MTech Integrated Software Engineering

PROJECT DOCUMENT

FOR

EXPENSE TRACKER APP

By

1) Balasubramaniyam G R	21MIS0027
2) Thenmozhi V	21MIS0070
3) VenkatBharath R	21MIS0255
4) Mothiswar T B G	21MIS0258

Team ID: HovUKHJelQZper39Tj5fx

Problem Statement:

In today's fast-paced world, managing personal finances has become increasingly challenging. People often struggle to keep track of their expenses, leading to overspending, financial stress, and difficulties in achieving their financial goals. Traditional methods of tracking expenses, such as manual notetaking or using spreadsheets, are time-consuming, error-prone, and lack the functionality needed to provide real-time insights into spending habits.

Individuals and households need a reliable, user-friendly, and efficient way to track their expenses, categorize their spending, and gain insights into their financial habits. The lack of an effective expense tracking system can result in poor financial management, missed savings opportunities, and financial instability.

Solution:

In an era where financial literacy and management are paramount, individuals often find it challenging to keep track of their daily expenses efficiently. Traditional methods, such as manual logging or using spreadsheets, are not only cumbersome but also prone to errors. To address this issue, we present an innovative solution: an Expense Tracker App built using the MERN stack (MongoDB, Express.js, React, and Node.js).

Our **Expense Tracker App** aims to provide a seamless and intuitive platform for users to monitor their spending, categorize expenses, and gain valuable insights into their financial habits. Leveraging the power of the MERN stack, we ensure a robust, scalable, and user-friendly application that caters to the diverse needs of modern users.

Key Features:

- **Real-time Expense Logging:** Users can quickly log their expenses on-the-go, ensuring that no transaction goes unrecorded.
- **Categorization and Analysis:** Expenses can be categorized (e.g., food, transportation, entertainment) to help users understand their spending patterns.
- **Visual Insights:** Interactive charts and graphs provide a visual representation of spending habits, aiding in better financial planning.
- **Secure and Reliable:** Built with the latest technologies, the app ensures data security and reliability.

User Interface:

Responsive Design:

The application is designed to be responsive and user-friendly.

Data Entry Modals:

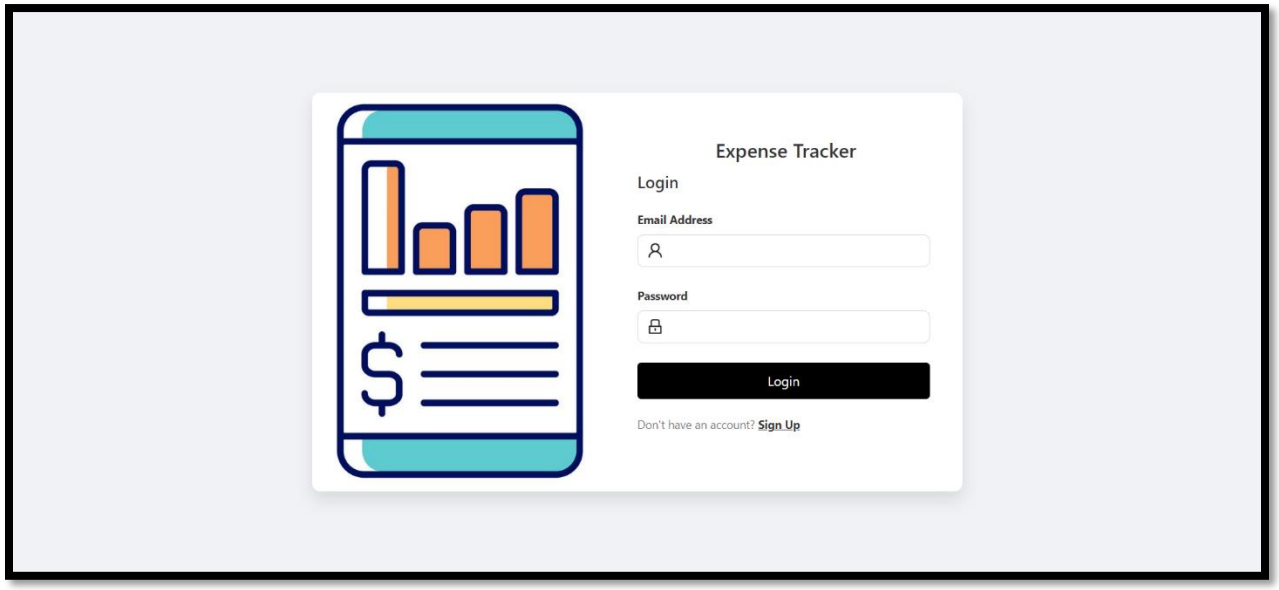
Forms for adding and editing transactions are displayed in modals for better user experience.

