Development of an Android Based Application: INCOME COUNTER

 \mathbf{BY}

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APPROVAL

This Project/internship titled **Development of an Android Based Application: INCOME COUNTER**, submitted by Marzia Haque Tumpa ID: 151-15-4811, Md.Hassain Ibne Salam ID:151-15-5218, Shamsun Nahar Sumona ID:151-15-4919, to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 10/12/2018.

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ABSTRACT

In this project, we have built up android basedwith different types of necessary features and unique features for the drivers. The main purpose of 'INCOME COUNTER' is to make better solution for calculating a driver's balance. This application can count their income, expanses and vehicles mileage. They can save their personal information like name, phone number, and email. This application can also show their balance from their income and expense. We have used JAVA, HTML, CSS for design this application.. In the wake of finishing all task, the application tested in various stages and was discovered working effectively. Now drivers no need to write their income and expanse in a note or memorize and calculate them later.

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Introduction

1.1Introduction

The use of the applications are increasing within the last few years in entire Country. As the number of applications, users increasing it is so important to develop an Android app based System using which will be providing users the opportunity to calculating their income, expense & mileage from their vehicles, which could be a very hard, and time consuming. This system will be saving the users time and proper calculation of their income & expense & also mileage.

1.2Motivation

This is a driver income calculator. From this concern of view we are going to make such kind of systemthat will calculate driver's daily, weekly, monthly or lifetime income & calculating expenses like fuel cost, engine oil cost, wash fee, servicing charge, parking fee, accessories and others. Also calculating their mileage.

After calculation the data will save in system and getting their daily balance.

1.3Objective

Using this system user will be able to calculating their balance from their income and expenses.

Services at a glance:

- Firstly calculating their incomeuser has to go-to add income. They are show a dial pad and type our income money of every trip. It create a daily income list.
- For calculating the expenses user have to go-to add expense and select expense type
 like fuel, engine oil, wash, servicing, parking, accessories and others. After
 selecting expense type we have to input expense cost of every expense accessories.
 it create a daily expense list.
- For figure out the mileage user have to go-to add mileage. They are show a dial pad and input mileage of every trips. It create a daily mileage list.

• From income list system show total income and from expense list system show total

expense. And system will show the balance.

• From mileage list user can see how much ride everyday.

• From the expense list user can also see every kind of expense separately.

• System can show statistic of expenses and income per month.

• User can also save user information like name, email, contact.

1.4Expected Outcome

User add there every trip income and get total income. User add their every expense in

add expense and get total expanse. From total income and total expanse, they get

balance. User also know total furl cost, total engine cost, total wash fee, total servicing

charge, total parking fee, total accessories cost and total others cost. User can also know

weekly, monthly or life time statistics of income and expense.

1.5Report Layout

We all know that, practical knowledge is more important than theory. In our graduation

degree we learn a lot of things. This project gives us scope to share our knowledge and

utilize our thought. By doing this project we can implement our skill more effectively.

Chapter 1: Introduction

First Chapter contains the Introduction, Objectives, Motivation, Expected Outcome and

Report layout of our project.

Chapter 2: Background

Then second chapter contains Project Introduction, Related works, Comparative

Studies, Scope of the problem and Challenges of our project.

Chapter 3: Requirement Specification

Our third chapter contain all about Requirement Specification, which are business

process modeling, requirement collection and analysis, Use Case Modeling and

2

Description, Logical Data Model, Design Requirements.

Chapter 4: Design Specification

Fourth Chapter describes our full web site description, which is related to Design Specification like Front-end Design, Back-end Design, Interaction Design and UX, Implementation Requirements.

Chapter 5: Implementation and Testing

Our fifth chapter is all about Implementation and Testing. This contains Implementation of Database, Implementation of Front-end Design, Implementation of Interactions, Testing Implementation and Test Results and Reports.

Chapter 6: Conclusion and Future Scope

Our last chapter Conclusion and Future Scope this contain Discussion and Conclusion, Scope for Further Development of the full project. This report contains all about our web system, its problem, solution and use of the system.

Background

2.1Introduction

Background set of our app, which is the unique portal such as calculator which is a driver's income calculator, it showing total income, total expense, balance, mileage etc. Our app there are more unique features such as daily income, expense and mileage list for calculation. Using of device this app such as, HTML, CSS, and JAVA, Android Studio and Microsoft SQL Server.

