LITERATURE SURVEY

PERSONAL EXPENSE TRACKER APPLICATION

I. INTRODUCTION

Tracking regular expense is a key factor to maintain a budget. People often track expense using pen and paper method or take notes in a mobile phone or a computer. These processes of storing expense require further computations and processing for these data to be used as a trackable record. In this work, we are proposing an automated system named as Expense to store and calculate these data. Expense is an application that runs on Android smartphones. By using this application, users can save their expense by simply scanning the bills or receipt copies. This application extracts the textual information from the receipts and saves the amount and description for further processing. It also monitors user's income by tracking the received SMS's from the user's saving accounts. By calculating income and expense it produces the user's balance in monthly and yearly basis. Overall, this is a smart automated solution for tracking expense.

From the beginning of human civilization, people have exchanged their fortune with each other for buying or selling goods. It has become a crucial and unchangeable part of our daily life since then. Most of us have a fixed income and we get it in a timely basis (i.e. daily, monthly, yearly etc.). Moreover, everyone follows a strict budget of expense. Generally, the budget is assembled as per category. The categories are distinct, for example, food, entertainment, transportation, education, healthcare, clothing etc. However, the budget of expense is restricted to the income. For that reason, we need to track our expense so that it doesn't exceed our budget. In old days, people used to track their expense manually i.e., using pen and paper system which takes a lot of effort and time. Nowadays, the availability of electronic devices like smartphones, computers have made our life a lot easier and faster. We can use computers to track our daily expense by using the online and offline software available. But the computer is not accessible all the time. The smart solution to the problem is to use smartphones.

II. INTERFACE DESIGN

Our application is designed by following the Google Design Pattern rules . So that the users can use it with ease. The interface is simple and user-friendly. The contents of our application are divided into four major sections. Those are Debit, Credit, Balance, and History. The debits and credits are shown in different lists. The last entry is always on top of the list and the previous one is just below the last entry and so on. It allows users to access their latest entries first. Also, there is a search option for searching debit or credit entries. There is a floating action button on debit and credit interface which is used to add new records. Therefore, new debit or credit entries can simply be added by tapping the floating add button. In the balance section, there are different pie charts showing the proportion of debits and credits . The history section is represented by a calendar view where debit and credit entries of a particular date can be seen by tapping on a date.

III. PROPOSED SYSTEM

Our proposed solution is a smart assistant for the users to track daily expense. The users simply need to scan receipts of any kind with their smartphone camera and our application is smart enough to detect the necessary words and amount from the receipt. The data of the expenditure is then saved on the database category wise. Our application structure has been divided into two major parts. One is debit and another is credit. All the expenditures are included in the debit part and the incomes are included in the credit part. The incomes are calculated automatically from the messages received in the inbox. There are some additional features available in our system. The users can set a total budget for the whole month as well as for individual categories. The system will notify the users if they attempt to exceed the set budget. There is a pie chart (see figure 5) representation to summarize the total expense. A calendar view (see figure 6) is also available to show the expense histories of the users. Our approach solves many issues and limitations of the currently available expense tracking systems in the market. It saves a lot of time and efforts of the users as the major processing is automatically done by the application.

IV. SYSTEM OVERVIEW

Expense is divided into four major sections. Those are Debit, Credit, Balance, and history. This system works as a one tap solution for tracking everyday expense. It also preserves yearly and monthly records. For the availability of the records, users can check their histories to keep track of their expense so that they do not exceed t

V. Credit:

The credit information can be stored using the mechanism . When users open the credit interface, the system reads all the messages from the user's messaging inbox. If the messages are from the bank about any transaction of credit, the app reads it and saves necessary information from the messages (SMS). There is also another option for saving credit. The users can manually give the input of credit in the app. After successfully saving the input, they can view the data on the list view. Figure 4 shows the credit input technique.

VI. Balance:

In balance interface, users can see two different types of pie charts, which are yearly and monthly balance. The pie charts represent the total estimation from all the categories (e.g., food, entertainment, transportation, education, healthcare, clothing, bank, groceries). Yearly balance includes the credit and debit information of a specific year. Monthly balance includes all the credit and debit information of 6 months.

VII. CONCLUSION

In today's world, time is the most valuable asset because people lack ample of it. People are obsessed with completing tasks in lesser time and our system is an approach serving this purpose. Expense can manage daily expense much faster than any other traditional app in the market which takes manual input. Our system proves to be most effective for the people aged 40 and over and an efficient solution comparing to any of the traditional applications. Nowadays, the world is leaning towards the one tap solution and our system is one of a kind. After all, automation is the way of future and Expense can be a step towards it. The application still has a lot of aspects that need to be improved. The app performs poorly if the input image from the receipt includes a lot of noises. The app is

unable to detect the region of interest automatically. On that note, the user has to set the region of the receipt to have a better result. Again, the performance of the character recognition from the receipt declines in low lights. Therefore, this system triggers few research scopes which can be a starting point for the improvement of the proposed approach.

VIII. REFERENCE

[1] “44% of World Population will Own Smartphones in 2017.” [Online]. Available: https://www.strategyanalytics.com/strategyanalytics/blogs/smart-phones/2016/12/21/44-of-world-populationwill-own-smartphones-in-2017#.Wq1BcehuY2y.

[2] “Daily Expense 3 - Apps on Google Play.” [Online]. Available: https://play.google.com/store/apps/details?id=mic.app.gastosdiarios.

[3] “Monefy - Money Manager - Apps on Google Play.” [Online]. Available: https://play.google.com/store/apps/details?id=com.monefy.app.lite.

[4] “Money Lover: Budget Planner, Expense Tracker - Apps on Google Play.” [Online]. Available: https://play.google.com/store/apps/details?id=com.bookmark.money .

[5] “AndroMoney (Expense Track) - Apps on Google Play.” [Online].

[6] https://ieeexplore.ieee.org/