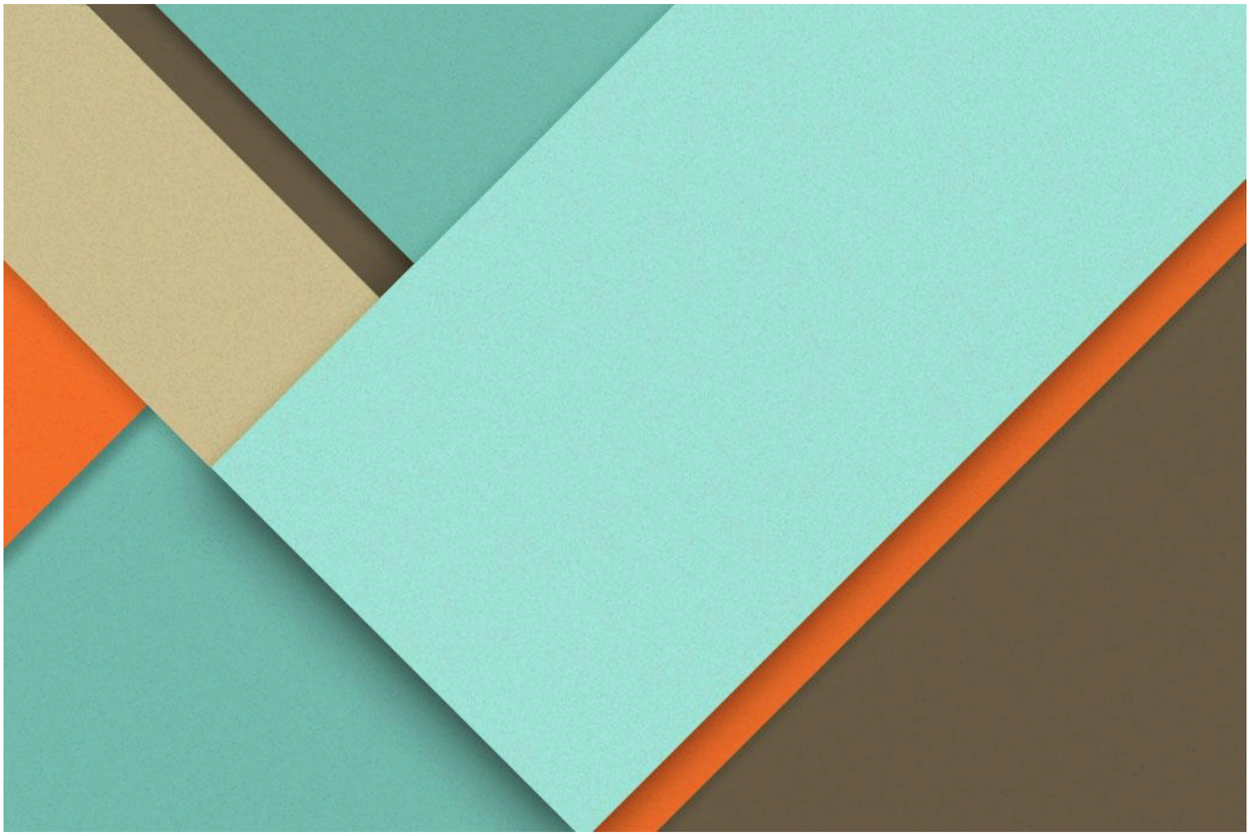

QuadraSystems Weekly Report

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Athish.CK

B-Tech(AI&DS)

Intern-QuadraSystems

Week-1

Goals

1. **Learning Progress**

   This week, I focused on strengthening my foundational knowledge and applied learning to support project development.

   Completed Learning Materials

   - HTML5 – Refreshed core concepts for structuring web content.
   - CSS3 – Studied styling techniques for responsive design.
   - Flexbox & CSS Grid – Practiced modern layout techniques for better UI structuring.
   - JavaScript (ES6+) – Covered essential concepts for React development.
   - React.js – Focused on component-based architecture and state management.
   - MySQL – Learned database design, queries, and integration with Node.js.

2. Starting with the Hands on React Node Js project .

   🔹 Frontend Development (React)

   - Built reusable components (Header, Balance, TransactionList, AddTransaction).
   - Integrated Google Charts for expense visualization.
   - Implemented context API for state management.

   🔹 Backend & Database (Node.js + MySQL)

   - Set up a REST API’s.
   - Connected with MySQL via Node.js.
   - Tested API endpoints with Postman.

Project Specifications & Overview

The Expense Tracker is a full-stack web application built with React (frontend) and Node.js (backend) that enables users to monitor their financial transactions efficiently. The system provides real-time insights into income, expenses, and net balance through an intuitive user interface.

