

*DEPARTMENT OF SOFTWARE*

*ENGINEERING*

***MAD’s Project Report***

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# Expense Tracker App Project Report

**Real-World Problem**

In today's fast-paced world, individuals and businesses face the challenge of efficiently managing their expenses. Tracking and categorizing expenses accurately is crucial for maintaining financial health and making informed financial decisions. Traditional paper-based or spreadsheet-based methods may be cumbersome and prone to errors. A digital solution is needed to simplify expense tracking, enhance accuracy, and provide valuable insights into spending habits.

**Solution**

**Expense Tracker App**

The Expense Tracker App is designed to address the problem of expense management efficiently. It offers a user-friendly and intuitive interface that allows users to:

* **Add Expenses:** Users can easily input details about their expenses, including the date, description, and amount.
* **Categorize Expenses:** Expenses can be categorized into different categories such as food, transportation, utilities, entertainment, and more.
* **View Expense History:** The app provides a history of all recorded expenses, making it easy for users to track their spending over time.
* **Generate Reports:** Users can generate reports that provide insights into their spending habits, helping them make informed financial decisions.
* **Data Persistence:** Expense data is stored persistently, ensuring that users can access their data even after closing the app.

**Database Information**

The Expense Tracker App uses a SQLite database to store and manage expense data. Key database details include:

* **Database Schema:** The database schema consists of tables for storing expense records, including fields for date, description, amount, and category.
* **Data Persistence:** SQLite ensures that user data is securely stored and accessible across app sessions.

**Issues and Bugs**

During the development of the Expense Tracker App, several issues and bugs were encountered, including:

1. **Input Validation:** Ensuring that user input is valid and handles edge cases, such as negative amounts or invalid dates, required careful consideration.
2. **User Experience:** Designing an intuitive and user-friendly interface to facilitate expense tracking for users of varying technical expertise posed a design challenge.
3. **Performance:** As the database grows with time, optimizing database queries and improving app performance became a priority.

**Conclusion**

The Expense Tracker App project provides a valuable solution to a real-world problem by simplifying expense management and offering insights into spending habits. It leverages a SQLite database for data storage and handles various challenges related to user input validation, data synchronization, and performance.

This project demonstrates the practical application of mobile app development skills using Flutter and offers a useful tool for individuals and businesses to better manage their finances.