SMART TRAVEL GUIDE (STG)

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Abstract- *There is no doubt that travel is one of the top three sectors disrupted by technology. Travel apps are taking the center stage in the mobile app development, as more and more people are using them. The travel industry is growing drastically as never before and since there are always new apps coming out one of the most thought over questions is what are the essentials ingredients of the best travel apps? There are tons of different travel apps out there today, with all kind of interesting features. In today's market there are different app with different-different function, as an example google maps for maps and location, other is trivago for hotel booking and so on. The main problem of frequent travelers who are traveling whole around the world needs this kind of app, but due to limited storage and switching to different apps it becomes tedious for the traveler and spoils the mood. So, the smart travel guide app is the solution for the traveler, which will give integrated features of all other featured apps in one app.*

Keywords: *Travel guide, Android app, Weather forecasting, Hotel finder*

1. INTRODUCTION

The aim of the project is to develop an android app that helps travelers on his journey. The purpose of our project is to provide the basic idea on some common conversation in the different places that the travelers need to go after coming to that place. The main aim of this research is to develop a mobile travel guide application with added functions to an existing application. Especially in this application, the interaction between users is the new function compared to traditional travel. The main objectives of the project are to understand the basic of android development involved in app development, to understand the trends and working of Travel app currently used, to understand how to implement the different algorithm on the real-time problem, to understand the flow in software development and documentation associated with it.

2. PROBLEM STATEMENT

The main problem of frequent traveler who is traveling whole around the world needs this kind of app, but due to limited storage and switching to different apps it becomes tedious for the traveler and it spoils the mood. By surveying the frequent traveler, we get to know the need of them they wanted an app which has the functionality of all various travel app does in the market today. The goal of the project is to do develop an android app that helps traveler on his journey. The purpose of our project is to provide the basic idea on some common conversation in the different places that the travelers need to go after coming to that place. The main objective of this research is to develop a mobile travel guide application with added functions to an existing application. Especially in this application, the interaction between users is the new function compared to traditional travel.

3. METHODOLOGY

We will use the agile methodology, Object-Oriented Programming model and MVP and MVC are architectural patterns in our project.

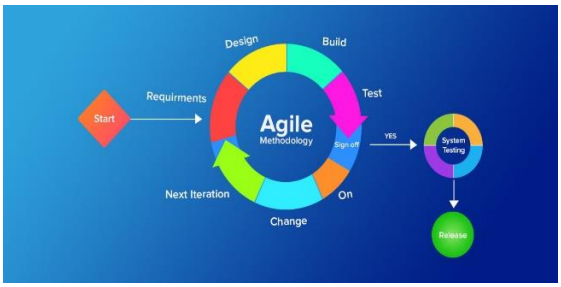


Fig (Agile methodology)

Agile Methodology is the term that is used for accrual and iterative app development approach that involves breaking down of the whole mobile app development process cycle in a number of different tasks. The whole set of segregated processes are then categorized in a number of sub-tasks, where each one of the tasks is treated as separate modules along the app development team. Then, every single of the module is handed over to a specialized cross-functioning team of specialists who then work on every module as an independent mini-project.

The method helps multiple teams with developing the different parts of the app simultaneously. The complete project then becomes a blend of several small modules. When you employ Agile development for

mobile apps, it not just reduces the amount of associated risk, but also give the developers complete freedom and flexibility for developing an amazing mobile app, which holds the ability to adjust to alterations very quickly, post-release.

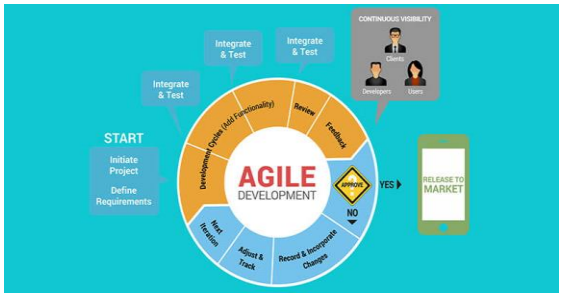


Fig (Agile cycle)

