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A Survey on Expense Tracker Mobile Application

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Abstract - Expense trackers are smartphone apps that keep track of a user's spending and provide a detailed picture of their daily, monthly, or annual spending. This study looks into spending tracker apps that are deficient in terms of user experience and data collection.
The proposed expense tracker will provide a better experience for the user by incorporating information from text messages about financial transactions such as debit and credit of his/her funds. The user can also enter an initial budget for a week, month, or year, and the expense tracker will keep him up to date or alert him if his expenses exceed his weekly, monthly, or yearly budget.

Key Words: Android, MongoDB, Flutter, Cross-platform, Cloud backup, Expense Manager, Budgeting Tools, Financial Planning, Expense Tracker, Money management.

1. INTRODUCTION

Flutter is a Google open-source framework for creating multi-platform, natively built applications from a single codebase.[1]

MongoDB is a cross-platform document-oriented database application that is open source. MongoDB is a NoSQL database application that works with JSON-like documents and optional schemas.[2]

The Android SDK is a software development kit that offers a wide range of programming tools. A debugger, libraries, a handset emulator based on QEMU, documentation, sample code, and tutorials are among the tools available.[3]

The goal is to create an expense tracker flutter application that can be used on both iOS and Android platforms that accepts automated input from the text message inbox after a successful transaction is received.

2. RELATED WORKS

The application "Walnut" has similar functionality in that it keeps track of user costs and generates detailed reports based on the type of user expense [4]. Walnut requires credit/debit card information from users in order to keep track of their spending. [3] The application “Money Manager” makes managing personal finances as easy as pie! Now easily record your personal and business financial transactions, generate spending reports, review your daily, weekly and monthly financial data and manage your assets with Money Manager's spending tracker and budget planner.[5]

The following are the features of the app "Expense Manager": Keeping track of spending and incomes Split Transaction - In a single transaction, record all items with varied categories and amounts. Expenses and revenue that occur on a regular basis, Multiple accounts, snapping a picture of a receipt, monitoring tax, tracking mileage, tracking debts, and using a credit card are all things that may be done with a credit card. [8]

The application "Expense Manager" is a straightforward, user-friendly, stable, and feature-rich app created specifically for you. Everything you need to keep track of your spending, cheque book, and budgeting is there at your fingertips. Money Manager makes personal financial management a piece of cake! With Money Manager's spending tracker and budget planner, you can effortlessly record personal and company financial transactions, generate expenditure reports, evaluate your daily, weekly, and monthly financial statistics, and manage your assets. [6]

The application "Daily Expense: Expense Manager" allows users to conveniently and swiftly track and manage daily costs. With this finest cost manager software, you can quickly manage your revenues, expenses, daily cash, bills, and more. [7]

My Money Manager is an app that allows you to keep track of your income, expenses, and savings. Attractive graphs that display your earnings and savings that can genuinely help you track and save your hard-earned money. [9]

3. PROBLEM STATEMENT

Traditional cost tracker methods involved bookkeeping methodologies or keeping track of their expenses in MS-excel workbooks, which are insecure due to the possibility of losing the excel workbook file or the ledger.

Existing applications, however, have overcome the difficulty of the traditional expense tracker methodology's lack of offering a nice user experience and preserving user data in a secure manner by requesting sensitive information such as the user's credit/debit card information.

4. PROPOSED SYSTEM

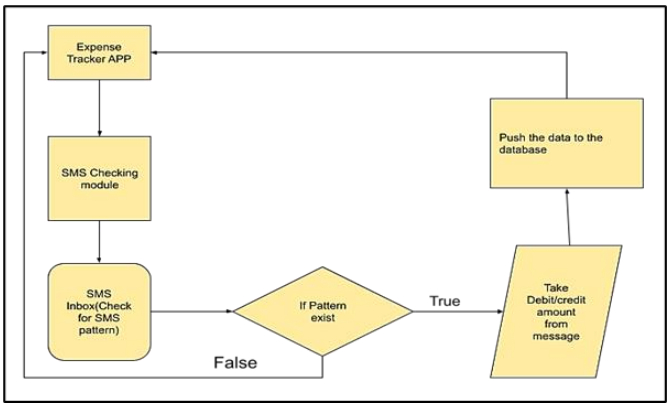

Figure 1: System Architecture

Figure 1 shows the system architecture, which employs the flutter framework for routing and Java in the backend to perform logical operations and store user expense data in the database. To access his spending manager, the user must input his four-digit pin. [10-24]

Telephony.Sms.Inbox

The Inbox Android API is used to check for bank statement messages that are sent to the user's inbox on a regular basis. This android API will allow the app to read the user's inbox SMS and, if necessary, accept expense input automatically. [3]

The org.eazegraph.lib.charts.PieChart module is used to create the pie chart of user costs that will be displayed on the application's home screen.[4]

If the user's weekly, monthly, or annual budget is exceeded, an alert will be issued to him.

5. CONCLUSION

In this article, surveyed at different apps and methodologies for tracking user expenses. This allows us to comprehend the drawbacks of the current spending tracking smartphone application.

The proposed solution offers a nice user interface, does not ask for sensitive information such as credit card numbers, and provides a cloud backup of the user's data in the form of a .csv file.

6. FUTURE SCOPE

The following are some future features that could be added to the suggested solution in future:

- Providing shared ledger maintenance
- Adding a crypto wallet function
- Providing a checklist to write down the payments that have been made or that will be made in the near future.

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