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Moneyminder: An Expense Tracking Application

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Abstract: ***In today's fast-paced world, the ability to track regular expenses efficiently is more vital than ever to maintaining a budget. Moneyminder is a web application. This application allows user to maintain and keep a track of expenses on a daily basis. It enables individuals to categorize their spending, such as groceries, utilizes, entertainment. This method is used to split the daily expenditures. This program manages a user's daily costs based on their income, allowing them to save money. You will receive a notice if your daily spending limit is exceeded, encouraging you to limit your spending on that particular day. The money that remains after spending is added to the user's savings if they spend less than the daily cost cap. Every month at the conclusion, the program creates a report of the costs. By tracking your expense, you can understand your financial habits on a deeper level. It helps in setting realistic financial goals and provide a clear picture of financial health. Overall, this is a smart automated solution for tracking expense.***

Keywords: track expense, Java, Html, View Analytics

I. INTRODUCTION

Managing personal finances is crucial for maintain a healthy budget and achieving financial goals. One key aspect of this is tracking expense ,which allows individuals to gain insights into their spending habits and make informed decisions about their money.

People have been trading wealth for products with each other since the dawn of human civilization. From then on, it has grown to be an essential and permanent aspect of our everyday existence[1]. Most people have a fixed income that they get on a regular basis, whether it be daily, monthly, or annually. In addition, everyone sticks to a tight spending plan. Typically, the budget is put together by category. Food, entertainment, transportation, healthcare, education, and clothes are just a few examples of the different categories. The spending budget, however, is constrained by the income. To ensure that our spending stays within our budget, we must monitor it. Using Excel sheets, Word documents, notes, and files for each user's daily and monthly spending is required for traditional budgeting approaches. To simply keep track of our everyday costs, there isn't a complete answer yet. Because it requires manual computations, keeping a journal in a diary can be a very tedious procedure at times[2]. We are attempting to meet user needs by developing a web application that will assist users in lessening their workloads while taking into account all of the above variables. With the help of the "Moneyminder" users input their daily spending and view their expense as charts at the end of the month.

II. RELATED WORK

The web that are on the market are really beneficial to smartphone users and improve their quality of life. One such software that is heavily utilized in day-to- day living is the moneyminder. Since there are a lot of comparable websites out there already, we added some creative elements to make our application stand out, be intuitive to use, and make sense. We enhanced the program with features like multiple user accounts in addition to special capabilities like view analytics and spending history. Our proposal is to utilize the application to conduct a survey on user expenditures[3]. One of the key goals of the study project is this concept. Viewing the information in the form of charts is another aspect of the investigation. Multiple accounts are supported by AndroMoney[4] for managing income and expenses. To ensure the security of the data, cloud storage is used. The software allows users to establish a budget for the purchase and will alert them if it is exceeded. It offers a number pad for any record calculation. For cash flow, it creates trend, pie, and bar charts. The spending management tool Monefy[5].Money Manager offers a user-friendly layout. It has a quicker record-storage speed than the previously listed models. It offers widgets to improve accessibility. Both pre-defined categories and the ability to add new categories are offered. Additionally, an on- screen calculator for figuring out the cost is provided. AExpense Manager [6] is an interactive, feature-rich, and well-balanced program. In addition to monitoring the user's income and expenses, it keeps track of bills, taxes, and mileage. It offers a number of useful features, including a credit card payback calculator, tip calculator, ordinary calculator, loan calculator, and currency converter.

Money Lover[7] is the latest software that's being used to monitor spending. Expense categories are managed using this program. It also oversees loans, debts, and revenue. With this software, users may store plans and create events. The receipt is saved. It also offers a calculator and a currency converter.