Project Features

1. Transaction Management

- Add Transactions

Input income/expense details (amount, category, description, date).

Form validation for accurate data entry.

- View Transactions

List of all transactions with sorting (date, amount, category).

Search/filter functionality.

- Delete Transactions

Remove unwanted entries with confirmation.

2. Financial Overview

- Real-Time Balance Calculation

Net balance (Income - Expenses).

Total income/expense summaries.

- Dynamic Updates

Automatic recalculation when transactions change.

3. Data Visualization

- Interactive Charts

Pie chart for expense categorization.

4. User Experience

- Responsive Design

Mobile, tablet, and desktop compatibility.

- Intuitive UI

Clean layout with clear action buttons.

Toast notifications for user feedback.

5. Technical Implementation

- Frontend

  React.js with hooks (useState, useContext).

  Google Charts/Chart.js for visualization.

- Backend

  Node.js + Express REST API.

- Database

  MySQL/PostgreSQL database.

Project Progress Steps(Full stack)

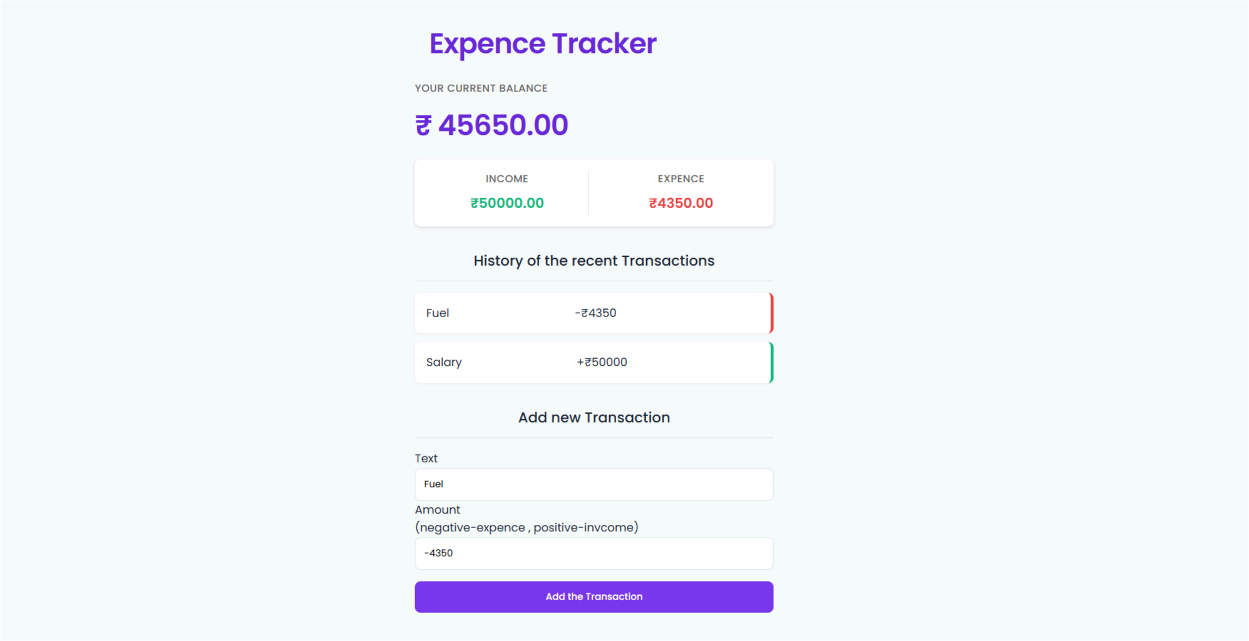
Completed Features:

✓ Transaction Management – Add, delete, and validate financial entries

✓ Real-Time Balance Tracking – Auto-updating income, expense, and net balance

✓ State Management – Context API for seamless data flow

✓ Responsive UI – Clean, mobile-friendly interface



Expence Tracker

YOUR CURRENT BALANCE

₹ 45650.00

INCOME	EXPENCE
₹50000.00	₹4350.00

History of the recent Transactions

Fuel	-₹4350
Salary	+₹50000

Add new Transaction

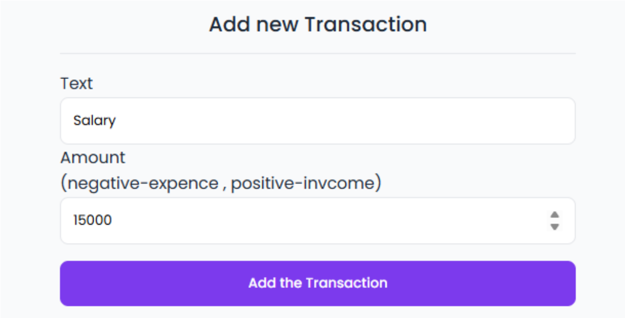
Text: Fuel

Amount (negative-expence , positive-invcome): -4350

This is the beta version of the application .Based on preliminary review by Mr. JothiMurugan, strategic enhancements have been identified to elevate the application's feature set, user experience, and technical architecture in subsequent iterations.

