

**PERSONAL FINANCE TRACKER REPORT**

**GROUP MEMBERS:**

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**COURSE :**

CS

**COURSE CODE:**

232

**INSTRUCTORS:**

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* **Lab Instructor:**Ma’am Sabahat Gul

***Business Scenario Analysis:***

**Overview:**

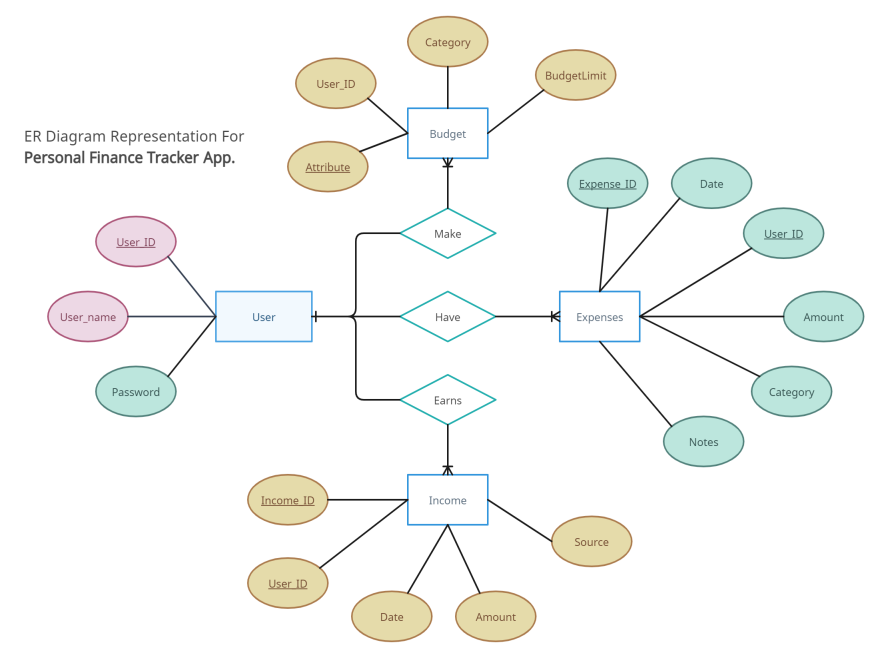
The Personal Finance Tracker app aims to address the need for individuals to effectively manage their finances by providing a comprehensive platform for tracking expenses, income, budgets, and generating financial reports.

**Features:**

* **Expense Tracking:** The expense tracking feature allows users to meticulously record their daily expenses. Users can log expenses such as groceries, utilities, transportation, entertainment, and more..
* **Income Tracking:** By accurately documenting all sources of income, users gain a comprehensive understanding of their financial inflows, enabling them to make informed decisions about budgeting and expenditure.
* **Budgeting:** The budgeting feature empowers users to set budget limits for different expense categories based on their financial goals and priorities.
* **Reporting:** The reporting feature enables users to generate detailed financial

reports that offer valuable insights into their spending and income trends.

***Entity Relationship Diagram (ERD) Design:***

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***Entities:***

* User
* Expenses
* Income
* Budgets

**Relationships:**

One-to-Many relationship between User and Expenses, Income, Budgets entities.

**Attributes:**

* **User:** UserID, Username, Password
* **Expenses:** ExpenseID, UserID (FK), Date, Amount, Category, Notes
* **Income:** IncomeID, UserID (FK), Date, Amount, Source
* **Budgets:**BudgetID, UserID (FK), Category, BudgetLimit

***Relational Database Schema:***

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**Tables:**

1. User (UserID, Username, Password)

2. Expenses (ExpenseID, UserID, Date, Amount, Category, Notes)

3. Income (IncomeID, UserID, Date, Amount, Source)

4. Budgets (BudgetID, UserID, Category, BudgetLimit)

***Data Population:***

**Sample Data:**

* **User:** [UserID: 1, Username: postgres, Password: \*\*\*\*]
* **Expenses:** [ExpenseID: 1, UserID: 1, Date: 2024-05-04, Amount: 1000.00, Category: Trip, Notes: Dinner]
* **Income:** [IncomeID: 1, UserID: 1, Date: 2024-05-04, Amount: 100000.00, Source: Salary]
* **Budgets:** [BudgetID: 1, UserID: 1, Category: Food, BudgetLimit: 50000.00]

***Querying and Reporting:***

**Queries:**

1. **Loading expenses**

cur.execute("SELECT \* FROM expenses")

1. **Adding new expenses**

cur.execute("INSERT INTO expenses (date, amount, category, notes) VALUES (%s, %s, %s, %s)", (date, amount, category, notes))

1. **Editing an existing expense**

query = "UPDATE expenses SET date = %s, amount = %s, category = %s, notes = %s WHERE id = %s"

cur.execute(query, (new\_date, new\_amount, new\_category, new\_notes, item\_id))

1. **Deleting an expense**

cur.execute("DELETE FROM expenses WHERE id = %s", (item\_id,))

1. **Loading income**

cur.execute("SELECT \* FROM income")

1. **Adding a new income entry**

cur.execute("INSERT INTO income (date, amount, source) VALUES (%s, %s, %s)", (date, amount, source))

1. **Editing an existing income entry**

query = "UPDATE income SET date = %s, amount = %s, source = %s WHERE id = %s"

cur.execute(query, (new\_date, new\_amount, new\_source, item\_id))