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Our method addresses a number of problems and restrictions with the market's existing expense tracking solutions. Because the program handles most of the processing automatically, users save a great deal of time and effort

III. METHODOLOGY

The aim behind creating this project as a web application is make it more convenient for users. Because they add in application whenever they make a cost right away. One of the major issues with keeping track of personal spending is that we frequently don't realize where the money is going toward our everyday costs[8]. Conventional approaches to solving this type of issue include sticky notes, which are used by regular users as shown in fig1. Skilled individuals, on the other hand, handle these kinds of issues by keeping large amounts of data in a ledger and using spreadsheets to track expenses. This demonstrates that different people employ different ways. Using this data is therefore contradictory. There are still several areas that are complicated, such as the lack of guarantee for data compatibility, the possibility of missing important inputs, and the possibility of human mistakes[9]. Data recorders may not always be managed, and getting a comprehensive picture of those costs might be a frantic procedure[10]. We think that a practical online application and design can solve these issues. on order for the web to be able to record expenditures and provide a comprehensive view with an intuitive user interface, this application must be clever enough to display the history of expenses recorded on the web.

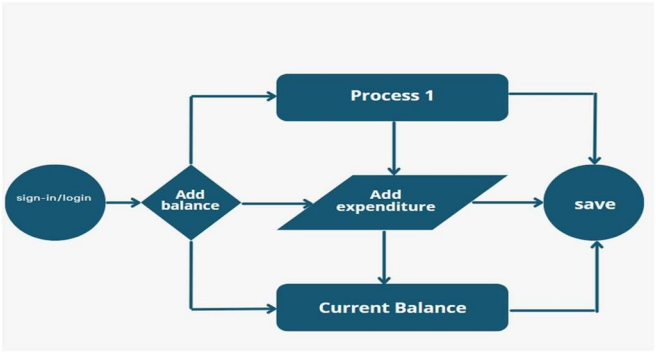

Fig1 Flowchart

IV. SYSTEM OVERVIEW

Four main components make up Moneyminder. These are the credit, balance, history, and current amount. This method functions as a one-tap way to keep track of regular expenses. Additionally, it keeps monthly and annual records. Users may monitor their spending history through the records' accessibility and ensure that their spending stays within their pre- allocated budget[11]. To make sure that only permitted users may access the system, user authentication should be included. Authentication with a username and password can help achieve this. The system should allow users to establish and manage spending categories and add balance as shown in the fig-2. This enables customers to keep track of their spending and understand where their money is going. The system should allow users to add new expenditure entries. Below is a description of the primary functions:

A. Current Balance

This module addresses the current balance of the users as shown in the fig-2.Here the users will add their expenses and current balance will updated according to it.

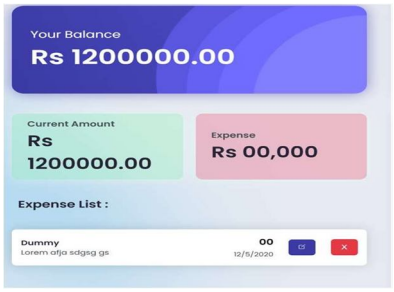

Fig2 Current Balance

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B. Add Category

The user can add categories to this module. Each cost that is listed under a category. Only then could we quickly sift the details. There are already a few predefined categories in the application. It is also possible for users to add more categories within the program.

C. Add Balance

This module addresses the addition of costs as shown in the fig-3. Here The user's everyday costs are increasing. However, there is a requirement: the user cannot add costs if they haven't chosen the category yet. Any transaction that is entered by the user will be added to the Transaction tabs. Long clicking the transaction will cause it to be removed from tabs if the user wishes to delete it.

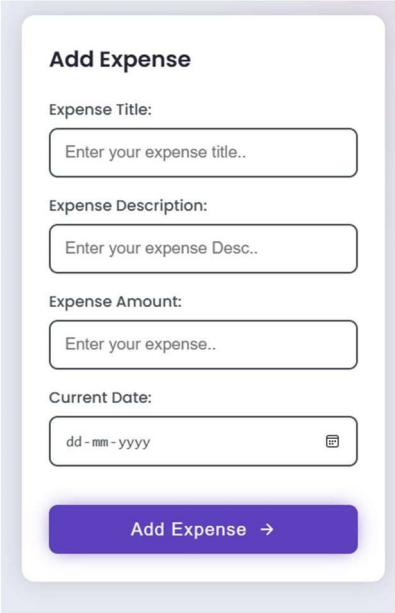

Fig3 Add Daily Expense

D. History

Users may tap and choose a date in the calendar interface, and the total cost for that date is displayed. Additionally, a user may examine the category-wise expenditure on a certain day. A user has the option to view the whole history of inputs made on a given day.