Changes that have been told:

1.Change the Add new transactions as two new buttons as Income and Expense.

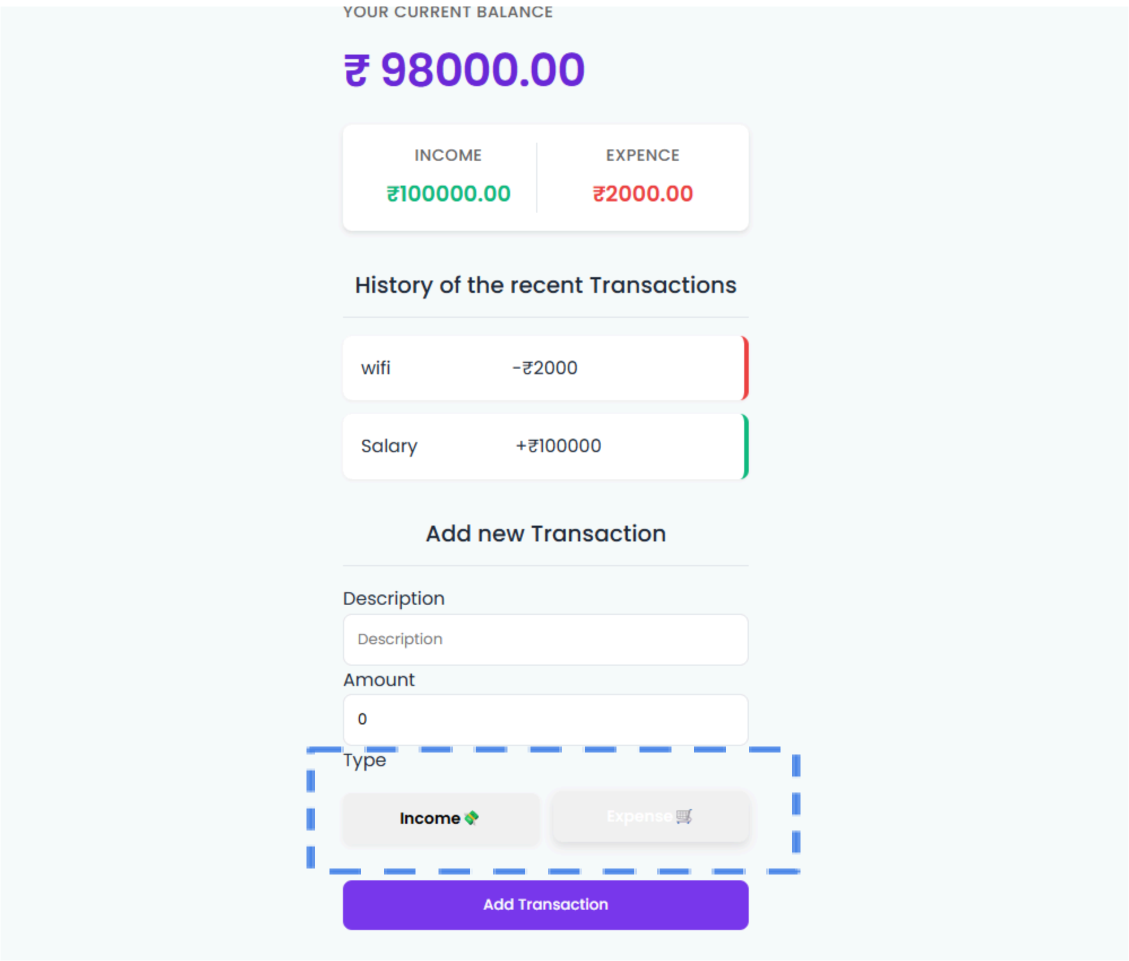


Add new Transaction

Text: Salary

Amount (negative-expence , positive-invcome): 15000

Now after the editing the code we have changed the interface of the project and have taken a new approach