1. **Deleting an income entry**

cur.execute("DELETE FROM income WHERE id = %s", (item\_id,))

1. **Loading budget**

cur.execute("SELECT \* FROM budgets")

1. **Adding a new budget entry**

cur.execute("INSERT INTO budgets (category, budget\_limit, spent) VALUES (%s, %s, %s)", (category, budget\_limit, spent))

1. **Editing an existing budget entry**

query = "UPDATE budgets SET category = %s, budget\_limit = %s, spent = %s WHERE id = %s"

cur.execute(query, (new\_category, new\_budget\_limit, new\_spent, item\_id))

1. **Deleting a budget entry**

cur.execute("DELETE FROM budgets WHERE id = %s", (item\_id,))

**Reports:**

* Financial Report image in below:

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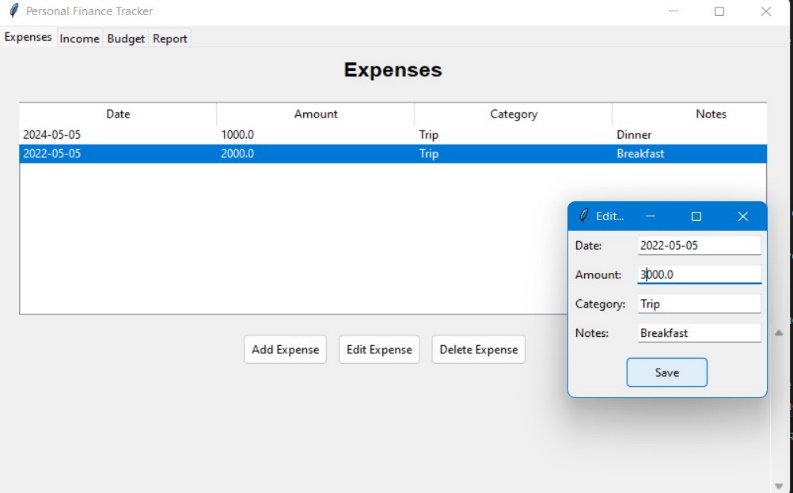
***User Interface:***

(a). Adding the expense as you can see in the image below.

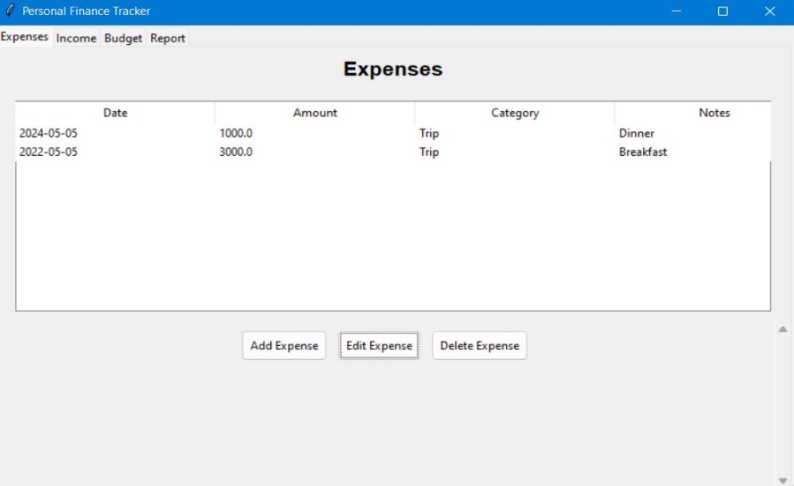
**A screenshot of a computer

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(b). Editing the expense.



(c).The value of expense is edited from 2000 to 3000.

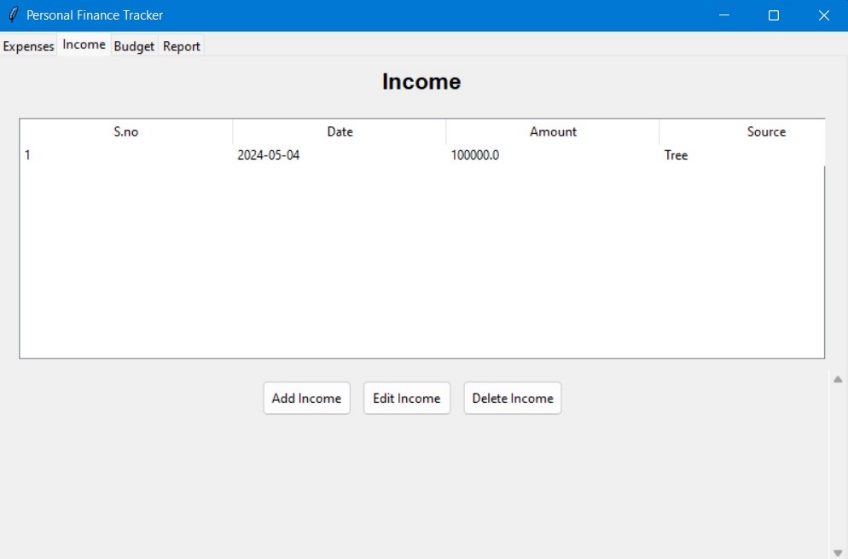


(d). Deleted the expense.

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(e). Added the income as you can see in the image below.



(f). Adding the budget as you can see in the image below.

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(g). Financial Report is generated in the image below.

A screenshot of a computer

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A screenshot of a computer

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(h). Exported Financial Report.

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