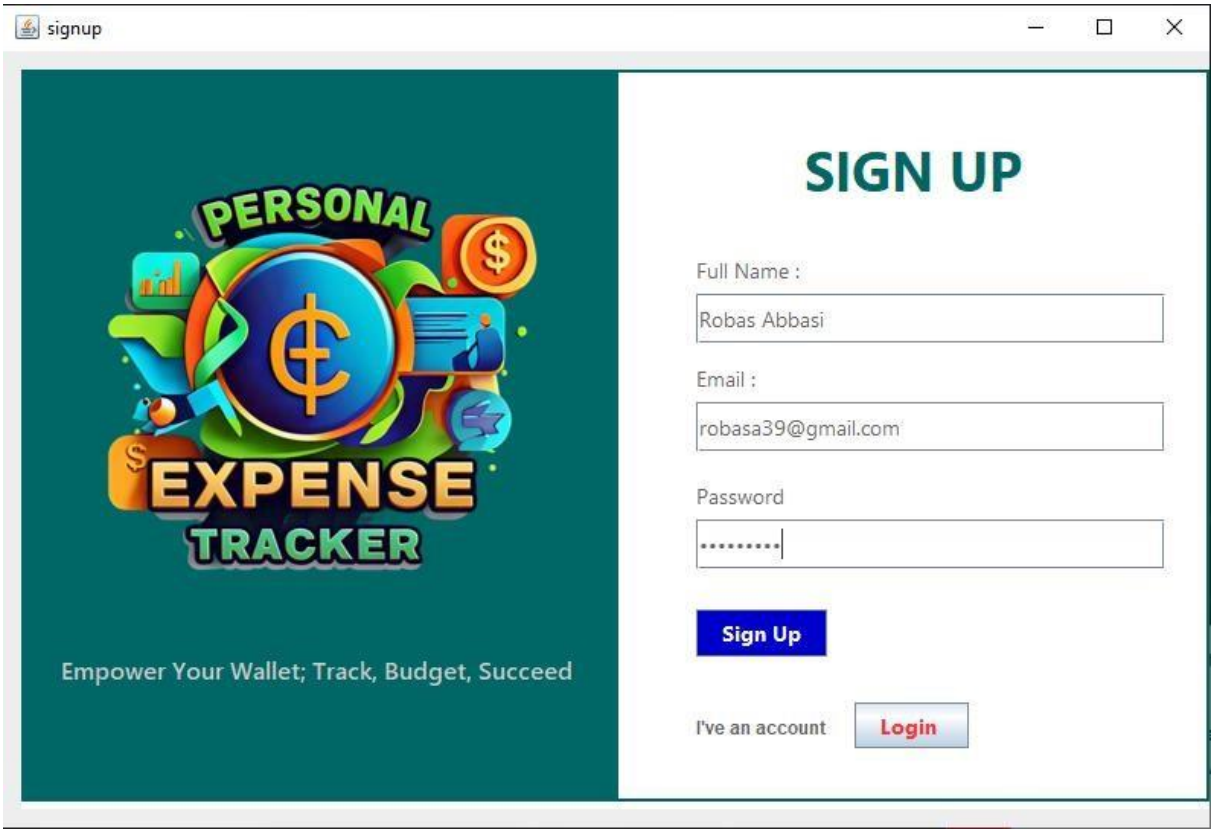
Creating a user-friendly and intuitive GUI for the expense tracker was challenging, especially when dealing with multiple forms, tables, and input fields while ensuring a smooth user experience requires careful design and testing.
Implementing data validation to ensure that only valid and appropriate data is entered into the system. This includes validating user inputs such as dates, amounts, and categories to prevent errors and maintain data integrity.
Establishing a reliable connection between the Java application and the MySQL database was tricky. Issues such as connection errors, authentication problems, and handling database exceptions were addressed effectively.

