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Expense Manager using OCR

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Abstract: ***An application that is able to capture and store images for processing expenses instead of manually handling the receipts. The application analyses the images of the receipts, converts the images to text, analyses the data, extracts expense data, and puts the data into an expense report.***
The end user can review the captured expense data, correct it or add to it. Preferably, the system displays the image of the receipt side-by-side with the captured expense data to make review and editing easier.
Instead of manually noting down the daily expenses, the application allows you to manage your expenses by setting the daily and monthly budget.
Keywords: Optical Character Recognition, Expense, Text Extraction, Camera,

I. INTRODUCTION

Expense Manager is an android application that works commonly on smartphones. It can be used for evaluating the expenses of a person and help manage the overall budget. In the proposed application, instead of manually keeping the record of the daily or monthly expenses, one can scan the available printed receipts of transactions. The text in the receipts is extracted and stored in the expense manager. The expense manager helps us to set the monthly budget, and monitors the expenses depending on the set budget. The camera is used to scan the receipts. After scanning the receipts the data is extracted using optical character recognition and the scanned text is given input for the expense manager. The optical character recognition is used for the text extraction. Database is required to store the extracted data and for further expense management.
Once you set the monthly/yearly budget, the app will notify you whether you have exceeded the cost or efficiently used your income. It helps you keep the record of your daily expenses and calculates the total money spend monthly.
The manual paper work is highly reduced by using this application.

II. LITERATURE REVIEW

A. System And Method For Capture, Storage and Processing Of Receipts And Related Data [5]

This paper proposes the application for capturing and processing of receipts that are scanned using camera of a smartphone. The image is captured using camera, scanned and extracted. If the document is damaged or crambled problem might occur in calculating the results. Also the receipt should be of white background only if not results may be inaccurate. The captured image is also stored in the application and text is extracted.

B. Receipts Scanner And Financial Organizer [3]

This paper proposes app based on obtaining an image and processing it. The numeric data is evaluated automatically. The receipt should always be in a neat condition. Also the app can have record of only one user.

C. Expense Report System With Receipt Image Processing [1]

This paper is about a patent which helps to extract receipt from data from data image. The receipt image and receipt data is then provided to expense manager.

D. Optical Character Recognition [4]

This paper proposes a system which first scans the image. Thresholding of the image is performed and pre-processing of image is carried out. The accuracy of output is directly dependent on the input document.

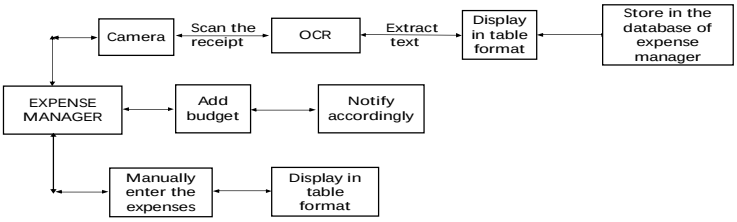
E. Personalized Expense Managing Assistant Using Android [2]

This paper has proposed an application for managing the expenses of the user. The user registers first to the system and then by adding income and expenses accordingly.

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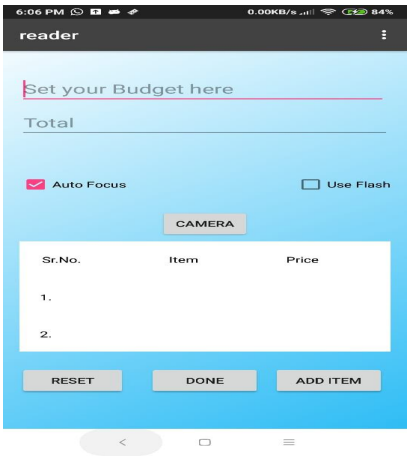
III. SYSTEM ARCHITECTURE