E. Filter Transaction View

The user has the option to filter the transaction on the transaction tab. Users may choose the day, month, and year on the tab, then click the filter button to see transactions categorized by the selected day, month, and year. If the user chooses to filter the transactions only based on a certain day—for instance, Sunday— all transactions done on Sunday will be displayed.

V. SYSTEM FUNCTIONALITY

A. Interface Design

The Google Design Pattern guidelines are adhered to in the creation of our application [12]. in order for consumers to utilize it effortlessly. The UI is easy to use and straightforward. Our application's material is organized into four main areas. Debit, Credit, Balance, and History are those. Different listings display the debits and credits. The most recent addition is usually at the top of the list, followed by the one before it and so forth. Users may view their most recent entries first thanks to it. Additionally, a search function is available for looking up credit or debit entries. To add new entries, utilize the floating action button on the debit and credit interface. Consequently, all it takes to add new debit or credit entries is a press on the floating add button. Different pie charts illustrating the percentage of debits and credits may be found in the balance section. Tapping on a date displays the debit and credit entries on that specific date in the history area, which is shown in a calendar.

B. Security

The program is installed on Netlify, which gives it access to the cloud infrastructure needed for processing and operation. Netlify offers partnerships with the most popular cloud frameworks, which undergo frequent audits and security enhancements. Additionally, Netlify offers a static and prerendered environment, eliminating any potential areas for assault. Once hosted or deployed, HTTPS certificates are used to encrypt the application. Netlify employs continuous monitoring techniques to defend against Distributed Denial of Service attacks. Netlify maintains its data centers in accordance with its security protocols. All of the Netlify networks' controlled traffic is TLS encrypted. Therefore, all of these features or security facets of Netlify apply to our project or application and ensure that it is safe and appropriate for its intended usage without posing a risk to user confidentiality.

VI. SYSTEM EVALUATION

Our system has been assessed through usability testing. Observing consumers as they utilize a system is the core of usability testing. By testing, the usable and non-workable features from user feedback are confirmed. Feedback turns out to be an essential component of the assessment, which aids in the creation of an effective system.

We attempted to investigate and contrast the usefulness of several conceptual ideas using the empirical method. We discovered a number of conventional applications in the web that also compute daily expenses. We suggest an improved solution by contrasting it with the applications that were looked into some of the tests we conducted were based on metrics that we used to assess the usability of our system:

1) Time needed to finish a specific job.
2) Completion success rate of tasks.
3) The quantity of mistakes made.
4) Feedback from users

VII. FUTURE ENHANCEMENT

It is possible for the application's future enhancements to support all next Android versions . You may configure history to see every detail. even after the specific data is removed from the database, in the application. Statistics based on the user's income and expense information might be created. WhatsApp file sharing via Bluetooth may be permitted. It is possible to print the specific revenue or spending information. A few of the added features include the ability for users to sign up for the application using an already-existing email address or social media account, which synchronizes the user's profile information with the application . With the help of the extension, it is possible to strategically separate yourself from the manual computation of the monthly cost and pay. The modules are attractively designed and functional at the same time.

VIII. CONCLUSION

Time is the most important resource in today's world since there is so little of it. With the help of this application, users may control their daily expenses according to their income and save money. If your daily spending limit is surpassed, you will be notified and encouraged to spend less on that specific day. If the customer spends less than the daily cost cap, the money that's left over after expenses is added to their savings. The application generates a cost report at the end of each month. People are fascinated with doing things faster, and our system is a method that helps with this obsession. More quickly than any other traditional program on the market that requires manual entry, Moneyminder can handle everyday expenses. When compared to other traditional apps, our system is an efficient solution that works best for persons 40 years of age and above. The world is moving toward one tap solutions these days, but our system is unique. As a result, this method opens up a few study avenues that might serve as a springboard for refining the suggested strategy.