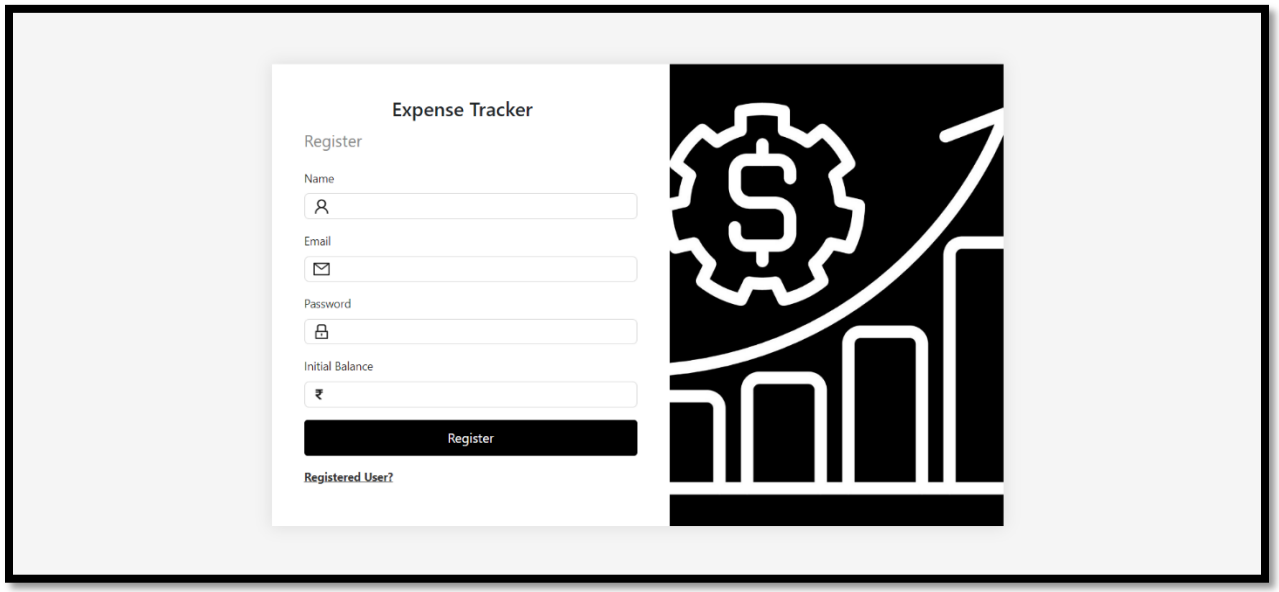
Technological Stack:

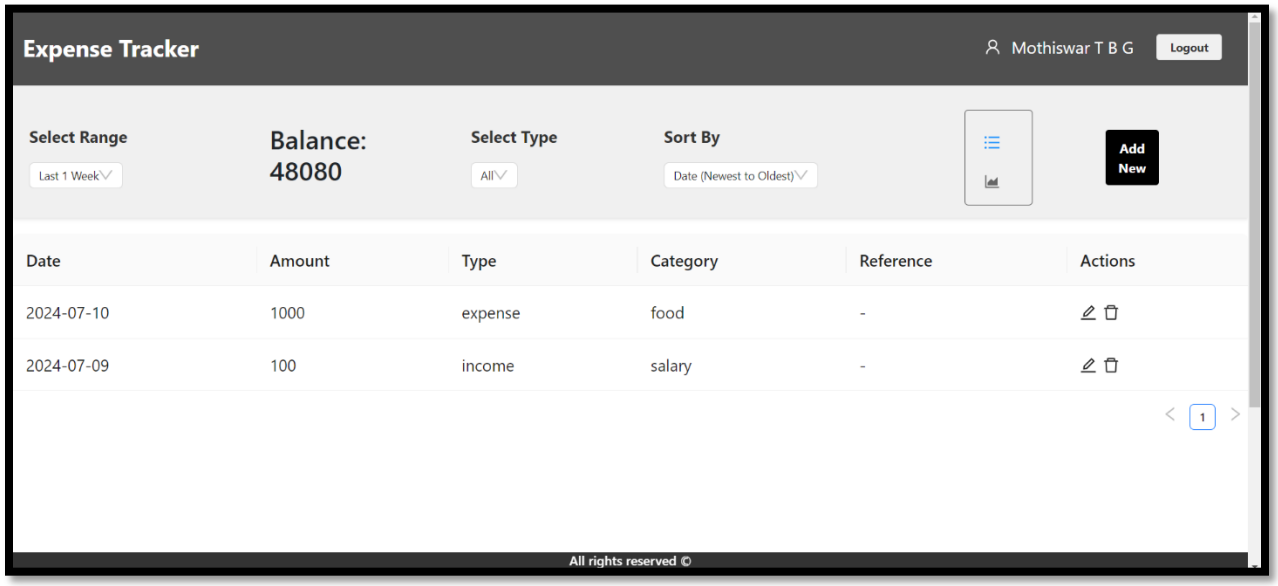
- **MongoDB:** A NoSQL database that provides flexibility in handling diverse data types and ensures high performance and scalability.
- **Express.js:** A web application framework for Node.js that simplifies the development of robust APIs.
- **React:** A powerful front-end library that enables the creation of dynamic and responsive user interfaces.
- **Node.js:** A runtime environment that allows for the development of fast and scalable server-side applications.

- **Visual Studio Code (VS Code):** A lightweight, powerful code editor with built-in support for debugging, version control, and extensions to enhance functionality. It's ideal for developers looking for a versatile and customizable tool to streamline their workflow.

User Interface:






Expense Tracker
Mothiswar T B G
Logout
Select Range
Last 1 Week
Balance:
48080
Select Type
All
Sort By
Date (Newest to Oldest)
Add New
Date
Amount
Type
Category
Reference
Actions
2024-07-10
1000
expense
food
-
2024-07-09
100
income
salary
-
1
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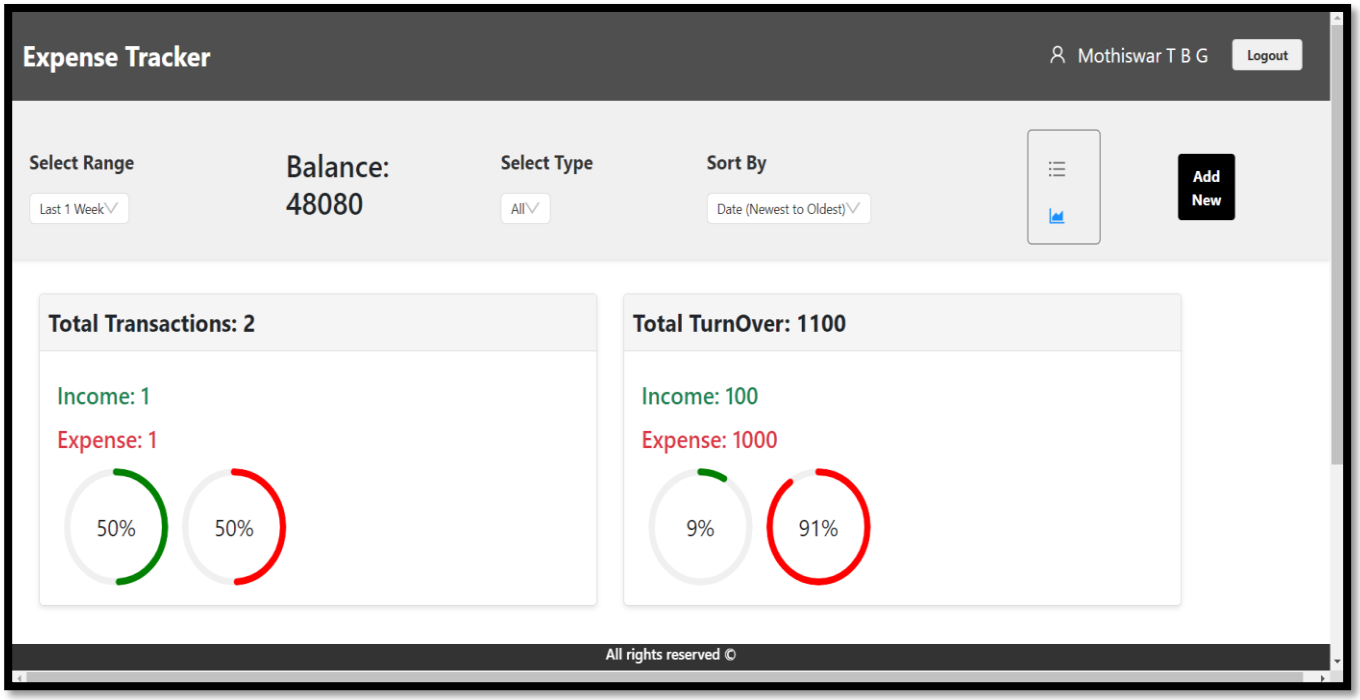
Expense Tracker
Mothiswar T B G
Logout
Select Range
Last 1 Week
Balance:
48080
Select Type
All
Sort By
Date (Newest to Oldest)
Add New
Total Transactions: 2
Income: 1
Expense: 1
50%
50%
Total TurnOver: 1100
Income: 100
Expense: 1000
9%
91%
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Developers:

1. **Balasubramaniyam G R** - Backend Development
2. **Thenmozhi V** - DBA & Backend Development
3. **VenkatBharath R** - Web Development
4. **Mothiswar T B G** - Front End Development

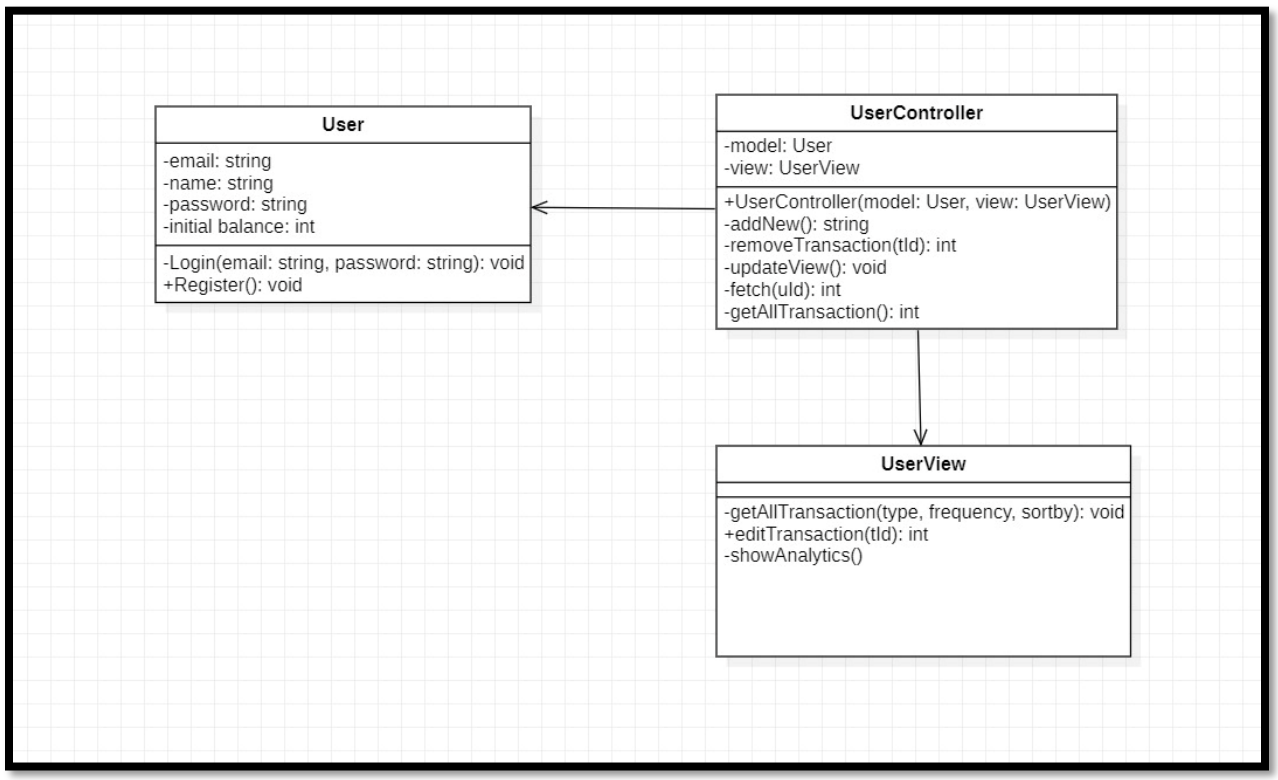
System Architecture:

Model-View-Controller (MVC) is a software design pattern commonly used for developing user interfaces that divide an application into three interconnected components. This separation helps manage complex applications by promoting organized and modular code, enhancing maintainability, and enabling parallel development.

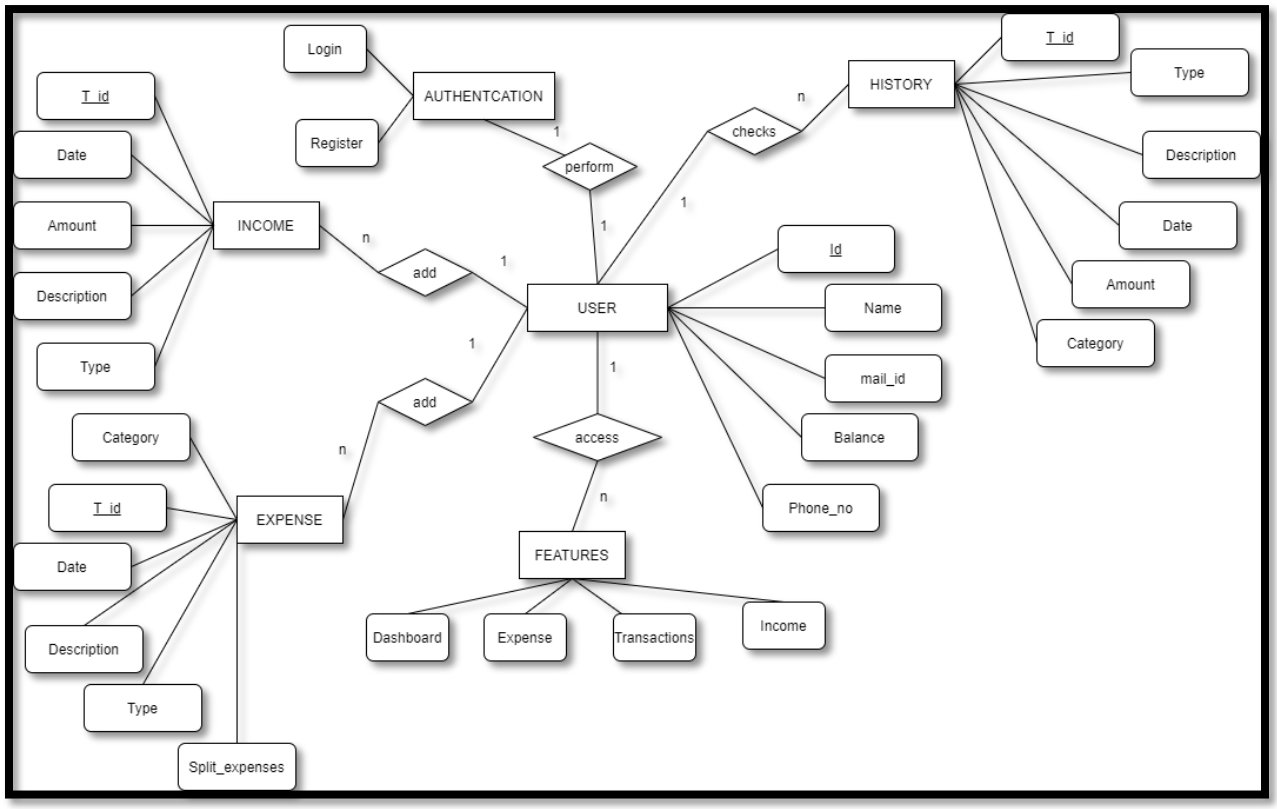
Model: Represents the application's data and business logic.