2.2Related Works

The app we are making is a unique to others. Though there is some app similar to our app but that has much limitations. But the app what we are going to publish is less limitation. The efficiency of our app is high than any other app similar to our app. We visit similar to our app which compare others app and our app. We show that most important point this app not access in Bangladesh, others reason On the other hand, this all element exist in our app.

Our apps related apps same as texi income expense manager app. This income expense manager app similar to our app. This was launched in 2014 and has sections for only income and expense calculation.

2.3Comparative Studies

We are analyzing that others application has more limitation, on other hand our application most of the reduce all the limitation.

Other application has no mileage calculation system. Our app has all requirement is fulfills.

Other app can's store lifetime data. But our app can do this. Our app can show how much fuel uses in every trip.

2.4Scope of the Problem

- How much fuel uses everyday
- New android version is supported.
- There is supported offline.

2.5Challenges

When we are making this app there, are more challenging face in our app?

- We have use more database then collected some difficult.
- Updating measurement.
- Requirement management

Requirement Specification

3.1Business Process Modeling

Business process modeling (BPM) in systems engineering is the activity of representing processes of an enterprise, so that the current process may be analyzed or improved[1]. It is typically performed with business analysts, who provide expertise in the modeling discipline; by subject matter experts. Alternatively, the process model can be derived directly from events' logs using process-mining tools [2]. Redesigning a process and implementing it is not a speedy enterprise. It can take monthly and occasionally years, depending on the extent of the process and sub-process, how many people and system are involved and how much of it need to be designed. We used to UML Use Case Model as a business process Model.

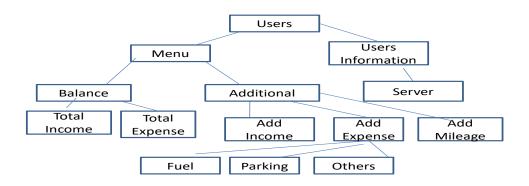


Figure 3.1.1:Business porcess model

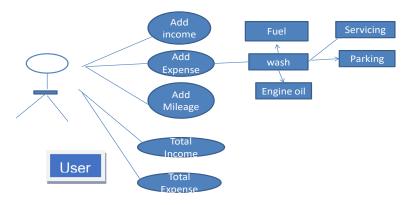


Figure 3.1.2: Use Case Model

This use case model declares the whole process of the application. Users can add income, add expense and add mileage. In an add expense option user can also add many types of expense.

3.2Requirement Collection and Analysis

- Users
- User friendly system design
- Database
- Library for compile procedural and object oriented program
- Script for run web program
- Easily accesible

3.3Use Case Modeling and Description

Whenever you purchase software or hardware for your computer, you should first make sure your computer supports the system requirements[3]. These are the necessary specifications your computer must have in order to use the software and hardware to be used efficiently, all or every computer software needs certain hardware components or other software resources to be present on a computer. Indevelopmentstage the system requires for all tools and platforms describe to advance the new system like.

In development stage the system requires for all tools and platforms describe to advance the new system like

- Local Server like XAMPP / WAMP
- Browser like Chrome or Opera

With our Apps, driver can save easily there all equation from day to day ,week to week ,month to month.

3.4 Logical Data Model

There are some basic requirements collected during implementation of the software and in the data collection.

INCOME AND EXPENSE:

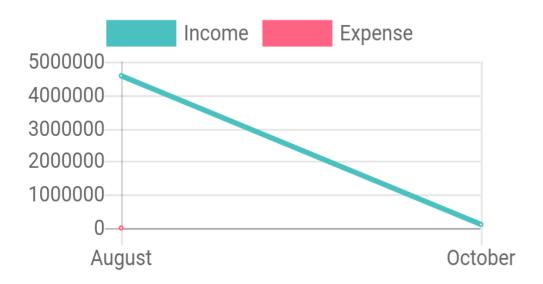


Figure 3.4.1: Total income and Expense Stastic

In this application mostly required is income and expense. At this time consuming income and expense is changing.

EXPESENSE CATAGORY:

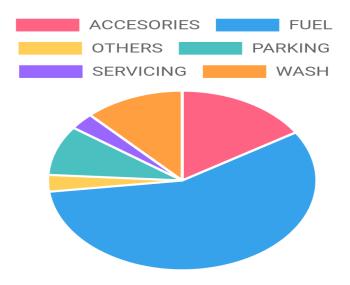


Figure 3.4.2: Total Expense Catagory

At is expense catagory there are some expense list like FULE,ENGINE OIL,WASH,SERVICING,PARKING,ACCESORRIES,OTHERS.when we add an option it also shows in graph with the details rate with time consuming.