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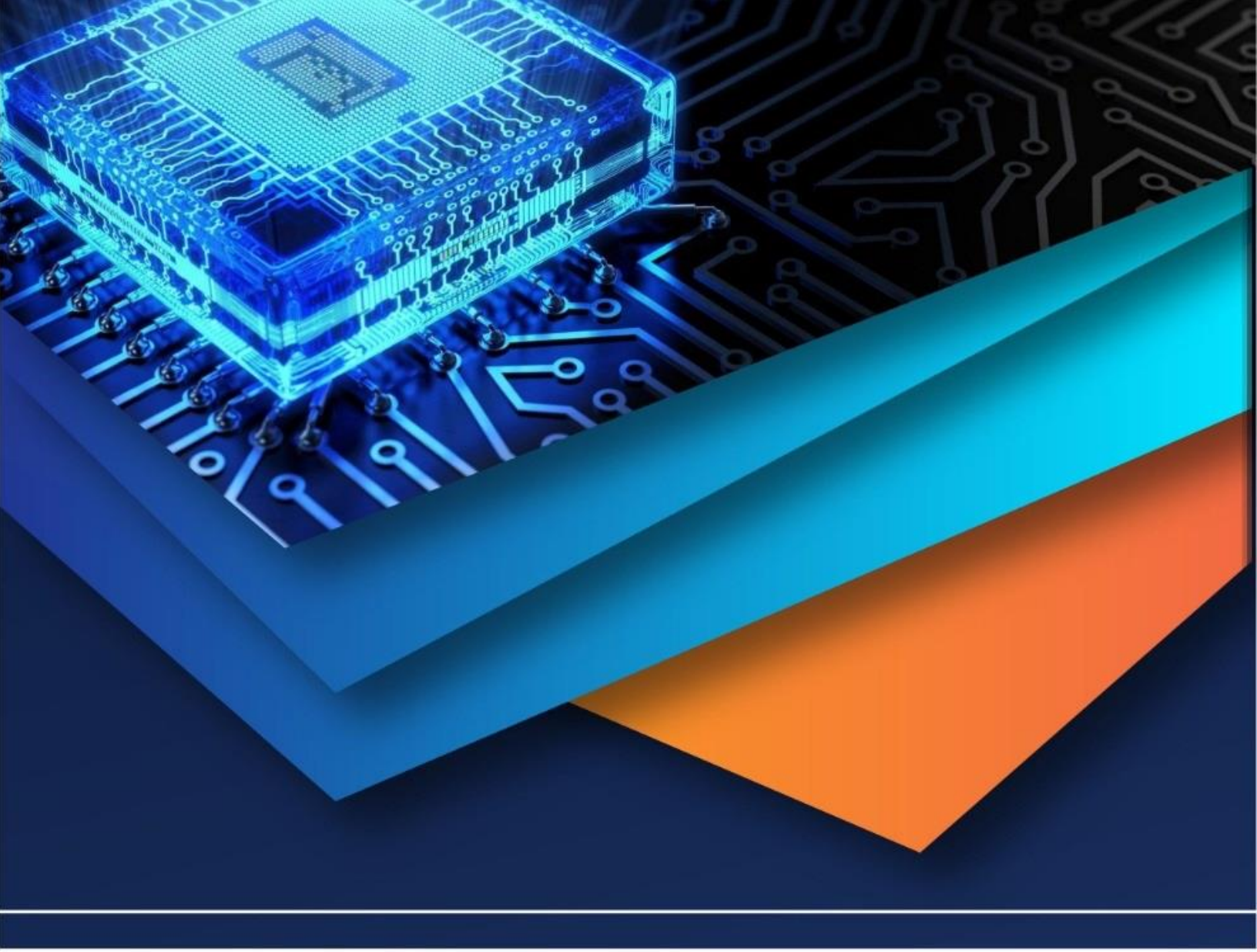

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