View: Represents the presentation layer and user interface of the application.

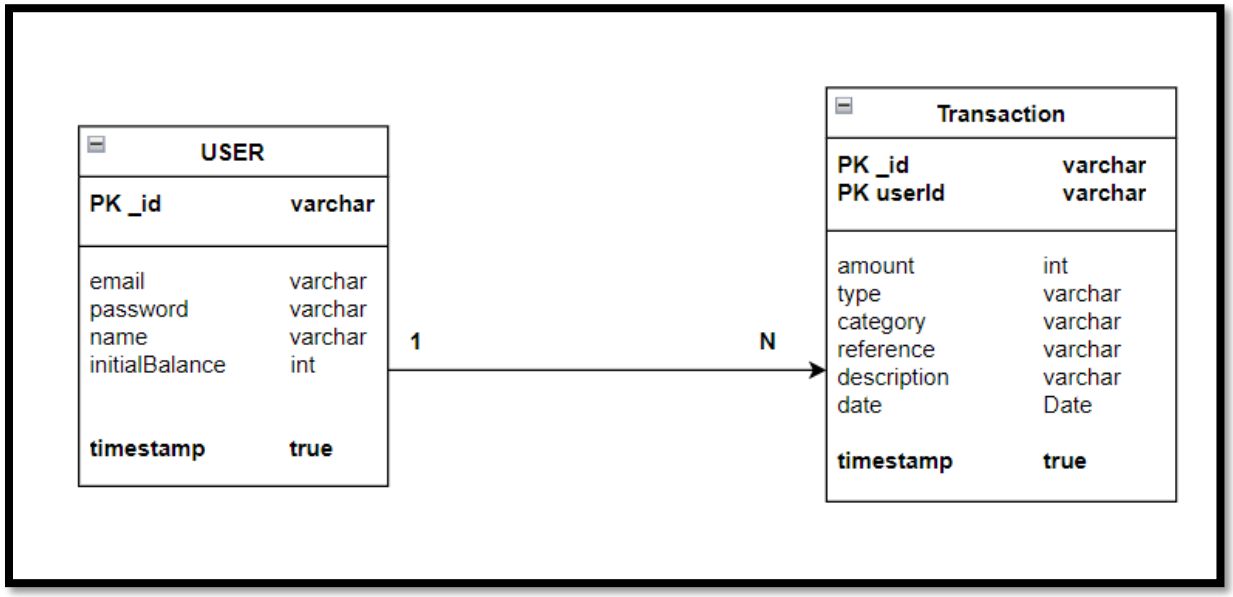
Controller: Acts as an intermediary between the Model and the View.