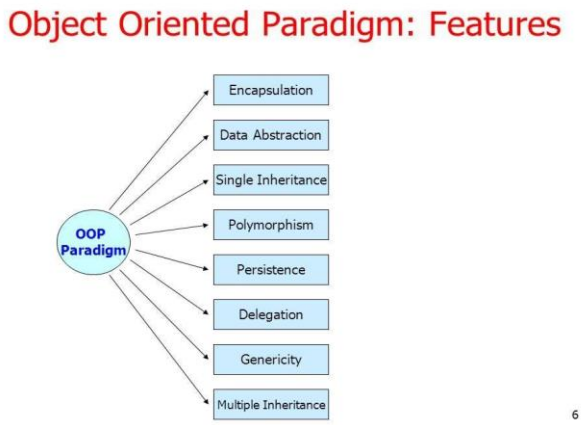
- Short development cycles
- Short life cycles
- Frequently shifting user demands
- Limited hardware
- Must download quickly
- Must be easily updatable

Software Development Paradigm:

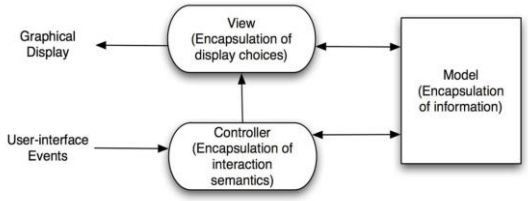
Object-oriented paradigm:

"Paradigm" means "a model of something". The Object-Oriented Paradigm is a way of looking at this Object-Oriented Programming model. Object-oriented programming (OOP): It is a programming paradigm based upon objects (having both data and methods) that aims to incorporate the advantages of modularity and reusability. Objects, which are usually instances of classes, are used to interact with one another to design applications and computer programs.
The important features of object–oriented programming are –

1. The Bottom–up approach in program design.
2. Programs organized around objects, grouped in classes.
3. Focus on data with methods to operate upon the object's data.
4.The interaction between objects through functions.
5. Reusability (Inheritance) of design through the creation of new classes by adding features to existing classes



Software Architecture:

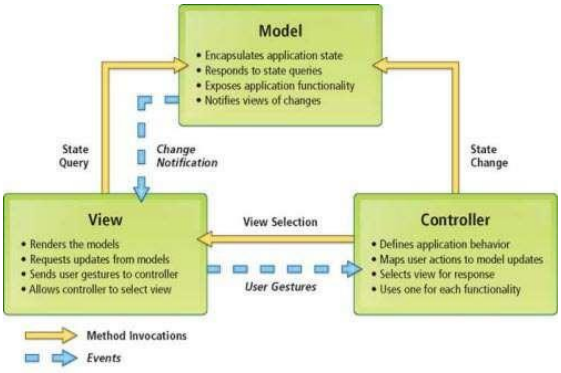


MVP and MVC are architectural patterns. The idea behind them is that many software systems that have user interface can be divided into three components:
 The component that stores a system's state (whether this state persistent or not). This component is referred to as Model.

 The component that handles input-output from/to the user. This component is referred to as View.

 The component that encapsulates the logical functionality of the system. This component is referred to as Controller/Presenter.

