

ANDROID BASED EXPENSE MANAGEMENT APP

Aditya Raj, Abhishek Verma, Kartik, Vaishnavi

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING CHANDIGARH
UNIVERSITY, GHARUAN

Abstract

Our paper deals with android based expense management app that provides the user manage and look after their expense through an app connected with realtime database. Our Expense management app is highly secured, and it is very user friendly and interactive user interface. The proposed expense management app is secured and have unique security feature such as email authentication which adds another layer of security and gives system the ability to verify the user information through email verification. It also creates and manages income and expenses detail as all the users must login by email and password and click on login to access the data. It also allows the user to have a proper control over the data that are cast and helps to distinguish expenses throughout the day. It can be very versatile as any type of expense management app can be. Using this and no additional cost or time has to be required for that.

Keywords: Android, Xml, Java, Android Studio, Firebase

1. Introduction

Expenso is an expense management app. In this app user who are authorized by the admin/system can manage his/her expenses, income and budget without using the traditional way of entering the data on notebook. There are many expense management procedures which are being used for expense/budget management, such as traditional method, spreadsheet/excel method but all these procedures require more time and more man power.

So to eliminate all these drawbacks we Provide an online voting system which provides features such as accuracy, convenience, flexibility, privacy and verifiability. Our online voting system provides user a platform where he can register himself to cast vote remotely. By using this the Voter can use his/her right to vote from anywhere as long as he has an internet connectivity in that place.

1.1 Problem Background

Recently there are a lot of literature on expense and budget management that has been developed. This area is under research for many years and there are efforts being made to make it more and more sustainable. There have been recent reports of instable use and mismanagement of the expenses and budget through traditional methods. So the major problem that need to be resolved is to resolve the management of expense through cloud based technology which can be accessed from anywhere in the world. Traditional expense management or budget tracking are very time consuming and there is a lots of chance for human error and thus leading to incorrect and thus biased results.

1.1 Problem Description

Managing this (“Android Based Expense Management App”) whole system is seem user friendly and compact but it is part of the User Experience. Managing daily expenses is not an easy task because it’s difficult to keep records of every expenses on daily bases and to keep track of budget on the go. The App user has to note the expenses to keep track on budget and this task going to be carried out through app. This project work will help in money management and will prevent unnecessary expenses.

1.3 Research Objective

The main objective of this study is to make a step forward in the direction of expense management platform by providing all the essential features and security levels. The objective of this study is to make the budget tracking and expense management process easy, less time taking, and easy to maintain and easy to access from anywhere in the world. Android based expense management app will eliminate the bogus way of tracking the budget which can occur in tradition methods. It also saves a lot of manpower and cost which is a drawback to the traditional expense/budget tracking that are still prevalent till date.

1.4 Scope of Study

As we all know that there are many ways to track the budget, mobile devices took first place in terms of accessibility and convenience for consumers. There are many solutions in the industry for managing personal and business expenses.

As colleges student have to be very strict with budget in order to to live with a bounded amount of money, this app would definitely going to help the student in learning the money management and tracking their habit of using the money by saving their income and expenses in a cloud based app which have a very interactive user interface for students and can be used on any cases like these efficiently it can be customized according to user need on any type of management.

2. LITERATURE REVIEW

App had been created that tracks users' 'personal costs.' A cloud-based expense management tool keeps track of and reports on all client expenditures. It makes it easy to keep track of any expenditure for a larger number of members of the workforce when old methods are often ineffective and time consuming. This tool will not only assist users in managing their finances, but it will also assist marketing executives in organising campaigns based on user needs. [1]

Tracking recurring costs is an important part of budgeting. People frequently keep track of their costs on paper or on their cell phone or computer. To use this data as a traceable record, this cost storage technique necessitates further computations and processing. We propose an automated system named eExpense to store and calculate this data in this research. eExpnese is a smartphone application that runs on Android. This app can assist you in saving money. [2]

2.1 Background

This is a app that can be used by user to track and manage their expenses and budget. All the users have to register and login on the app in their smartphones with their chosen email and password which they have to verify first during registering for the app. The research development and testing are done on test dummy using google based backend provider “Firebase”. On other hand expense management is been in research for many years, researched cases of wrong implementations reported in recent years. These factors are need to be resolved so user can track their expenses.