Entity Relationship Diagram:



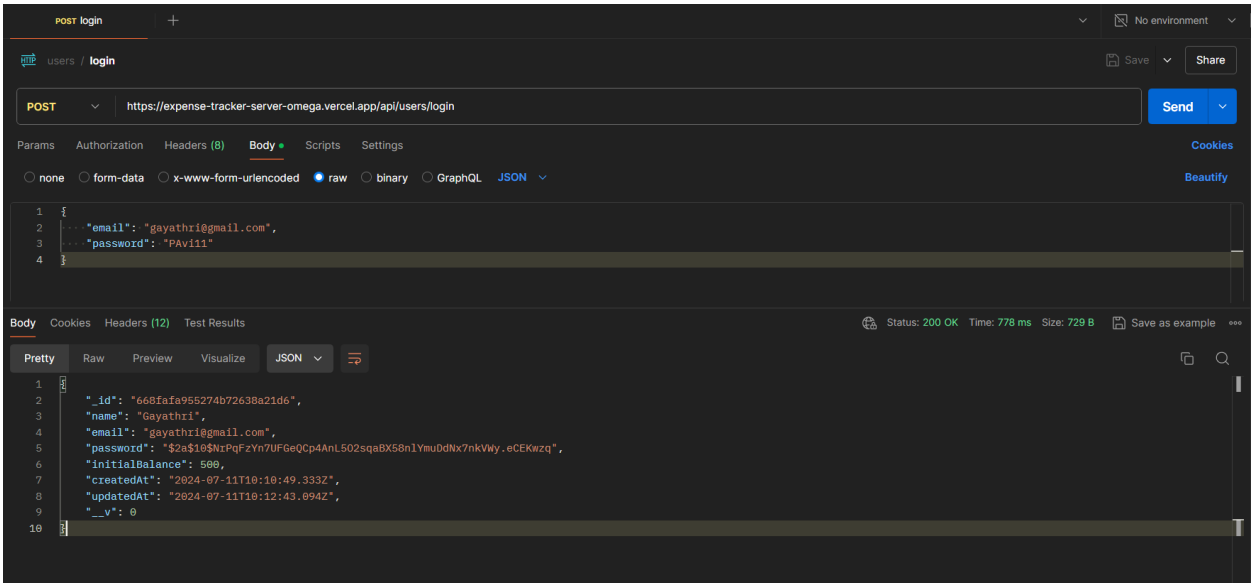
Database structure:



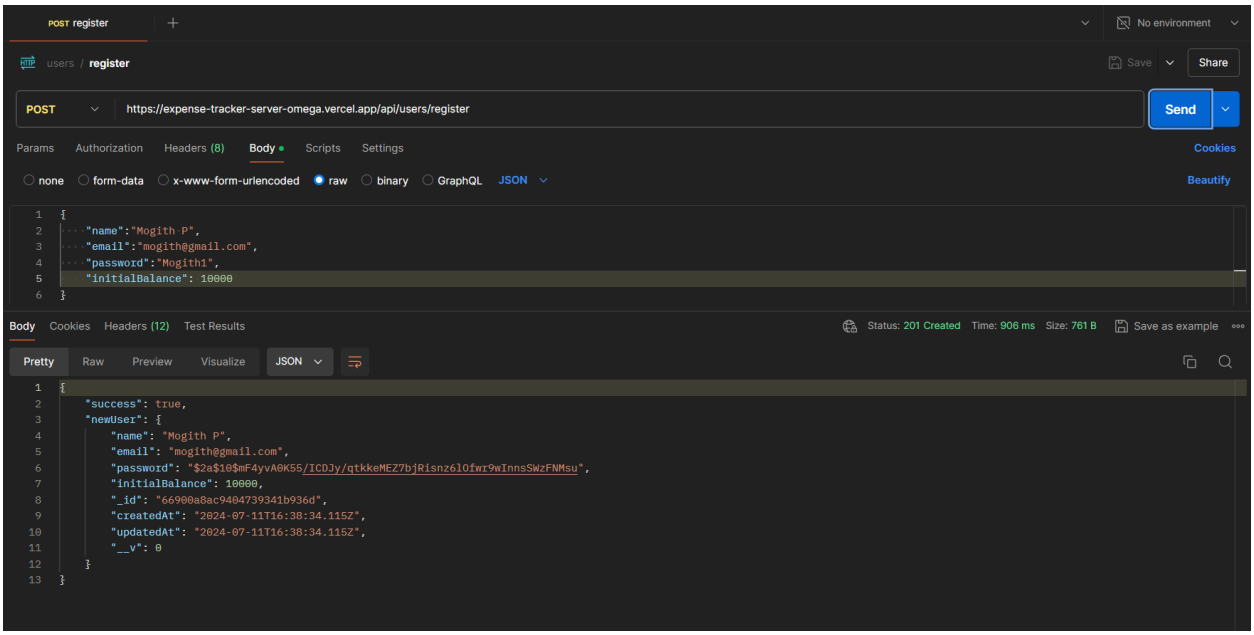
List of API calls:

1.Users:

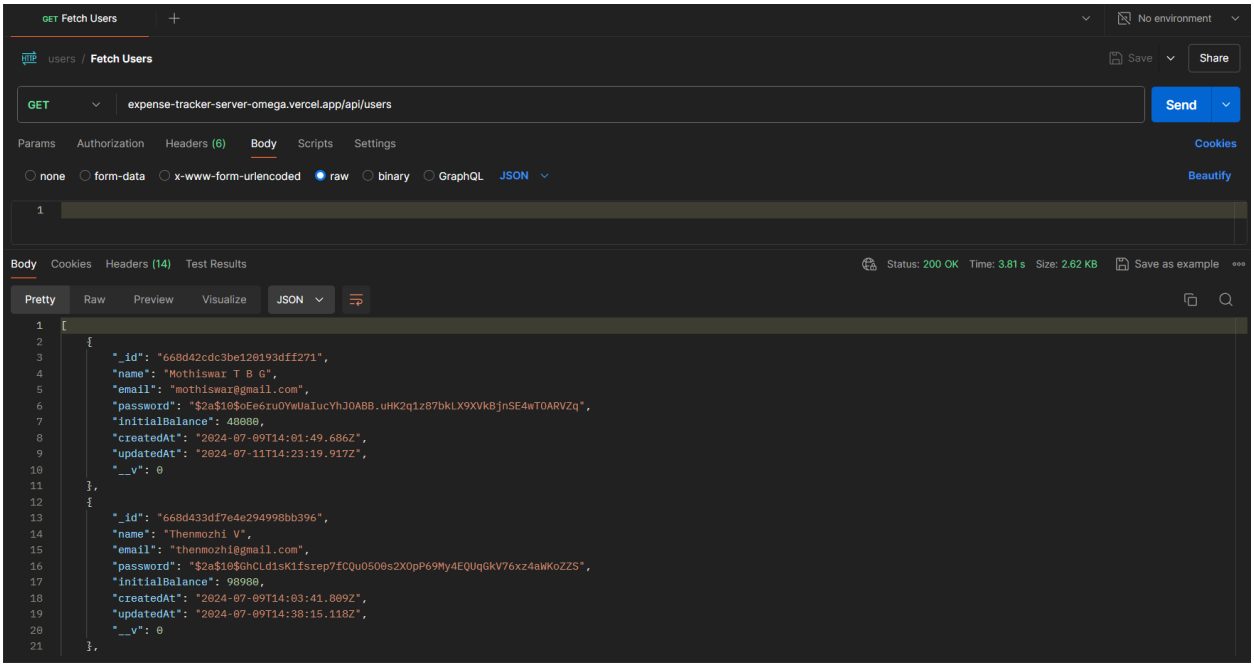
Login: https://expense-tracker-server-omega.vercel.app/api/users/login



Register: https://expense-tracker-server-omega.vercel.app/api/users/register



GetAllUsers: https://expense-tracker-server-omega.vercel.app/api/users



2. Transactions:

Add: https://expense-tracker-server-omega.vercel.app/api/transactions/add

Edit: https://expense-tracker-server-omega.vercel.app/api/transactions/edit

Delete: https://expense-tracker-server-omega.vercel.app/api/transactions/delete

GetAll: https://expense-tracker-server-omega.vercel.app/api/transactions

Github repo link: https://github.com/Mothiswar24/Expense-Tracker-App.git

Deployment link: https://expense-tracker-client-ochre.vercel.app/