YOUR CURRENT BALANCE

₹ 98000.00

INCOME	EXPENCE
₹100000.00	₹2000.00

History of the recent Transactions

wifi	-₹2000
Salary	+₹100000

Add new Transaction

Description: Description

Amount: 0

Type

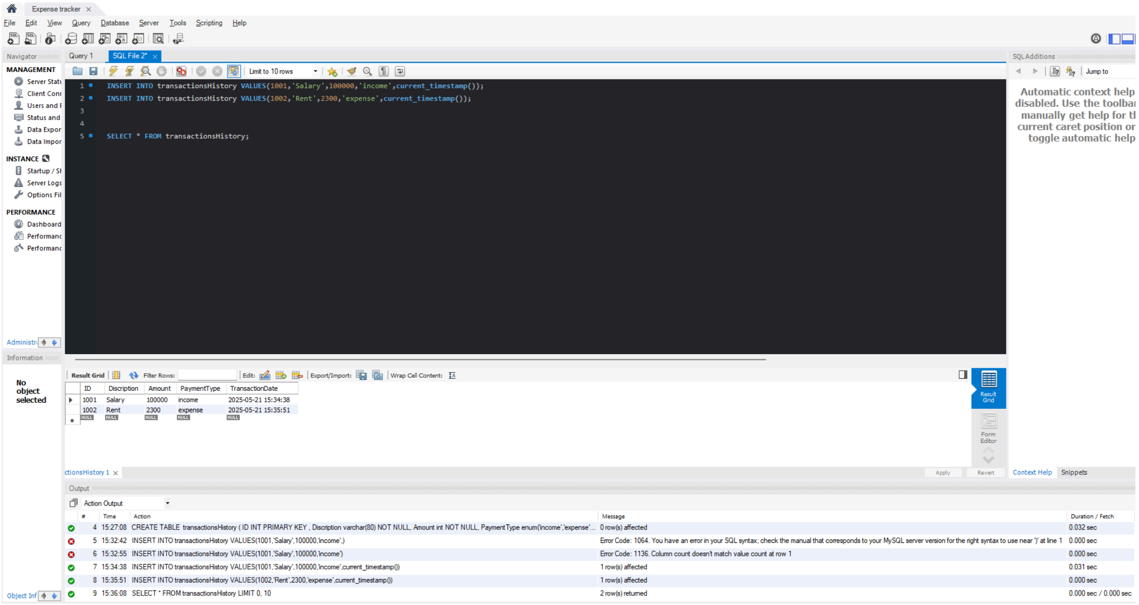
2. Give the exception block for all the input conditions.

3.Connect with the BDMS backend system .

3.1 Connecting with the local DBMS Server

The local MySql server has been created with respect to our Expense-Manager project .

4. Final aligning of the project was done



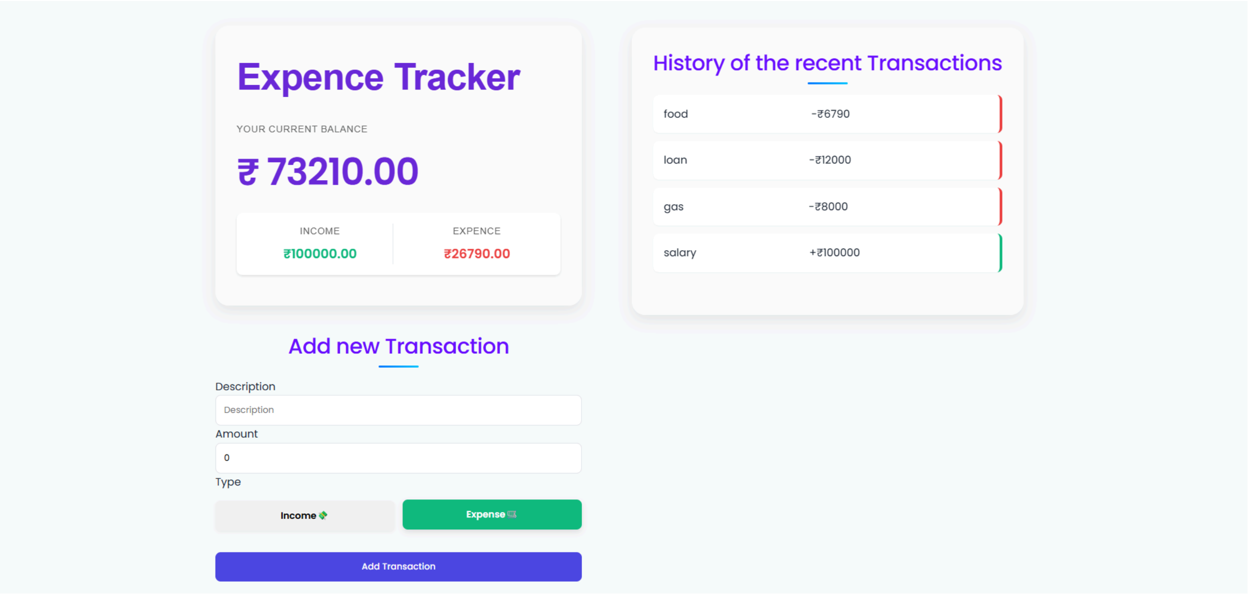
```
INSERT INTO transactionsHistory VALUES(1001,'Salary',100000,'income',current_timestamp());
INSERT INTO transactionsHistory VALUES(1002,'Rent',2300,'expense',current_timestamp());


SELECT * FROM transactionsHistory;
```