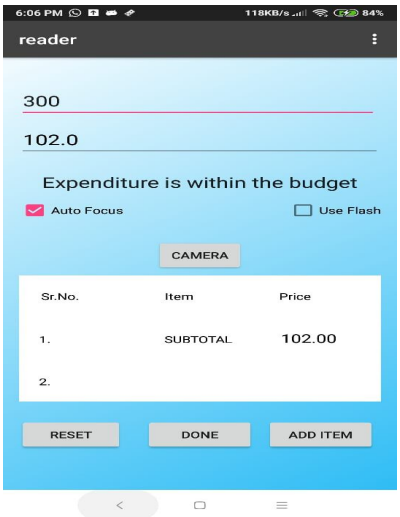
IV. ALGORITHM

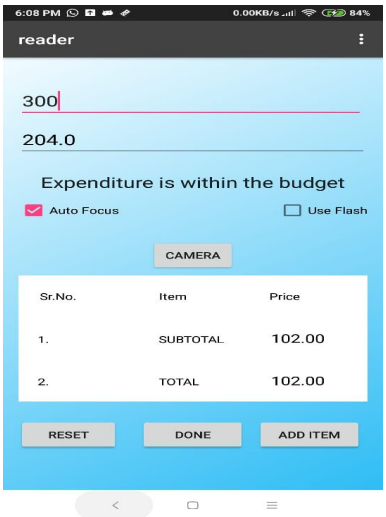
A. The user logins or signups to the system application of which the data is stored into database.
B. The user enters his/her income and monthly budget.
C. The user can then scan the receipt and image is processed i.e. its text is extracted and stored in database.
D. The user can identify the scanned document and also check history of his own account.
E. The user is notified about the expenses and budget set i.e. whether the expense is more than the set budget or not.\

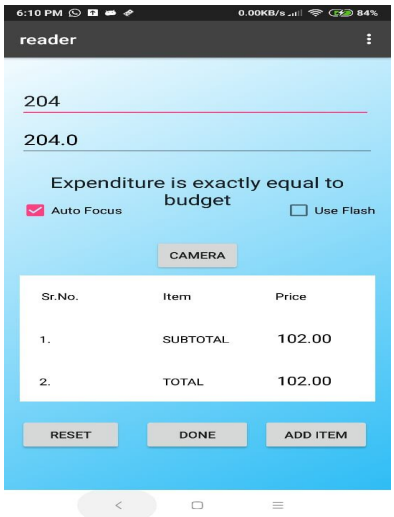
V. RESULTS



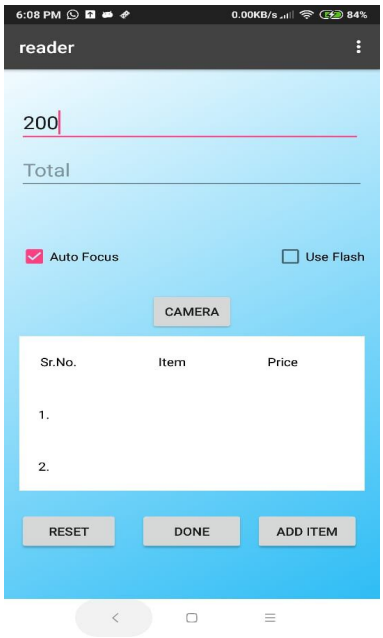


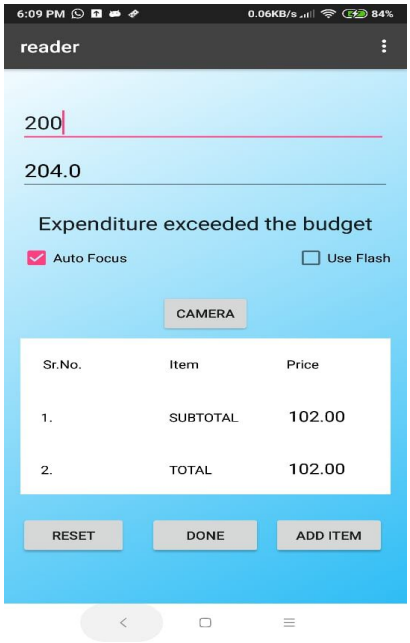






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VI. CONCLUSION

Hence this app can be used efficiently and very effectively. Manual work is reduced a lot. No need of manually calculating various budgets. No need of manually keeping the record of various expenses. Hence the app is very helpful.