Expense managment app contains:

- a) users details
- b) users Email with password.
- c) users income and expenses in a database.
- d) sum of total income and expenses.
- e) result panel.
- g) a unique user id given my administration.

Various operational works proposed in the system are: information of the user in database. Verification of emial submitted by user. deletion of account.

2.2 Product Perspective:

The product is an expense management tool with a interating GUI . This system is developed using java and xml. Though product is stand-alone. It requires a android smartphone with internet.

2.3 Product Functions:

Our System has a server back-end which takes care of authenticating the users and maintaining necessary details. The user interface at the server's end enables creating the election on behalf of the users. The users must login with id and password then they can access the election module where they can cast their vote with such ease and comfort and their

response will be saved and after that result will be displayed.

3. Modules of our System:

Expense management app is a software through which a user can track his/her expenses by registering themselves on the expense management platform. Email and password is requiredto entered in database by which user can be verified the algorithm. There are different tables in database for users, like . Each user has to enter his all income and expense with type, date and note. This is the login page of the application known options like add income, add expenses, register, Login, about, profile, rate us.

3.1 Login Page:

It is the first page of our app which can be referred as login page. From this page if user enters his details he/she will be redirected to dashboard panel, or if the chose to regitser for app then he/she will be redirected to the signup page where they have to register for the app with details like email and password, it will sent verification link to the above email address to verify. If the user forgot their password then he/she can recover his/her account by clicking on forgot password where he/she needs to enter the email to get the reset password link.

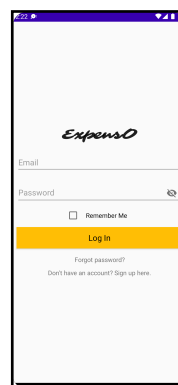


FIG 1.1

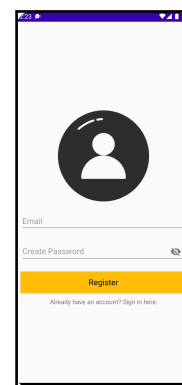


FIG 1.2

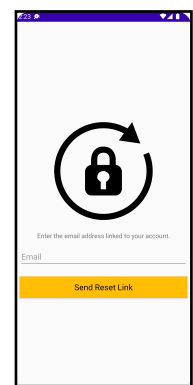


FIG 1.3

3.1 DashBoard:

It is the home page of our app which can be referred as dashboard where user can find the overview of income and expenses along with the graphical representation of expense, balance.

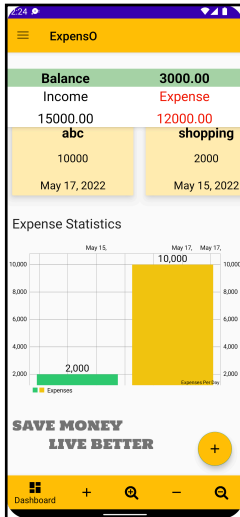


FIG 1.4

3.1 Menu Bar:

It is the menu where user can find various options like 'My Profile', 'dashboard', 'income history', 'expense history', 'search income and expense', 'rate us', 'emi and tax calculator', 'about' and 'logout'. We can access any of the feature by simply clicking on it.

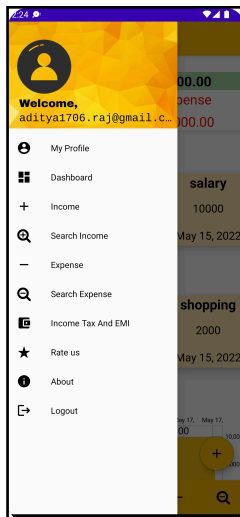


FIG 1.5

3.3 Income and Expense History:

It is the the fragment/page where we can access the previous income and expense data in a ordered format according to the date of entry in the database.