Automatic context help disabled. Use the toolbar manually get help for th current caret position or toggle automatic help

ID	Discription	Amount	PaymentType	TransactionDate
1001	Salary	100000	income	2025-05-21 15:34:38
1002	Rent	2300	expense	2025-05-21 15:35:51
NULL	NULL	NULL	NULL	NULL

ctionsHistory 1

```
#  Time      Action                                                                                                              Message                                                                                                                         Duration / Fetch
4  15:27:08  CREATE TABLE  transactionsHistory ( ID INT PRIMARY KEY , Discription varchar(80) NOT NULL, Amount int NOT NULL, PaymentType enum('income','expense'...  0 row(s) affected  0.032 sec
5  15:32:42  INSERT INTO transactionsHistory VALUES(1001,'Salary',100000,'income',)   Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near ')' at line 1  0.000 sec
6  15:32:55  INSERT INTO transactionsHistory VALUES(1001,'Salary',100000,'income')   Error Code: 1136. Column count doesn't match value count at row 1  0.000 sec
7  15:34:38  INSERT INTO transactionsHistory VALUES(1001,'Salary',100000,'income',current_timestamp())   1 row(s) affected  0.031 sec
8  15:35:51  INSERT INTO transactionsHistory VALUES(1002,'Rent',2300,'expense',current_timestamp())   1 row(s) affected  0.000 sec
9  15:36:08  SELECT * FROM transactionsHistory LIMIT 0, 10   2 row(s) returned  0.000 sec / 0.000 sec
```



