Expense Tracker

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***Abstract*—This research paper presents a case study of an automated system for managing business expenses, payments, and registrations. The key goals of the project, which are to automate the business process, reduce the cost of collecting management data, and provide accurate and detailed management information. The distribution of your income can be visualised by real-time functioning charts that update in accordance with your transactions and that also include a section for expenses where you can enter similar transactions regarding the source, amount, and date of your expenses by utilizing MERN stack. A variety of chart for the distribution of expenses will be made in real time when such a transaction is initialised.**

Keywords—Real-time functioning, Expenses, MERN stack, Chart.

I. INTRODUCTION

A case study of an automated system for controlling corporate expenditures, payments, and registrations is presented in this research article. The project's main objectives are to deliver precise and in-depth management information, automate the business process, and lower the cost of management data collection. The different sources of income can be combined, and the distribution of your income is then shown by real-time functioning charts that update in response to your transactions. It also includes a category for expenses where you can enter similar transactions regarding the source of your expenses, their amount, and their date using MERN stack. A different chart for the distribution of expenses will be made in real time when such a transaction is created.

All things considered, an expenditure tracker app is a necessary tool for everyone who wishes to manage their money and keep track of their spending. It offers a straightforward method for managing finances, putting money aside, and achieving financial objectives.

The application enables users to keep track of their spending over time, log their expenses, and categorize them. The app's objective is to give users better financial awareness so they may make wiser financial decisions.

II. LITRATURE SURVEY

A. Velmurugan et al *2020* J. Phys.: Conf. Ser. ***1712*** *012039*

The work in this paper is focusing on multi-purpose finance related android application using Android studio, Kotlin, Java and SQLite with specific implementations of Android OS and Figma Designing tool The methods in this paper one needs to give SMS read permission to the app since the whole idea of the app revolves around the transactions made online. The methods in this paper includes that It asks for the user's budget for investment. Accordingly the app suggest the best suitable option using the help of the algorithm designed. The limitations or research gaps in the research manuscript is focusing on the single dataset from single user. It can be elevated to multiple datasets from multiple locations or regions. The data set is small and it can be escalated.

B. M N Rajaprabha 2017 IOP Conf. Ser.: Mater. Sci. Eng. ***263*** *042050*

This research paper discusses the mobile stage's recent transformation into a unique, creative advancement, particularly in the PDA and tablet feature spaces. This Synthesis presentation is a guide for the most recent developments of the essential small stages that are in the flexible stage business. The paper discusses the three currently popular local platforms, iOS, Android, and Windows Phone, together with the browser-friendly HTML5 device stage. The operating system for Android is completely open source and available to everyone. This report also identifies many difficulties overcome by designers of Android apps.
There are several apps available right now to track and maintain track of our spending such as spendbook, pocketgraud, homebudget, Wally, level money, spendee, every dollar, and so on. Our financial information is displayed extensively in these programme panels, and we can study the spending from them.
All of such applications only have records of paid bills. This functions like a diary and saves the bills that you and your family have paid or are still owing. The status of our bill can be noted. This is appropriate for middle class individuals who consistently avoid settlements and purchase items on credit.

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This research paper focuses that people are concerned about regularity of their daily expenses and this is done mostly to

maintain tabs on users' daily expenses so that monthly expenses can be controlled. In order to help users manage their everyday expenses in a more organised and manageable manner, they created the "Expense Tracker Application" android app.

At the end of the month, the expense tracker programme will provide a report that displays expenses graphically. We have also included a unique tool that will divide your spending into user-friendly categories. Moreover, a cost history will be included in the application.

This application will have a two-tier architecture, with the database tier housing all of the personal and financial information. The user interface, which will help the application's user communicate with the system and also store information in the system, will come in second.

III. EXISTING SYSTEM

The expense tracker's current approach only works with desktop software, therefore it cannot offer the user any kind of portable device control. Update everywhere expenses done and unable to disrupt the proposed system's provision of location-based spending details. Currently, we need to keep track of the user's daily, weekly, and monthly costs in Excel sheets and CSV files. There is currently no such comprehensive way to conveniently keep track of daily costs. To do this, one must maintain a journal in a diary or computer system, and all calculations must be made by the user, which might occasionally result in errors that cause losses.

The spending tracker's current design only supports desktop software, so it is unable to give users any sort of management via mobile devices. Update all expenses completed and unable to interfere with the proposed system's delivery of location-based spending information. The user's daily, weekly, and monthly expenses must currently be recorded in Excel sheets and CSV files. Currently, there isn't a comprehensive approach to easily keep track of daily expenses. This requires the user to make all computations and keep a journal in a diary or computer system, which occasionally leads to errors that result in losses.