Figure 3.4.3: Total Expense catagory

3.5Design Requirements

- The App will have to contain three options: Buy, Post Advertisement, and Rent.
- Everyone can download the app from Google Play for free and access the app without registration.
- Anyuser will be able to buy an apartment from the App, to advertise an apartment for selling/rent, and to rent an apartment.
- A customer can view details of the apartment including price, location, apartment type, size, and other facilities.
- A location based search option should be available, through which a user can look for an apartment in specified location.
- The registered users can write a post using a form. They can also publish, edit and delete the post at any moment if necessary.
- The App users can share any post in social media like facebook, messenger, email, and whatsApp.
- The validation and testing are necessary for ensuring better performance.
- The App should have the property of security, privacy, reliability and maintainability.
- The admin can access the system at any moment, can read the posts and delete the post if necessary.
- The registration will be required only when anyone wants to post an advertisement to rent or sell his or her apartments

Design Specification

4.1HTML

In html i did my hypertext mark-up languages for my websites. That means whatever text you the texts in my websites that have made up with HTML. So in the image i have created a page title and header titles of each feature. Actually html is the structure of a webpage.

4.2CSS

CSS is used to ascertain styles for my web pages, including the design, layout and variations in display for different devices and screen sizes. Through the CSS i can add lot of designs, colors, text-alignment, text-styles and everything that would make my system more attractive. Actually CSS is use for styling webpages.element content to "new content", in my project I use java script for working with web programming.

4.3 Home Page Interaction Design

I have designed a Home page look like a diagram. Where drivers can easily access their data. They can add and see their income, expense and mileage for last 7days, last 30 days, life time. They can see total running, cost and uses.



Figure 4.3.1: Home page

4.4Income List

In this part drivers easily add their income day by day.so that they get a total income balance. When they add income they can see the cost.

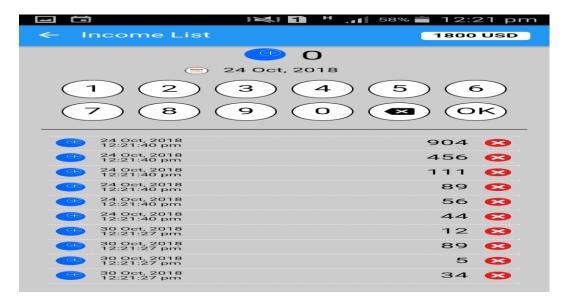


Figure 4.4.1: Income List page

4.5Expense List

In expense list their are some options to add where they expense their balance. There are Fuel, Engine oil, Wash, Servicing, Parking, Accesories, Others for expense list. They can chosse any options to add expense.

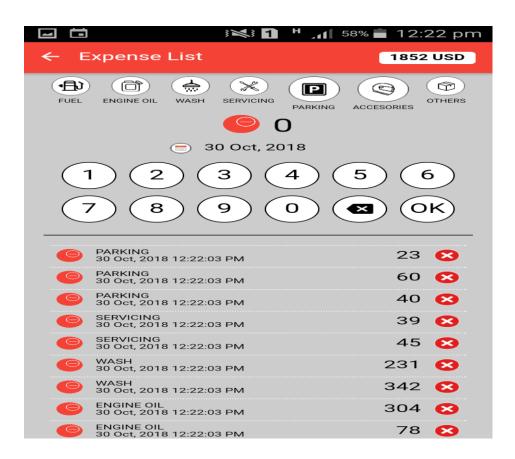


Figure 4.5.1: Expense List page

4.6 Mileage List

In mileage List drivers can see distance he travels and can save the data which is he added.

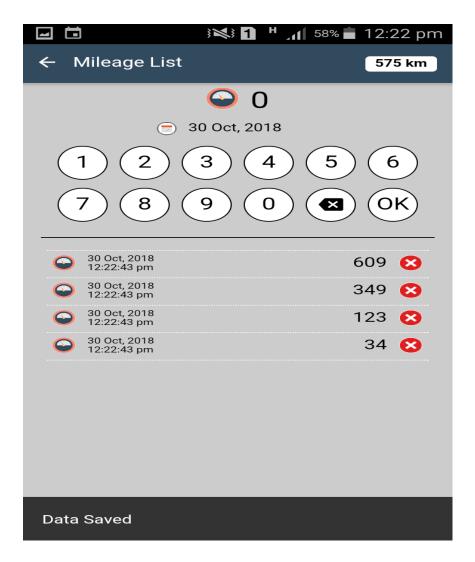


Figure 4.6.1:Mileage List page

4.7 Implementation Requirement

Different types of hardware and software have been used to develop this project. We also use various platforms for the implementation of the application. In this section, we discuss about the overview of all of the requirements for implementing the project successfully.