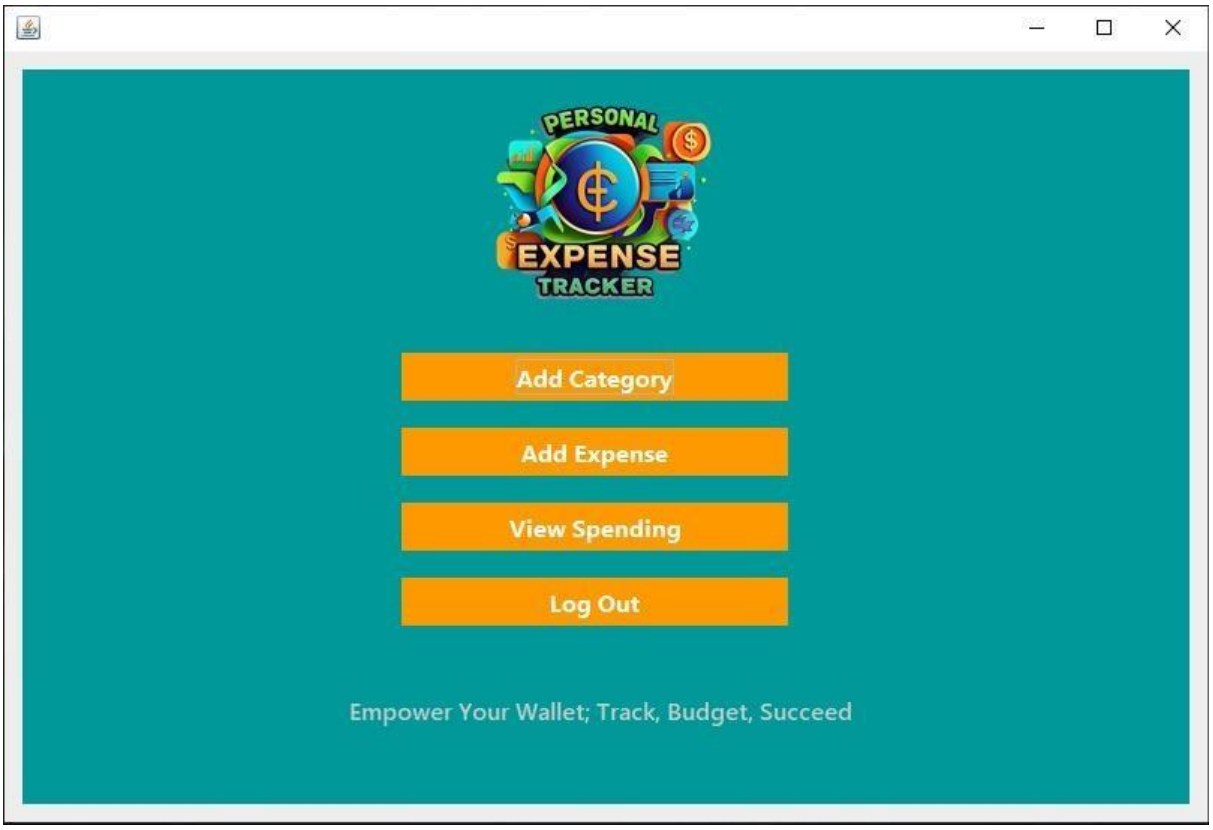
Outcomes:

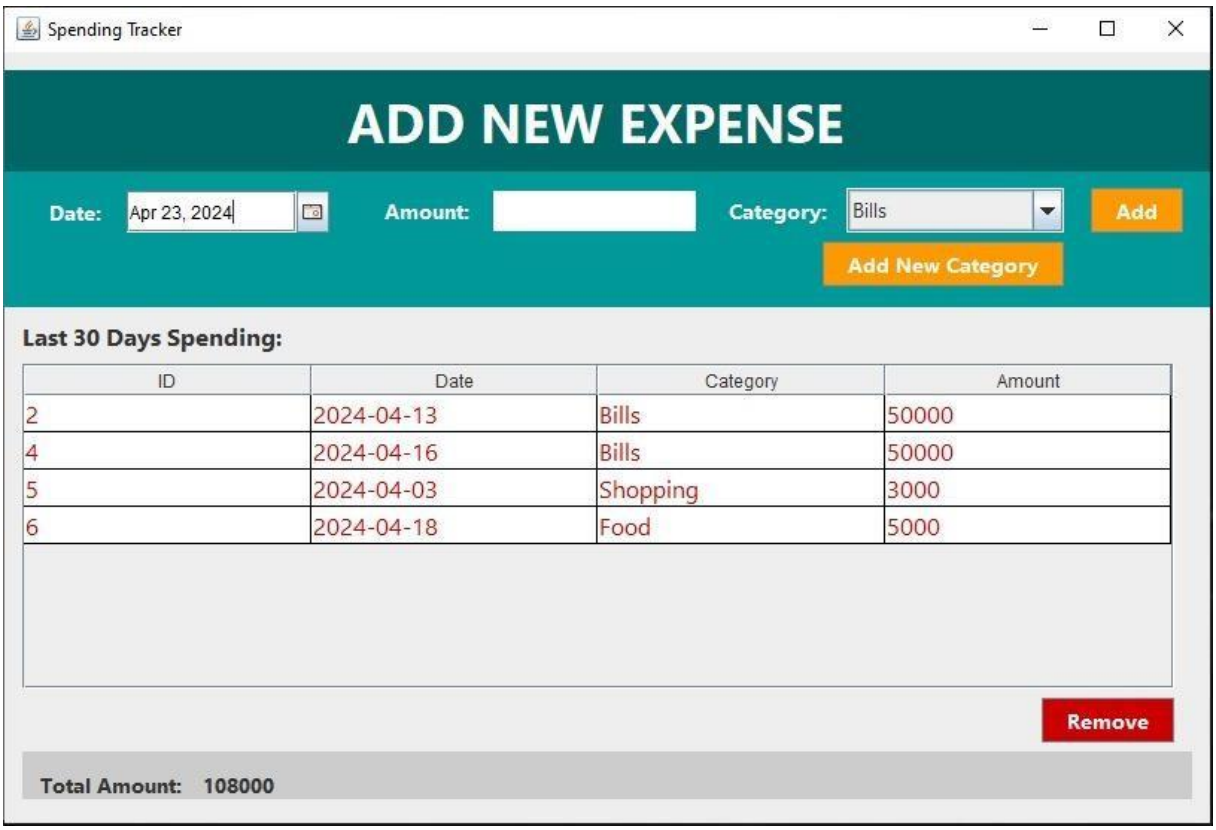
The expense tracker intends to give users an affordable and simple platform for tracking, organizing, and analyzing their personal expenses with a signup and login page.