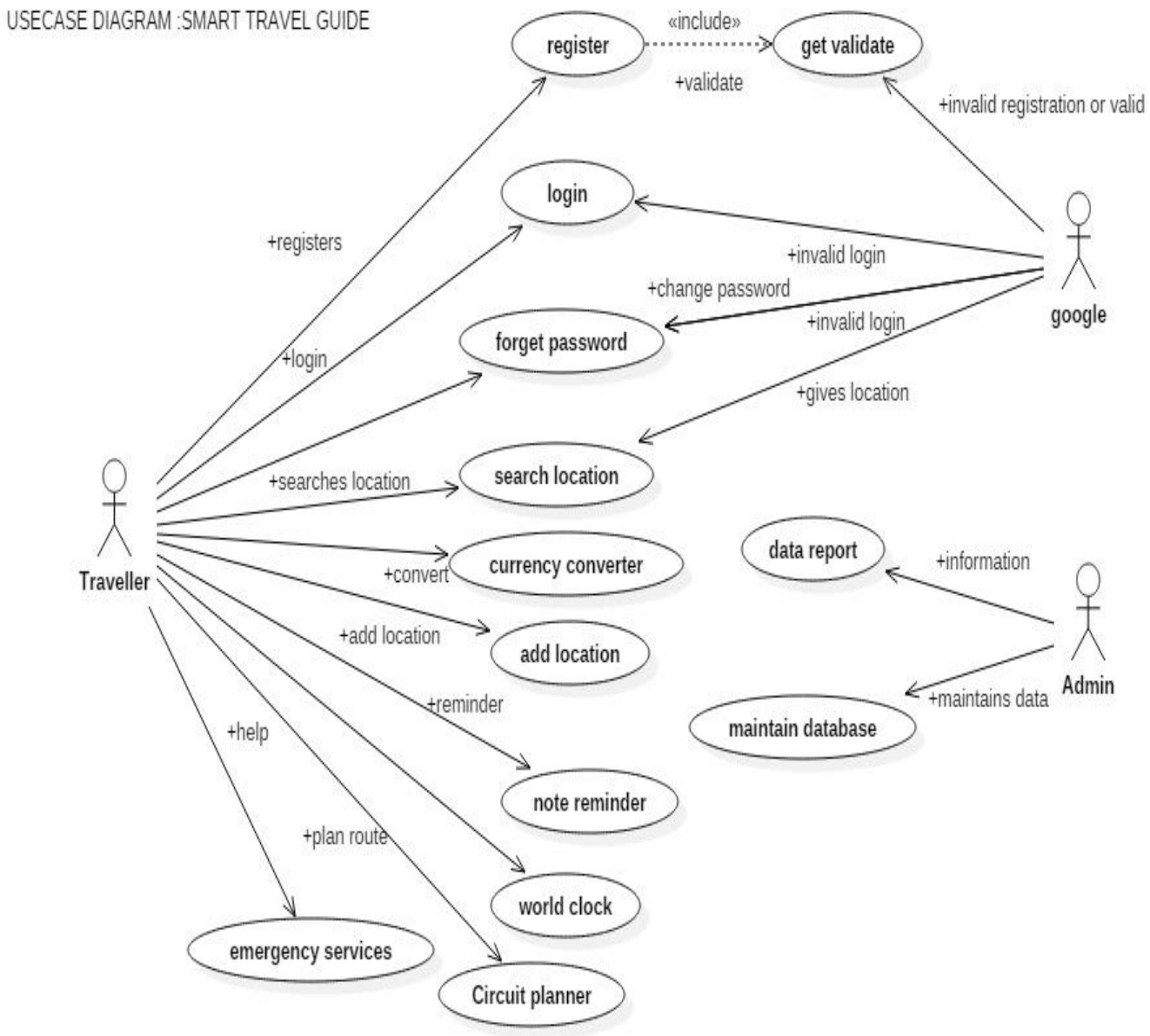
Components of a good MVC/MVP implementation should be decoupled as much as possible: it should be possible to switch from one input/output entity (View) to another or to change the location or the type of persistent storage mechanism (Model) without affecting other components.