4.7.1Resource Requirements

Resources including various hardware and software are required for the execution of this project. These include the following:

- **Software requirements:**
- Android Studio

- PHP Storm
- XAMPP Server
- Adobe illustrator CS6
- ❖ System Requirement:
- Microsoft Windows 7/8/10
- 4 GB RAM or higher
- 2 GB available disk space
- Android Phone or Tab (minimum Lollypop version)
- Internet Connection

4.7.2 Android Studio

Android Studio is an Integrated Development Environment (IDE) for Android App development[4]. This official tool includes everything one needs to develop an Android application. These are SDK Tools, SDK Build Tools, SDK Tools Platform, Android Grade Plugin, Android Emulator etc.

4.7.3 XAMPP

XAMPP is an open-source cross-platform web server. It consists of Apache HTTP Server, and interpreters for PHP scripts and Perl programming languages. It is possible to make transition from a local test server to a live server. It is being used as a development tool to facilitate programmers and website designers to test their work on their PC without any access to the Internet. It is able to serve web pages on the World Wide Web (WWW).

4.7.4 Adobe illustrator CS6

Adobe Illustrator is a vector graphics editor which is developed and marketed by Adobe Systems. It is used for creating logos, graphics, fonts and animation for the photorealistic layouts.

Implementation and Testing

It is necessary to make it clear that this project was designed and developed entirely based on collecting information from existing systems, concepts and imaginary scenarios. To remind the readers of this report, many developers are still arguing about the core concept of different components of the android-based education system. Their opinion is that we are trying to implement the new system Implementation of Front-End Design the screenshots below show the main project view. Capture an image of what you see on your mobile screen and how to use it.

5.1 Implementation of Database

The database contains all the data of income list, expense list & mileage list. User can insert and delete data of database. If user add income the balance will increase, if delete it will decrease. If user add expense the balance will decrease & if delete the balance will increase.

5.2 Implementation of Front-end design

Activities of system are managed as an activity stack. When a new activity is started, it is pleased on the top of the stack and became the running activity. Activity implementations can make use of the fragment class to better modularize of code, to build more interface for larger screens, and help working capability our application between larger and small screens. For implementation, we have to work on our test alignment on the layout. Because most of the time we use string to call the text view on our app. In android app, size will increase if we build much activity so we have to convert our law details from activity to fragment. Button alignment has been done properly. Therefore, toolbar does not need implementation.

5.3 Implementation of Interactions

In this application, user calculate his/ her daily, monthly or lifetime income. In home page, there are add income, add expanse and add mileage option. User add their every trips income in add income option. User add their expense like fuel cost, engine oil cost, parking fee, wash fee, service charge, accessories and the other cost can add in add expense option. User can add his /her vehicles mileage. User can know how much fuel he use from mileage.

5.4 Testing Implementation

Implementation is process of setting an action for the formulated plan. Before when we implement, that plan should have been accomplished and our purpose should be clear. We are testing all pages and we can access the all pages no debug are here. Some pages/features description this below-

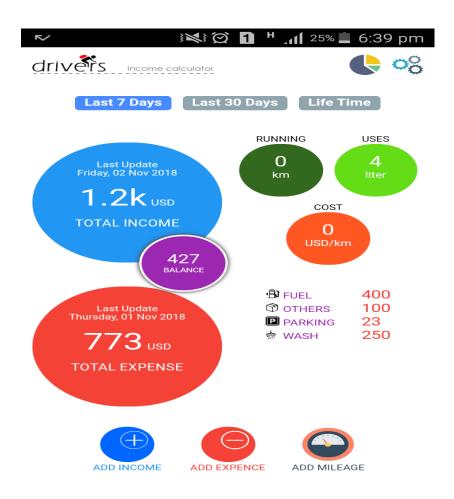


Figure 5.4.1: Home page

In figure 5.1, there are the home page where show user total income, total expense, which kind of expense goes how much money. And the mileage and how much fuel used.

