

EXPENSE AND BUDGET TRACKER SYSTEM USING PHP AND MYSQL

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ABSTRACT

This paper presents the development and implementation of an Expense and Budget Tracker system using PHP and MySQL. The system is designed to help users manage their personal finances by tracking income, expenses, and generating reports for better financial planning. The development process, system architecture, and functionalities are discussed in detail. The system aims to provide a user-friendly interface with robust features to ensure efficient financial management.

I. INTRODUCTION

Managing personal finances is crucial for maintaining financial health and achieving financial goals. An effective Expense and Budget Tracker system can assist individuals in monitoring their spending habits, planning budgets, and making informed financial decisions. This paper outlines the creation of such a system using PHP and MySQL, focusing on its architecture, design, and implementation.

System Requirements

Functional Requirements

- 1. User Registration and Authentication:** Users must be able to create accounts and log in securely.
- 2. Income and Expense Management:** Users should be able to record their income and expenses with relevant details.
- 3. Category Management:** Users should categorize their transactions for better organization and reporting.
- 4. Budget Setting:** Users must be able to set monthly or yearly budgets.
- 5. Report Generation:** The system should generate reports on spending, income, and budget adherence.

Non-Functional Requirements

- 1. Security:** Ensure data privacy and protection through secure authentication and data handling practices.
- 2. Usability:** The system should be user-friendly and intuitive.
- 3. Performance:** The system must handle multiple users and transactions efficiently.
- 4. Scalability:** The system should be scalable to accommodate an increasing number of users and data volume.

System Architecture

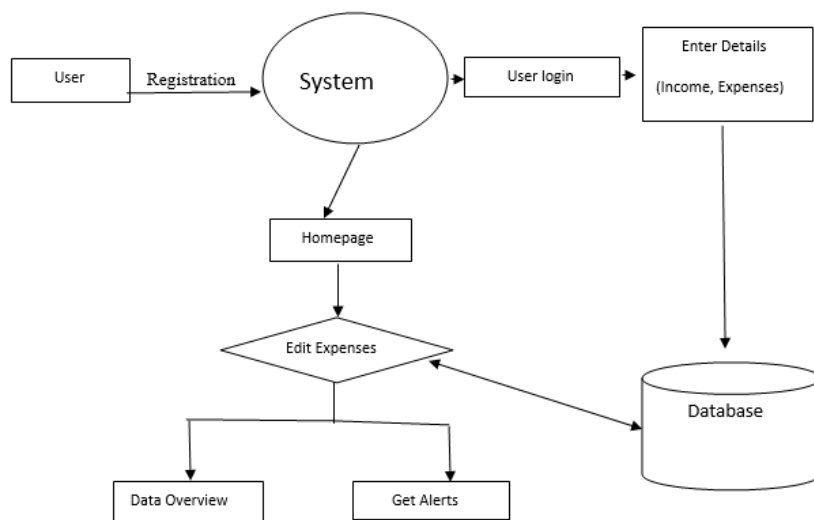


Fig.1 Data Flow Diagram

The system architecture consists of a client-server model, where the front end is developed using HTML, CSS, and JavaScript, and the back end is managed with PHP and MySQL.

Front-End

- **HTML/CSS:** Used for the basic structure and styling of the web pages.
- **JavaScript:** Used for client-side validation and dynamic content rendering.

Back-End

- **PHP:** Handles server-side logic, form submissions, session management, and interaction with the database.
- **MySQL:** Used as the database management system to store user data, transactions, and budgets.

Database Design

The database consists of several tables to store user information, transactions, categories, and budget details. Key tables include:

1. **Users:** Stores user credentials and personal information.
2. **Transactions:** Records all income and expenses with fields for amount, date, category, and description.
3. **Categories:** Stores different categories for transactions such as Food, Transportation, Utilities, etc.
4. **Budgets:** Contains budget limits set by users for different categories and time periods.

Implementation

User Registration and Authentication

Users can register by providing a username, email, and password. Passwords are hashed before storage to enhance security. Upon registration, users can log in using their credentials, with session management ensuring secure access to personal data.

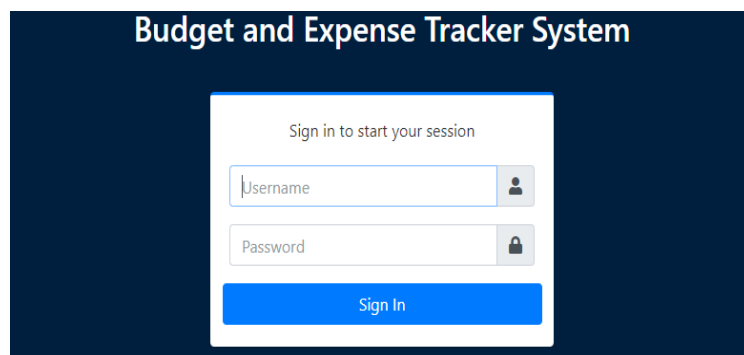


Fig.2 Login Page

Income and Expense Management

Users can add transactions by entering the amount, selecting a category, and providing a description. Each transaction is stored in the database linked to the user's account.