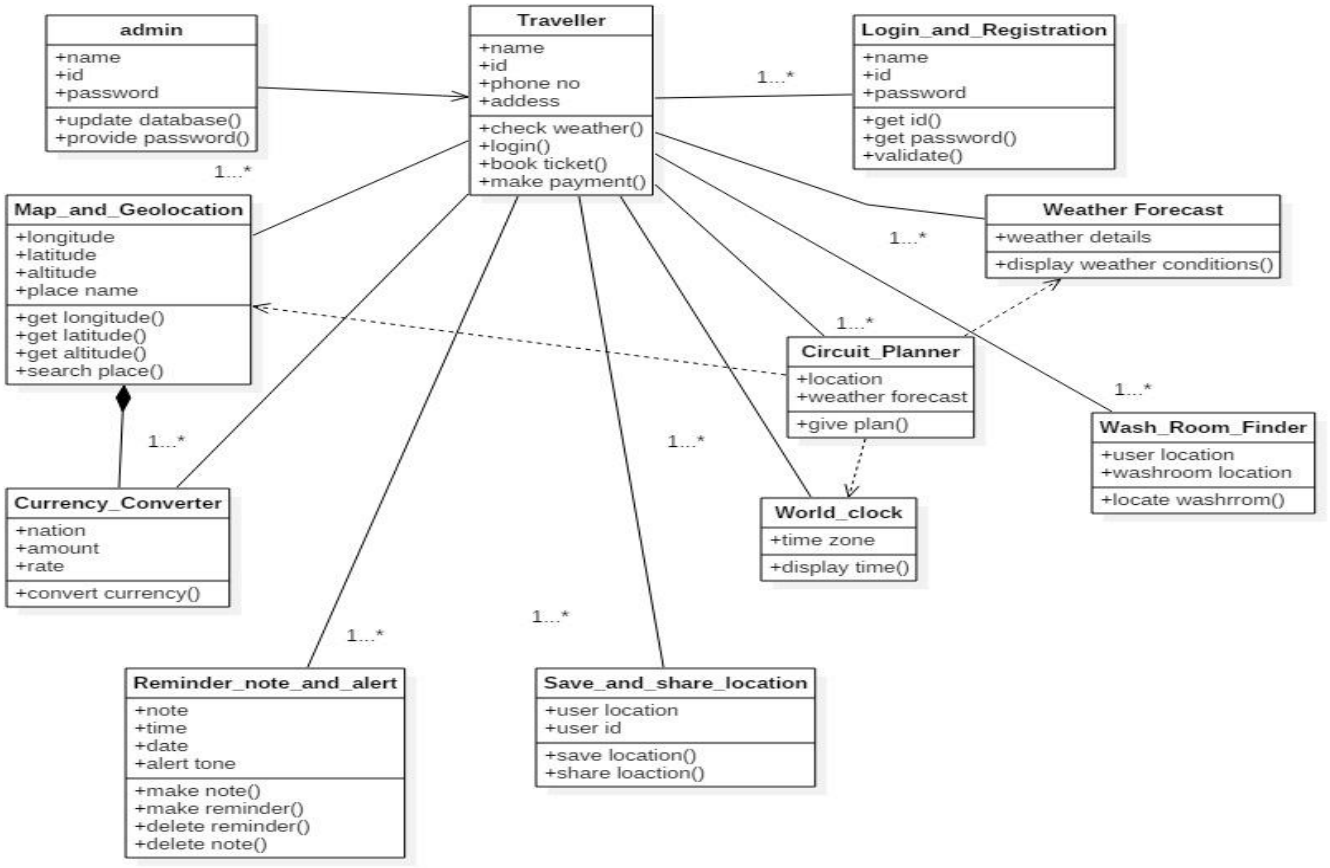
4. FUNCTIONAL REQUIREMENT

1. LOGIN AND SIGN-UP: To authenticate a user of the app
2.TRIP PLANNER: This will allow plane the trip from source to destination
3.GEOLOCATION: This will give the exact location of the user in the unknown area on travel
4.CIRCUIT PLANNER: This finds the optimal route for multiple location stoppage points between source and destination.
5.WEATHER FORECASTING: With the current user location weather of that area will know to user
6.WORLD CLOCK: With the current user location time of that location will know to user
7.CURRENCY CONVERTER: This will help for international traveler to convert the currency with a live real-time exchange rate.
8.SAVE AND SHARE LOCATION: This will help to save the location for future visiting and to share that location with friends
9.EMERGENCY SERVICES: To get emergency help near you
10.WASHROOM FINDER: Will help you to find restroom near to you in case of emergency