5.4.1CODING STANDARDS

I already show the coding standards design in design specification chapter. There we implement different type of programming language like java, html, css. User can run this application in android studio, sql, dot net.

5.5 Test Result and Reports

While testing the calculation of balance from total income and total expense.

In figure 5.5.1, there insert every trip income and create a income list and calculate total income.

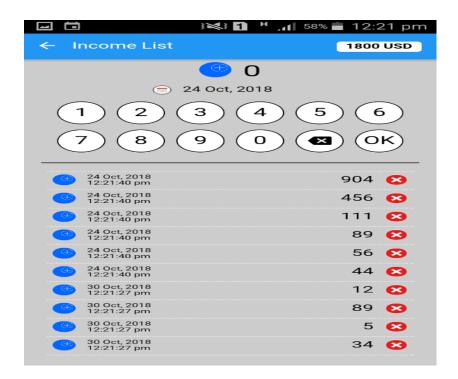


Figure 5.5.1: Income List

In Figure 5.5.2, there insert all expense and create a expanse list and calculate total expanse.

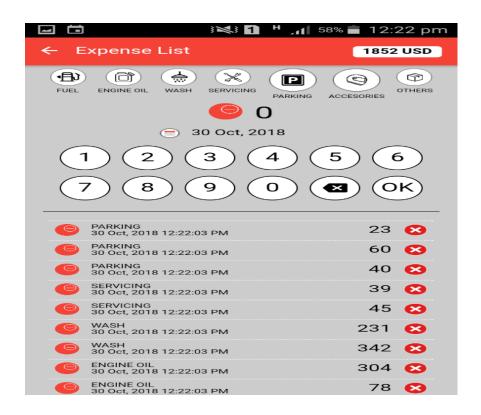


Figure 5.5.2: Expense list

Figure 5.5.3, there show balance which is calculate from total income and total expanse. And also show the total fuel cost, total engine oil cost, total parking fee, total servicing charge, total wash charge and others expanses.

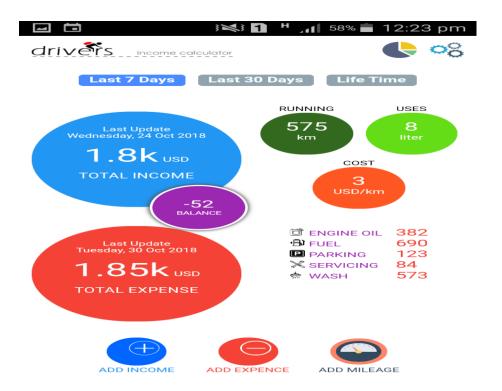


Figure 5.5.3:Balance and other outcomes

Conclusion and Future Scope

6.1Discussion and Conclusion

Throughout the process, I enjoyed working with the organization and it was a great learning experience[5]. I had the privilege of going through entire Software Development Life Cycle right from the necessity-gathering phase. Particularly, the software engineering concepts that I learned theoretically were actually complete practically.

While acknowledging all the help that my seniors observed to me and with due respect and sincere thanks to my teachers who were apparatus to shape me out, I submit my project report for your kind discretion. Though I have paid absolute attention to incorporate the maximum figures in my report, I take this opportunity to beg your grace for any inadvertent error in the data that has been gathered and incorporated in this report.

The drivers income calculator application we made ideal to calculate income/expense/mileage. With this app, user can now easily calculate income/expense/balance and show every kind of expense total cost separately. This application will make the drivers life much easier than before. The GUI provided is so simple that any apprentice can also learn to use it.

This application will be make drivers happy because they need not to use hand writing notepad or memories any of their income or expenses for calculating balance. The user can easily figure out perfact calculation. The entire estimate will be done automatically and all the record will be saved in the system.

6.2 Goal

Our main goal is to create an android application where a driver can calculate his income or expense & how much fuel he/she uses.

6.3Scope of Further Development

- ❖ We think our project will more efficient and useful in the future. There are many attribute and information to add our project future time.
- ❖ We think that user will save his every trip location and create location chart.
- ❖ We can use artificial intelligent in future time such as feedback or short description about trip.
- ❖ We can make for website based on android drivers income statistic.
- ❖ In future we can be updated the interface design.
- ❖ We think our project will more features and functionalities will be added.
- * Reliability of the application should be increased.

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