IV. PROPOSED METHODOLOGY

User can make their profile and there in the Dashboard past and current expenses,lended money detail along with borrowed money, savings etc. will be shown with graphs and neccesary details,Report section to create Report of expense,Lended money section to create report of lended money with reminding feature to borrower,Borrowing section to create report of borrowed money. Achieved section which will show saved money. It is kind,which will remind me to save more money in comparision to past expense.

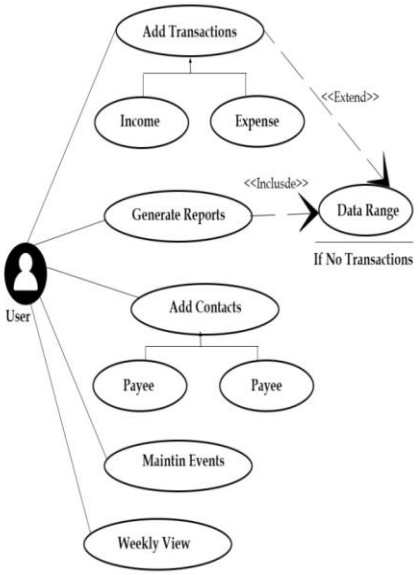

Fig 1.Flowchart

We'll go through the tools and technologies needed to successfully complete this paper.We have created architecture layouts and diagrams that we will employ in our user interface, which is user-friendly. i.e. simple to use and understand. Our goal is to create an application that is effective and can function even on low-end hardware. Every technique we use adheres to the best practices established by the sector. The list of all the programming languages, tools, and technologies employed in this study is provided below:

- HTML
- CSS
- JavaScript
- MongoDB
- Express
- React
- Node.js

Because it will be a mobile application, Expense Tracker can be used whenever it is needed. A two-tier architecture will be used for this application; the database layer will house all of the user and financial data. The user interface, which let application users communicate with the system and also stores information in the database, will come in second. The suggested solution should function offline, allowing for anytime access even when there is no internet connection. The suggested system should let users choose from a variety of categories and enter their payment amount and method. This system ought to be able to examine the data and offer insights on which categories users spent the majority of their money on.

V. EXPERIMENT AND RESULT

As a result, the user may employ this program in normal daily activities. After use, updating and viewing our everyday expenses and family expenses might become a routine part of life. This enables you to control your spending since we are too busy with our everyday activities to do it for you. Maintain tabs on our earnings and spending.

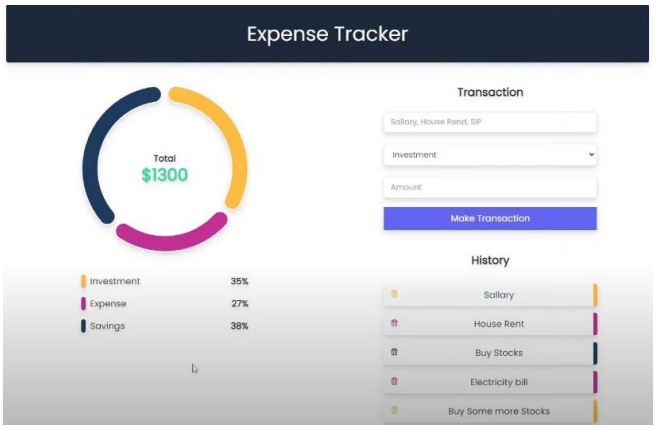

Fig.2 Expense Tracker

According to the user's selections based on the category and source of payment, respectively, Figure 2 displays the list of expenses and incomes, the expense/income amount, and the total expense/income amount for the week and month. The benefit of this strategy is that the user can maintain the spending monitor activity using cash, a credit card, or a variety of other payment sources.

VII. CONCLUSION

Daily spending tracking can help you save money, but it can also aid in setting and achieving future financial objectives. You can quickly identify where some budget cuts and concessions can be made if you know exactly where your money is going each month. The project we designed is more effective than other accessible tools for tracking revenue and expenses. The project successfully avoids manual calculation in order to save the user's time and avoid computing the income and expense per month. The modules are created in a way that is effective, dependable, and appealing.

VIII. FUTURE PLANS

The following features could be added in the future to the online income and expense tracker app: The application's Future Enhancements may be supported by all upcoming Android versions. Even if a specific piece of data is removed from the database, history can be set to view all the details in the app. Based on the user's income and expense information, statistics might be generated. It is possible to share files using WhatsApp and Bluetooth.

• The application can be expanded to allow scanning of price tag barcodes, which reduces the effort required to enter data into the input areas.

• Group: We intend to expand this system to include a shared spending group in addition to keeping a personal journal.

• To help the user better understand his or her finances and take control of their spending, the programme might be set up to generate a monthly analysis and report of their earnings and outlays.

• When the user's costs exceed his or her income, a warning system that alerts them to the problem can be enabled.

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