Expence Tracker

YOUR CURRENT BALANCE

₹ 73210.00

INCOME	EXPENCE
₹100000.00	₹26790.00

History of the recent Transactions

food	-₹6790
loan	-₹12000
gas	-₹8000
salary	+₹100000

Add new Transaction

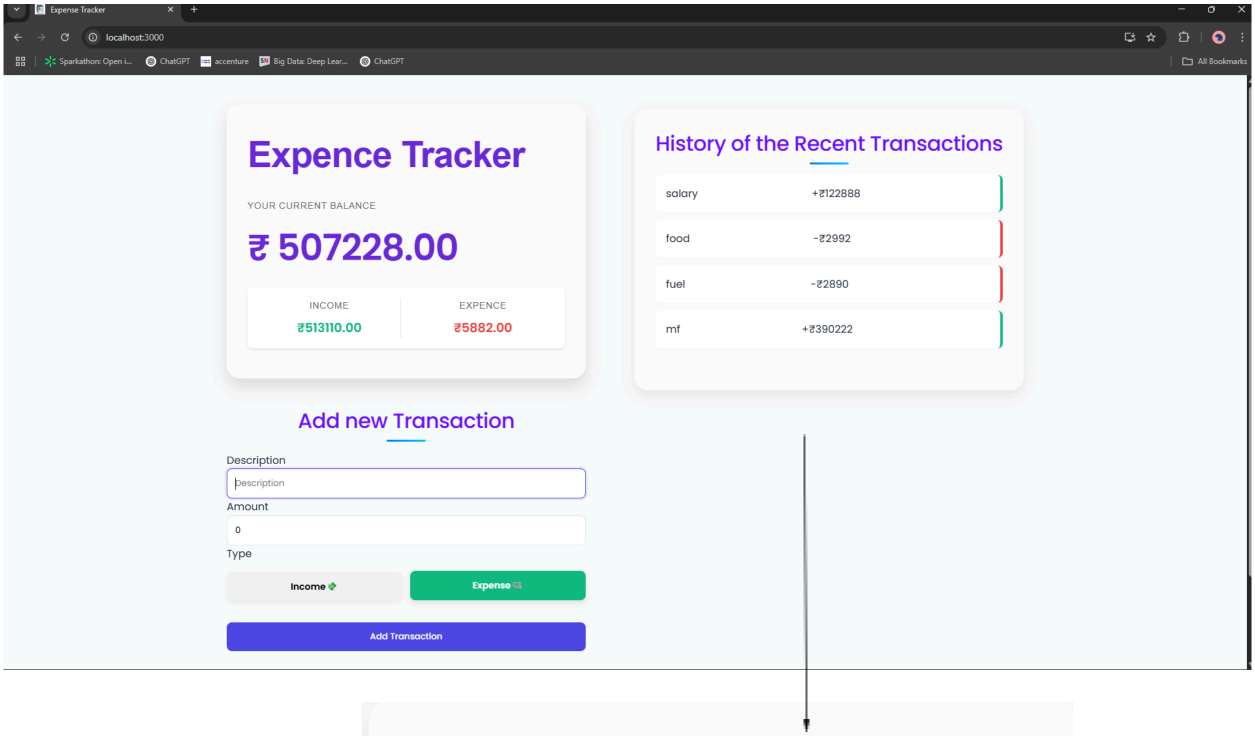
Description: Description

Amount: 0

Type

Connecting with the Back-End

The front-end is connected with the backend with MySQL with the local-server .



Expence Tracker

YOUR CURRENT BALANCE

₹ 507228.00

INCOME	EXPENCE
₹513110.00	₹5882.00

History of the Recent Transactions

salary	+₹122888
food	-₹2992
fuel	-₹2890
mf	+₹390222

Add new Transaction

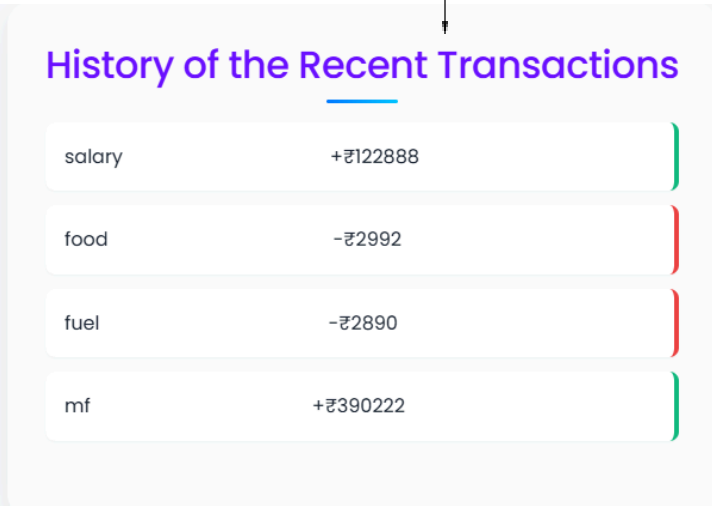
Description

Description

Amount

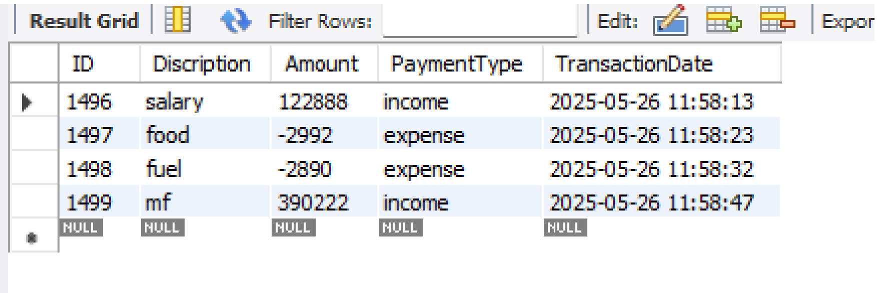
0

Type



History of the Recent Transactions

salary	+₹122888
food	-₹2992
fuel	-₹2890
mf	+₹390222



ID	Discription	Amount	PaymentType	TransactionDate
1496	salary	122888	income	2025-05-26 11:58:13
1497	food	-2992	expense	2025-05-26 11:58:23
1498	fuel	-2890	expense	2025-05-26 11:58:32
1499	mf	390222	income	2025-05-26 11:58:47
NULL	NULL	NULL	NULL	NULL

The data will be inserted directly with the database and all the transactions and calculations will be processed after that.