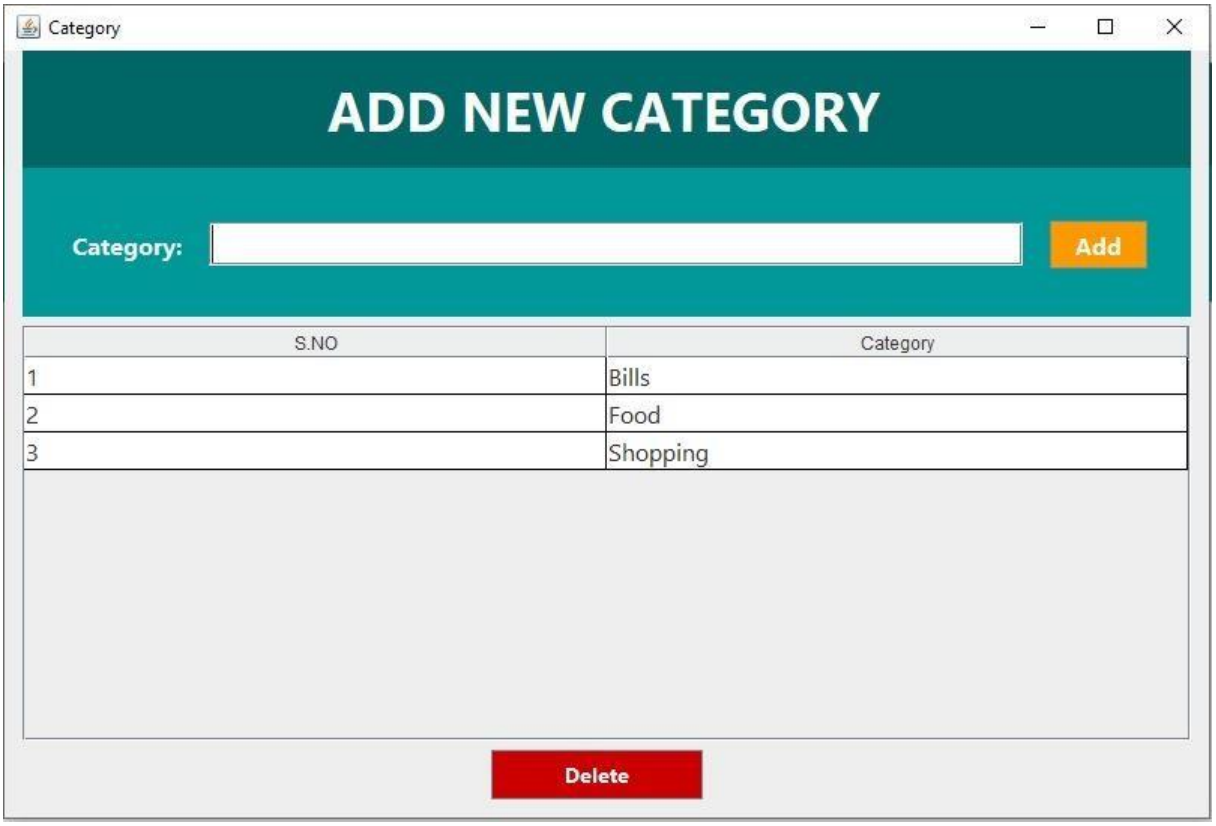
Results:

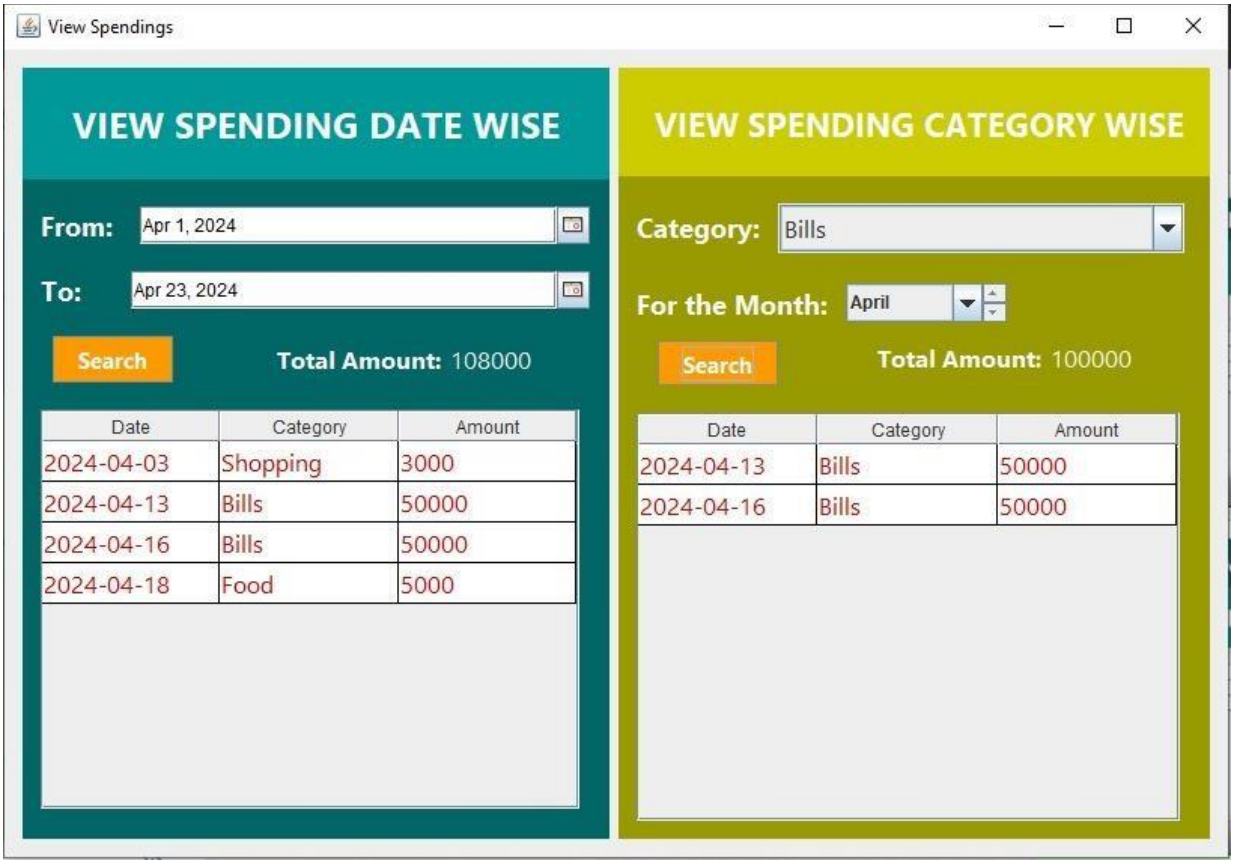



signup
PERSONAL
EXPENSE
TRACKER
Empower Your Wallet; Track, Budget, Succeed
SIGN UP
Full Name :
Robas Abbasi
Email :
robasa39@gmail.com
Password
Sign Up
I've an account
Login


PERSONAL
EXPENSE
TRACKER
Add Category
Add Expense
View Spending
Log Out
Empower Your Wallet; Track, Budget, Succeed


Spending Tracker
ADD NEW EXPENSE
Date:
Apr 23, 2024
Amount:
Category:
Bills
Add
Add New Category
Last 30 Days Spending:
ID
Date
Category
Amount
2
2024-04-13
Bills
50000
4
2024-04-16
Bills
50000
5
2024-04-03
Shopping
3000
6
2024-04-18
Food
5000
Remove
Total Amount: 108000


Category
ADD NEW CATEGORY
Category:
Add
S.NO
Category
1
Bills
2
Food
3
Shopping
Delete



Conclusion:

The Personal Expense Tracker app's creation is a significant step in the right direction toward eliminating the typical problems people have with money management. The software tracks, manages, and monitors expenditure with an intuitive user interface in an effort to provide consumers greater financial control.

With capabilities like add, update, and remove expenses and signup and login functions for enhanced data safety, the app offers a comprehensive way to keep tabs on your spending. Additionally, the diversity of client requirements increases with the flexibility to adjust spending categories.

Although there is always room for improvement in every project, our app's main objective is to assist users in becoming more adept money managers.