It includes the ammount, date, type and note.

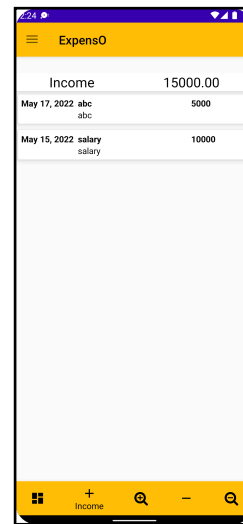


FIG 1.6

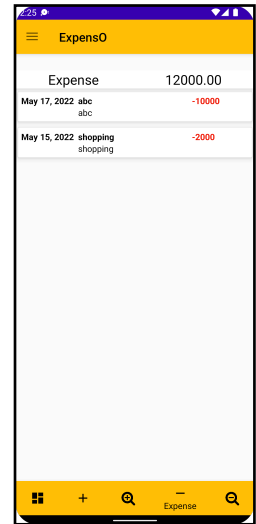


FIG 1.7

3.1 ECONOMICAL TOOLS:

It is the tool or feature in app where user can calculate the tax and emi by feeding the required information and can get the ouptut right on the app with the help of built in calculator which calculates in the backend using java.

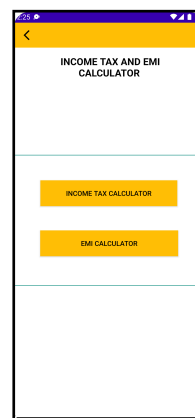


FIG 1.8

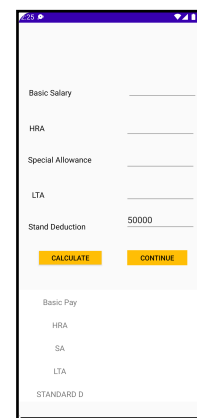


FIG 1.9

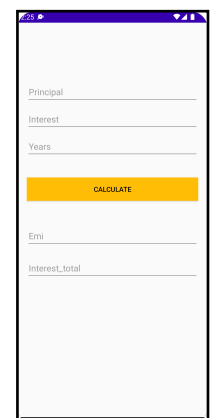


FIG 1.10

4. Technology Used:

We have created this app using technologies mentioned below:

- Java.
- Xml.
- Android Studio.
- Firebase.

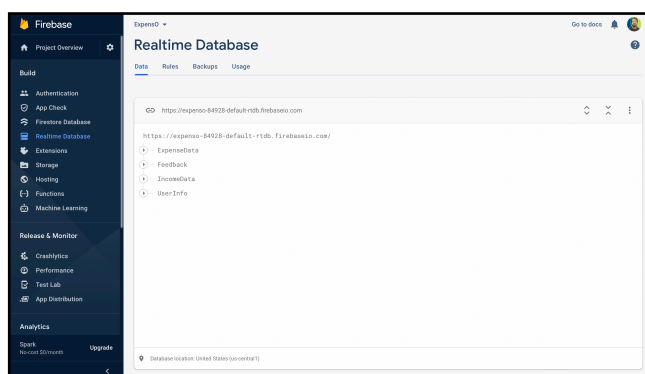
4.1 Frontend Technology:

Java is a high-level, class-based, object-oriented programming language that is designed to have as few implementation dependencies as possible.

XML stands for Extensible Markup Language. XML is a markup language much like HTML used to describe data. It is derived from Standard Generalized Markup Language(SMGL).

4.1 Backend Technology:

Owned by Google, Firebase is a complete package of products that allows to build web and mobile apps, improve the app quality, and help your clients grow their business. Firebase manages all data real-time in the database.



5. Conclusion:

The entire premise for wanting an automated expense management software is to automate and streamline certain aspects of expense management. With one click approvals on submitted expenses, approvers can just approve or reject expenses without wasting time on validating individual spends. Some expense management software also provide the option of customizing approval hierarchies with multi-level approvers, where required.

6. References :

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