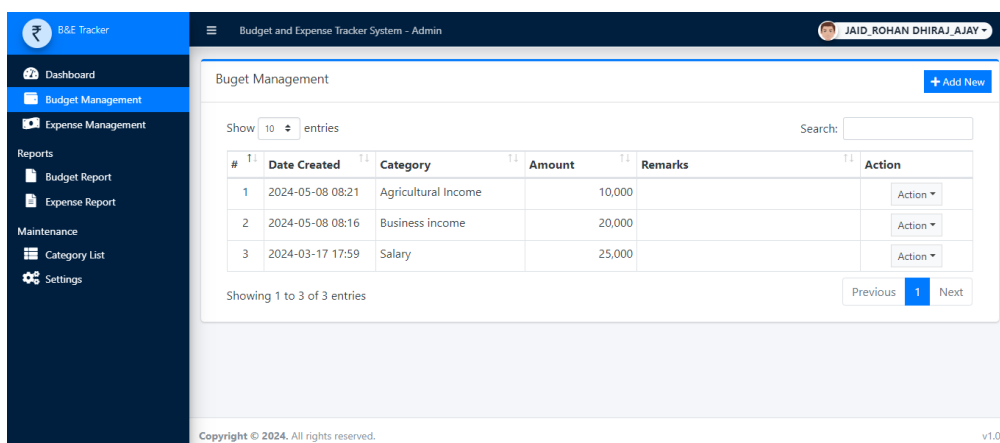
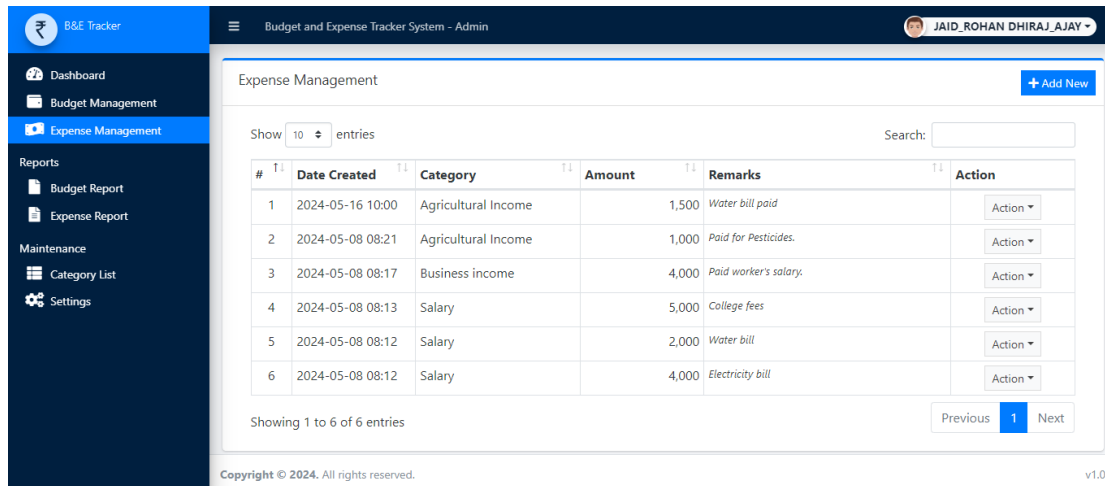


Fig.3 Budget Management Tab

Budget Setting

Users can set budgets for different categories and time periods. The system allows users to monitor their spending against these budgets and receive alerts when nearing or exceeding limits.



#	Date Created	Category	Amount	Remarks	Action
1	2024-05-16 10:00	Agricultural Income	1,500	Water bill paid	Action
2	2024-05-08 08:21	Agricultural Income	1,000	Paid for Pesticides.	Action
3	2024-05-08 08:17	Business income	4,000	Paid worker's salary.	Action
4	2024-05-08 08:13	Salary	5,000	College fees	Action
5	2024-05-08 08:12	Salary	2,000	Water bill	Action
6	2024-05-08 08:12	Salary	4,000	Electricity bill	Action

Fig.4 Expense Management Tab

Report Generation

The system generates various reports to help users understand their financial status. Reports can include spending summaries, income versus expenses, and budget adherence.

Security Considerations

To protect user data, the system implements several security measures:

- Password hashing using bcrypt.
- Prepared statements to prevent SQL injection.
- HTTPS to secure data transmission.

II. CONCLUSION

The Expense and Budget Tracker system developed using PHP and MySQL offers a comprehensive solution for personal financial management. By enabling users to track income, expenses, and set budgets, the system aids in better financial planning and control. Future enhancements could include integrating mobile applications and providing advanced data analytics for deeper financial insights.

III. REFERENCES

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