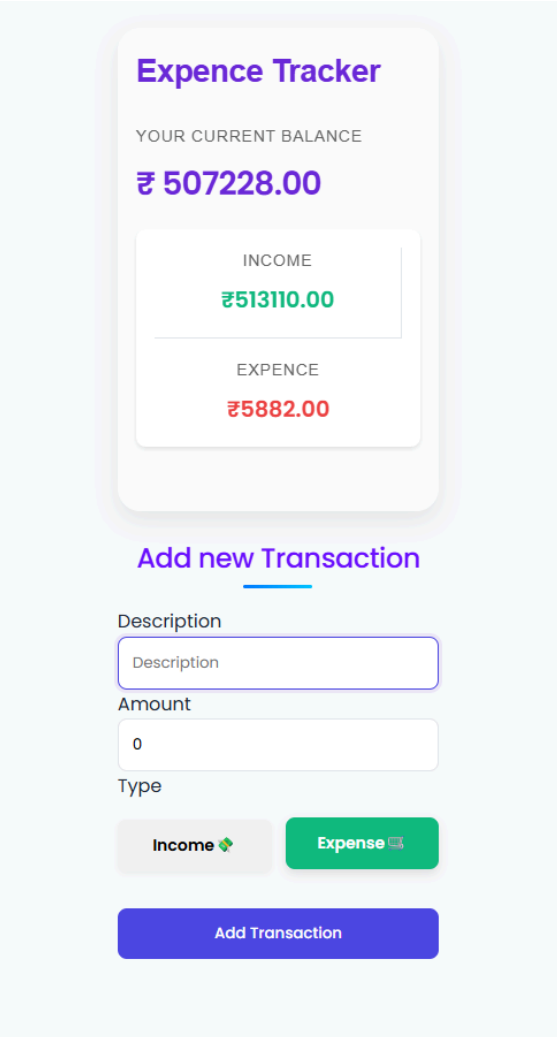
Operations Performed
1. Insertion

2.Deletion

3.Calculations

Changing the orientation of the display wrt to Mobile

To make the application Multi-device compatible the orientations have been edited in such a way .



Expence Tracker

YOUR CURRENT BALANCE

₴ 507228.00

INCOME

₴513110.00

EXPENCE

₴5882.00

Add new Transaction

Description

Description

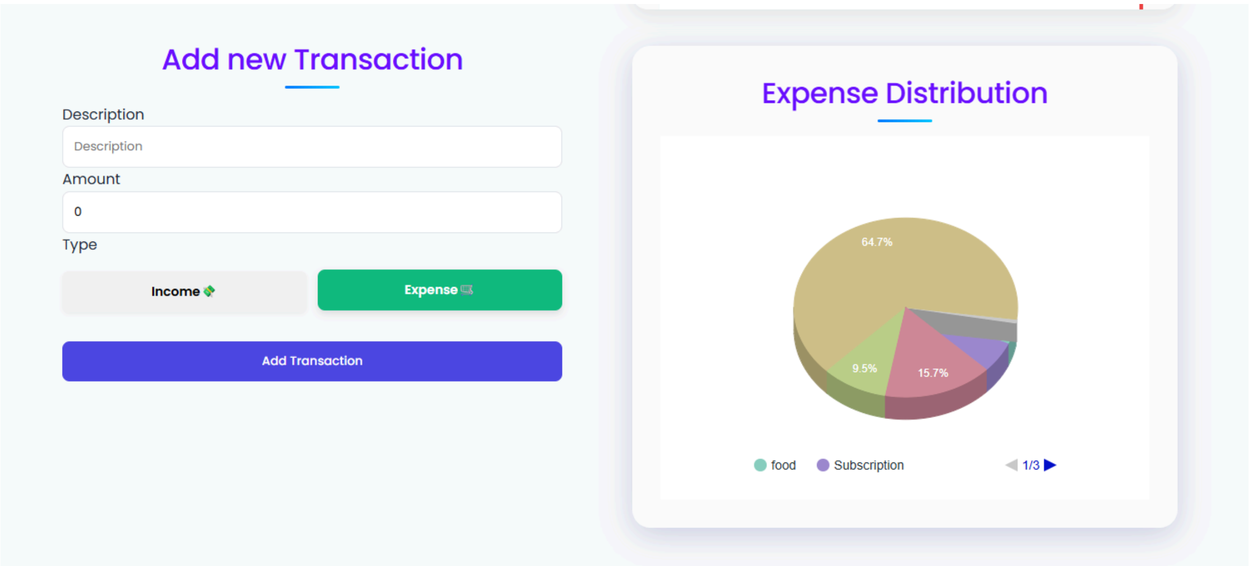
Amount

0

Type

Adding the analysis graph part

We have added the analysis part of the expanses as a pie-chart using Google Charts .