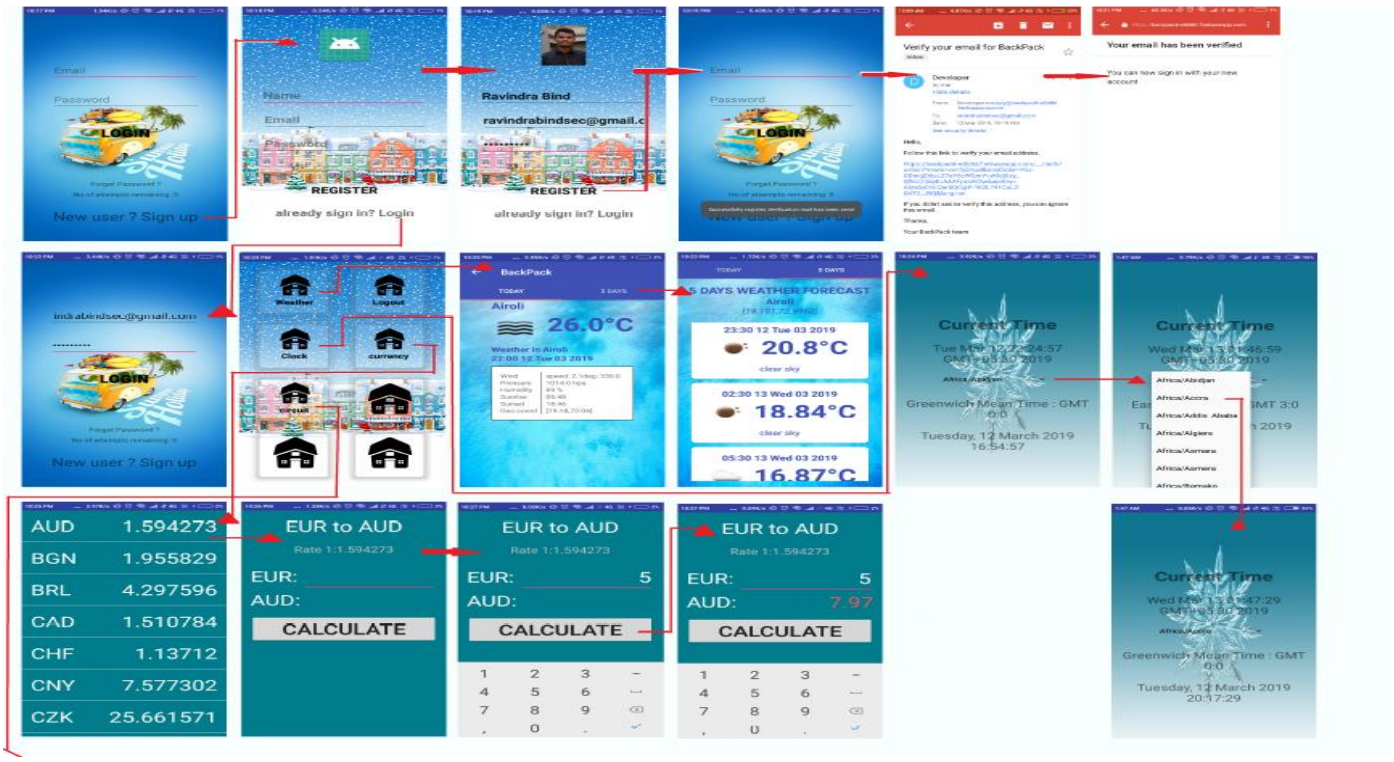
5. USE CASES

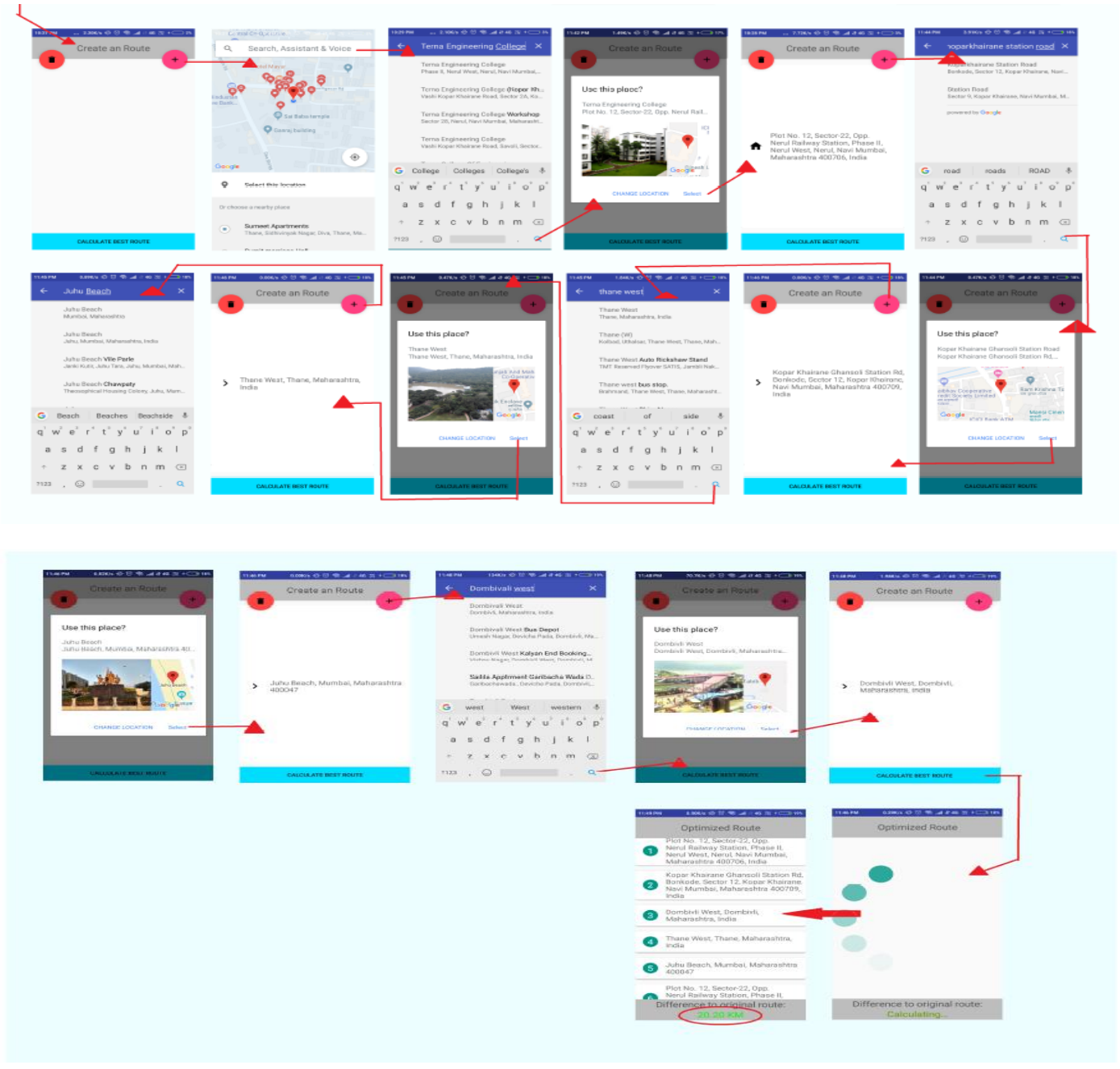


6. CLASS DIAGRAM



7. USER INTERFACE





8. CONCLUSIONS

From the analysis of the result, we can conclude that our smart travel guide app is able to meet up the requirement for the traveler for a great traveling experience. As a conclusion, the design of the smart travel guide is able to perform as expected and can be further analyzed for future enhancement so that new features could be focused to produce a better solution by improving the effectiveness of the app. It enables free, secure, fast and easy usage. We can also conclude that the use of smart travel guide will definitely benefit the user by saving storage and time of the user which in turn makes this app user and practice-friendly.

Hence, we have successfully drafted our project report on the proposed system. The proposed system offers a smart travel guide, which could be used by travelers on their journey.

9. ACKNOWLEDGMENT

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10. REFERENCES

1) B. Wong, I. Stoyanov, E.G. Sirer. "Octant: A Comprehensive Framework for the Geolocalization of Internet Hosts". In Proceedings of the Symposium on Networked System Design and Implementation, Cambridge, Massachusetts, April 2007.

2) D. Li, J. Cheny, C. Guo, Y. Liu, J. Zhangy, Z. Zhang, Y. Zhang. "IP- Geolocation Mapping for Involving Moderately-Connected Internet Regions." Technical Report 2009

3) D. Chatzopoulou, M. Kokkodis. "IP Geolocation." Computer Science and Engineering Dept UC Riverside Technical Report 2007

4) Cao L. & Tay F., (2001) "Financial Forecasting Using Support Vector Machines," Neural Comput & Application, vol. 10, pp 184- 192

5) Agboola A.H, Gabriel A. J, Aliyu E.O, Alese B.K. "Development Of A Fuzzy Logic Based Rainfall Prediction Model "International Journal Of Engineering And Technology Volume 3 No. 4, April 2013.