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Splitit: Group And Personal Finance Tracker

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***Abstract**:* People do not have track on their monthly expenses and receivables and they do not have any control on what they spend. Developing an website which will be able to keep track on expenses and receivables can solve this problem. To manage our monthly expenses we designed a website. Whatever we spend monthly or daily will be recorded in this website. And it is used to manage our monthly expenses. User can enter their limited budget of the entire month in this website where when the user exceeds their given budget in the respective month will be notified through this website. SplitIt is a web application designed to manage and streamline expense sharing within groups i.e. Group expense sharing. It enables users to track their contributions to group expenses, manage monthly income, and monitor individual spending patterns. The platform efficiently calculates and displays "who owes whom and by how much," simplifying the often complex process of splitting costs among multiple participants. Additionally, SplitIt offers users the ability to track their own monthly or yearly expenses, providing a comprehensive view of personal finances, Personal expense tracking. Through these features, the application aims to help users manage expenses more effectively and transparently.

Keywords: Group expense sharing, Personal finance tracking

I.INTRODUCTION

In today's fast-paced world, managing shared expenses efficiently has become a necessity, especially among friends, roommates, and colleagues. The Split-It App is designed to simplify the process of splitting expenses among multiple users, ensuring transparency and ease of financial management. Inspired by the functionality of apps like Splitwise, Split-It enables users to track group expenses, calculate individual shares, and settle payments seamlessly. The app allows users to create groups, add expenses, and automatically divide costs based on predefined rules, such as equal split or custom distribution. With a user-friendly interface and real-time updates, Split-It ensures that users always have a clear view of their financial contributions and dues. The system keeps track of who owes whom, reducing the need for manual calculations and awkward money-related conversations. Built using PHP and MySQL, the Split-It app provides secure user authentication, group management, and efficient handling of financial records. The backend efficiently processes expense data, while the frontend presents an intuitive dashboard where users can view pending balances, add new expenses, and settle dues effortlessly.

The system also generates reports, helping users keep track of past transactions and settlements. To further enhance usability, SplitIt incorporates features like expense history tracking, notifications for pending payments, and an integrated payment system for direct settlements. Whether it's splitting rent among roommates, sharing restaurant bills with friends, or managing group travel expenses, the app ensures smooth and hassle-free transactions. By implementing a robust and scalable architecture, Split-It aims to provide a seamless experience for users looking to simplify their expense management. The SplitIt ensures data security, transaction integrity, and accuracy in expense calculations, making it an essential tool for group financial coordination. SplitIt not only eliminates confusion regarding shared expenses but also fosters better financial transparency among users. With its easy-to-use interface, automated calculations, and secure transactions, it serves as a one- stop solution for managing and settling group expenses efficiently.

II. PROPOSED SYSTEM

The proposed SplitIt Expense Sharing System focuses on creating a secure, automated, and user-friendly platform to track and settle shared expenses efficiently. The system will integrate expense tracking, automated calculations, debt minimization, and reporting to ensure seamless financial management among groups. Users will be able to add expenses by specifying the total amount, payer, date, and description. Once an expense is added, the system will automatically update each member's share and outstanding balance, ensuring accurate financial records. Instead of multiple individual transactions, the system will suggest optimal settlements, allowing users to balance their debts in the most efficient way possible. This feature ensures that fewer transactions are needed, making it easier for group members to settle expenses. The system will allow users to create groups, invite members, and manage expenses collectively. A dashboard will summarize monthly and yearly expense trends, helping users analyze their spending patterns over time. The system will be designed for scalability and high performance. Optimized database queries will allow the system to handle large groups efficiently. The user interface will be fully responsive, providing a seamless experience on desktops, tablets, and mobile devices. The proposed Split Expense Sharing System will offer a transparent, automated, and user-friendly solution for managing shared expenses. By integrating automated calculations, smart debt settlements, and detailed reporting, the system will eliminate financial confusion and make cost- sharing simple and hassle-free.