VII. FUTURE WORK

Future work can be like we can integrate this app with any of our credit/debit car details and keep track directly from our savings account. This application can also be used on a large scale for the chartered accountant work if developed further.

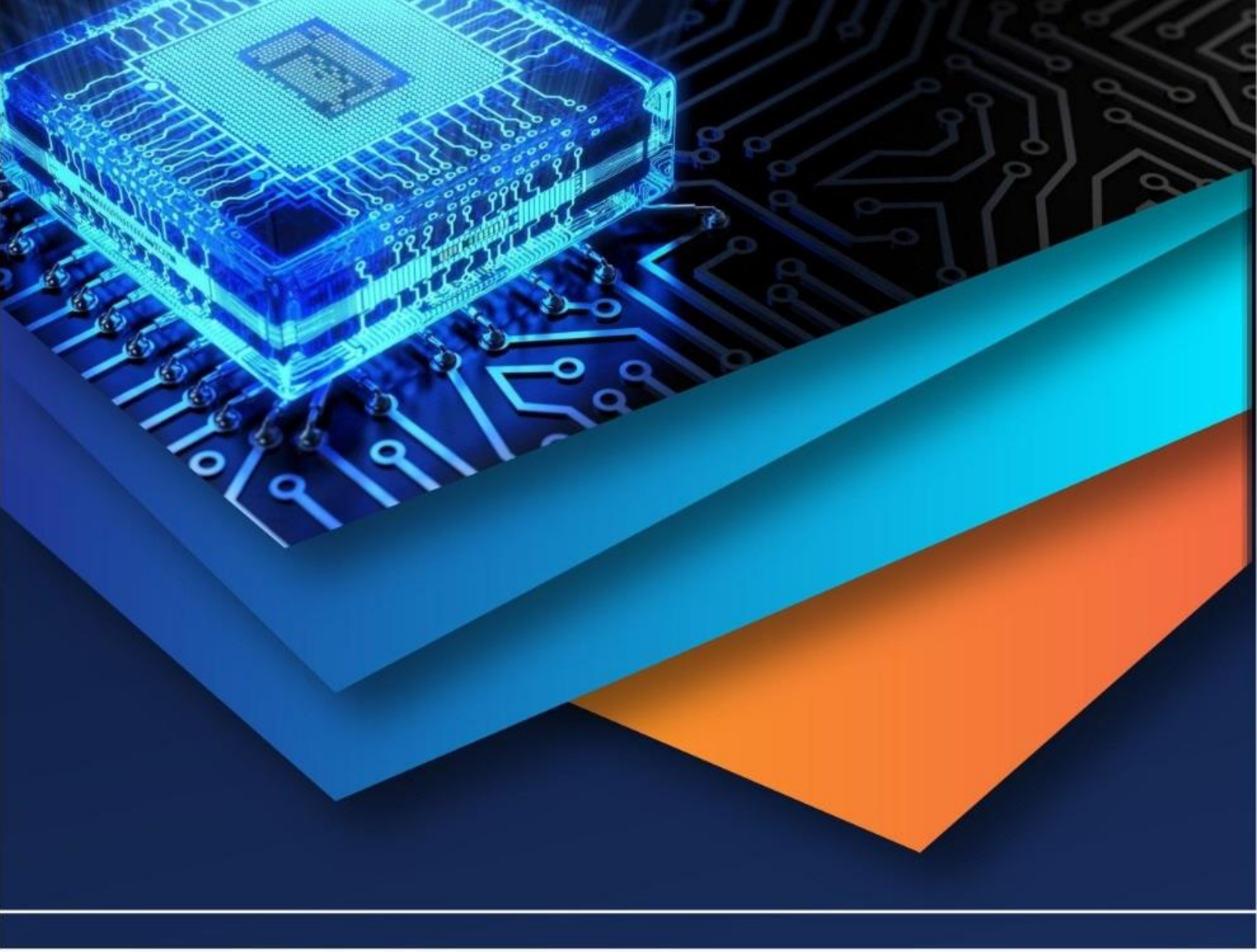
VIII. ACKNOWLEDGMENT

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