Add new Transaction

Description

Description

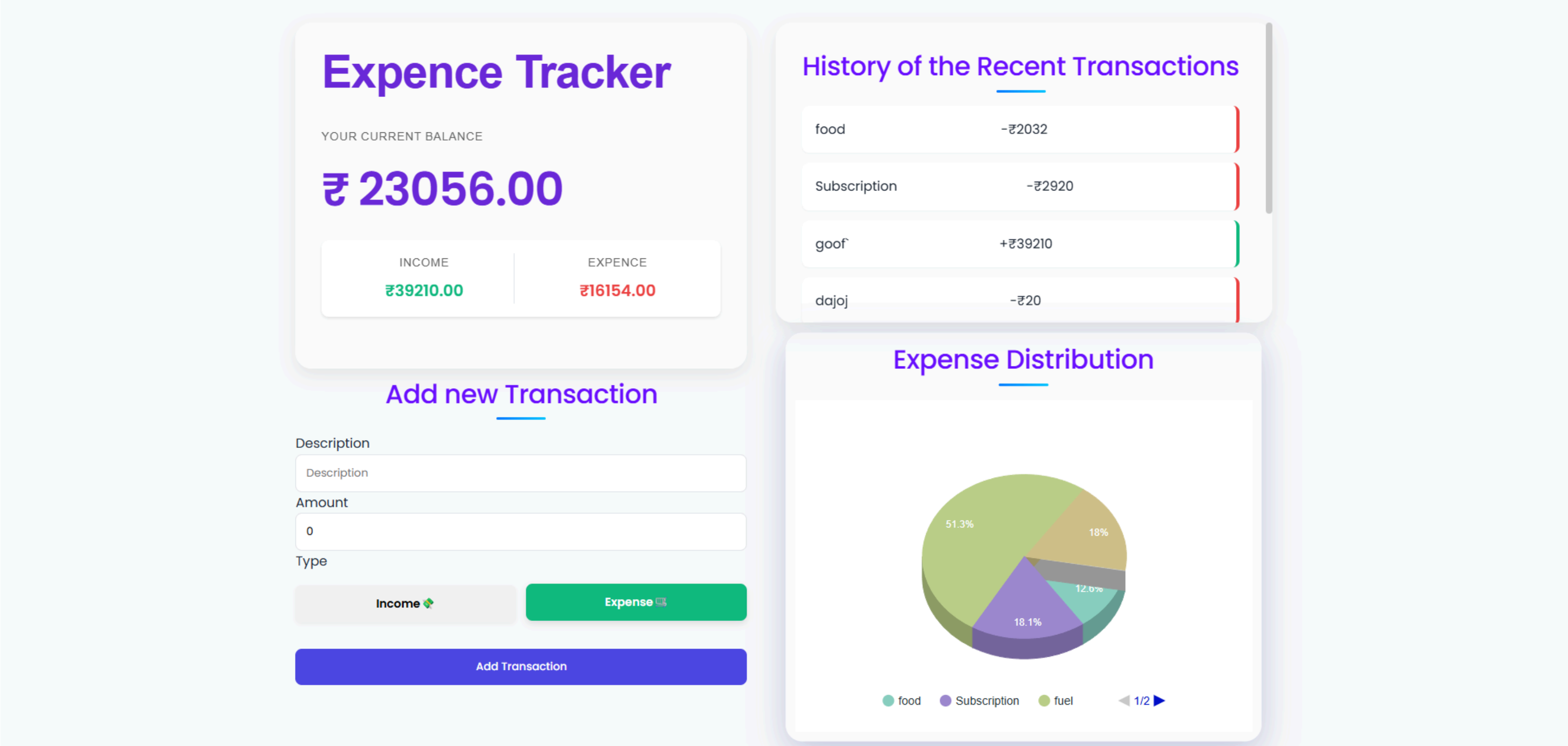
Amount

0

Type

Expense Distribution

Final draft of the webpage



Expence Tracker

YOUR CURRENT BALANCE

₹ 23056.00

INCOME	EXPENCE
₹39210.00	₹16154.00

History of the Recent Transactions

food	-₹2032
Subscription	-₹2920
goof`	+₹39210
dajoj	-₹20

Add new Transaction

Description

Description

Amount

0

Type

Expense Distribution

All the elements in the webpage have been edited and padded according to the exact matches of the webpage. Scrolling has been disabled as all the contents have been fit correctly into the page .

Upcoming Features (Roadmap)

User Authentication & Security

- Secure Signup/Login – JWT-based authentication
- User Profiles – Personalized transaction history

Advanced Transaction Management

- Recurring Payments – Automated bills/subscriptions
- Scheduled Transactions – Future-dated entries

Data Export & Reporting

- PDF/Excel Reports – Export transaction history
- Custom Date Ranges – Filter by week/month/year

UI/UX Enhancements

- Dark Mode – Toggleable color scheme
- Dashboard Widgets – Quick financial insights