III. WORKING PRINCIPLE

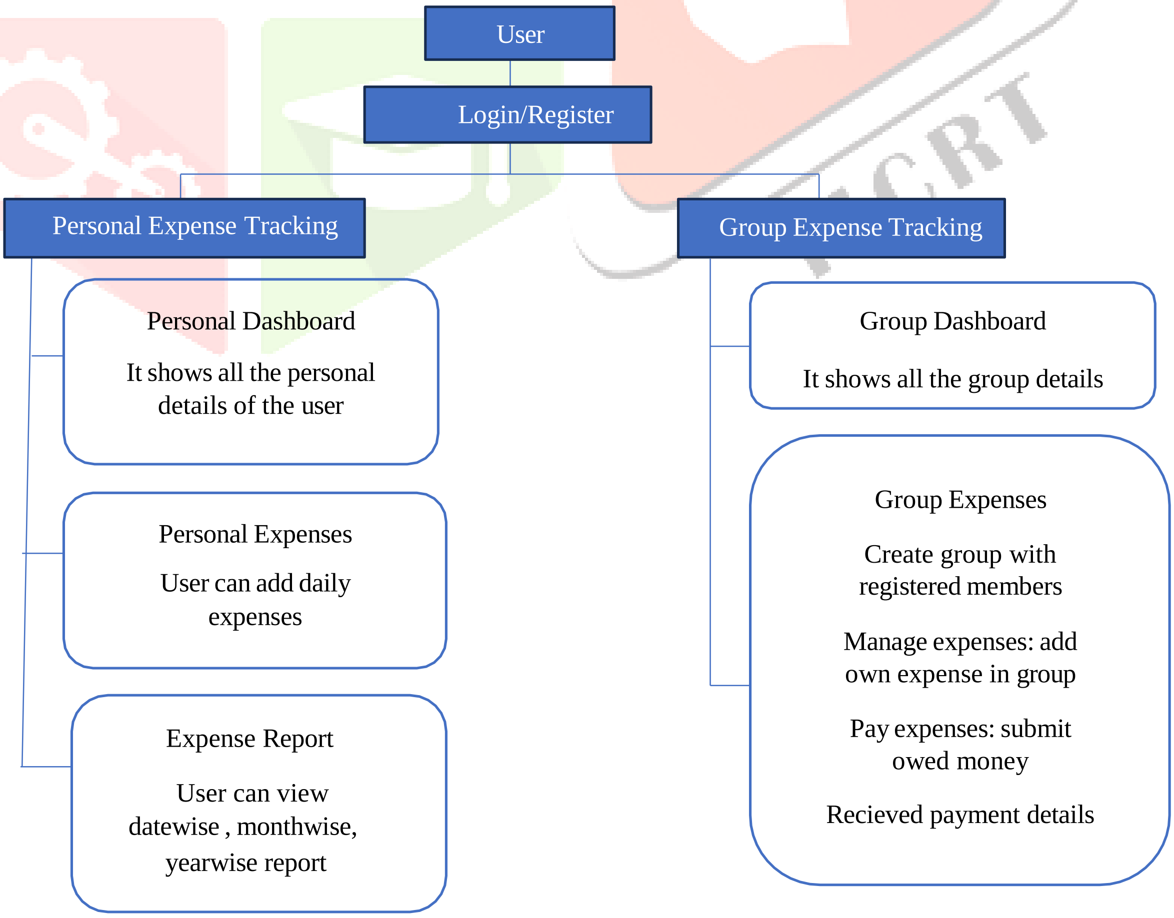

Fig. Flow Chart

1. User Registration & Login: New user registration by providing their email, phone number, password and other basic details. Existing users log in using their registered credentials. Authentication ensures secure access to personal and group financial data.
2. Personal Dashboard: Users access a personalized dashboard displaying their financial summary. It shows total expenses and spending trends. Personal Dashboard shows all the personal expense details of the person. Like Today's Expense, Yesterday's Expense, Last 2 Days Expense, Last 30 days expense etc.
3. Personal Expenses: Users can add daily or monthly expenses, categorizing them (e.g., food, rent, travel). The system tracks all expenses along with detailed information. Expense Entry: For every logged expense, the user can specify the amount, category, and date of the expense. This data is stored in the backend for future analysis.

4. Expense Report (Date-wise, Month-wise, Year-wise): The system generates detailed expense reports, helping users analyze their spending patterns. Reports can be filtered by date (daily, monthly, yearly) to track financial trends. Users can view these reports to manage their budgets more effectively.
5.Group Dashboard
- Create Group: Users can create or join groups for shared expenses (e.g., roommates, friends, colleagues).
- Receive Notification: After creation of group by one user it will notify other group members that they are added in a particular group.
- Manage Group: A group dashboard displays all shared expenses and calculates individual contributions. The system determines "who owes whom and how much," making it easier to split bills.
- Pay Expenses: Members can track pending settlements and update payments accordingly. For transparency among group members there is facility to upload screenshots.
- Received Payment Details: It includes balance which is received from group members along with screenshots.

6. Data Storage and Security
- Database Management: All expense data, user information, and financial reports are securely stored in a backend database.
- Encryption: Personal financial data and sensitive information are encrypted to ensure the user's privacy and security.

IV. CONCLUSION

The Split Expense Sharing App successfully provides a seamless and efficient way for users to manage shared expenses within groups. By automating expense tracking, contribution calculations, and balance settlements, the system ensures fairness and transparency in financial transactions. The real-time balance updates and payment settlement features help users keep track of their dues and avoid confusion. With a user-friendly interface, secure authentication, and a well-structured database, this system enhances convenience in splitting expenses, making group financial management hassle-free. Future enhancements could include integrating payment gateways and AI-based expense analysis for better financial insights.

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