

PROJECT PROPOSAL

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1. Title of the project : **TRAIN & RAILWAY MAP MANAGEMENT SYSTEM**

2. Overview of the Project

The project is about a train & railway map management system in order to identify the destination station using google map. It gives the path from current location to destination through the railway according to the train. It shows all the stations which the train is about to stop along the way according to the train and we can keep alert to destination place or earlier station via the system. It gives the feasibility to books train via system. We can get all the train's time slot and other details from this.

This system is developed as an android mobile app which can be used via mobile phones. It is similar to the google road map which is currently used in mobile phones.

We can find out the path from source to destination by giving the input, source and destination stations. Furthermore by giving train's name or number as input we can notice the station where that train will be stopped will the journey.

3. Objectives of the Project

The main objective of the project is to develop software system using all the knowledge that have learned so far. And it provides an easy and useful system to train travellers by using this mobile app to go to any place where they never have gone by train confidentially. Tourists will be the special target travellers whom have identified for using this system. Furthermore user can get all the other major facilities like booking train, viewing train schedule via this system. Additionally user can keep alert to a specific station if he wants to get nap or do something else without seen the map all along the way.

4. The Need for the Project

According to the current procedure every station announced which train is arrived where it is leaving and what are the stations, it is going to be stopped. So that travellers who were in the station can get that information before they were get into the train. But after they get into the train they always have to look out at each and every station to notify what is the current station. Sometimes they missed the station name board. It is a big issue if the traveller is a visitor with that way.

Therefore this system gives the facility to every traveller to identify the stations and path from source to destination by themselves.

5. Scope of the Project

The major purpose of the Train and Railway management system is to provide google railway map with the facility to search source to destination path through the map just like in google map. User gives the source and destination names and then the system

automatically detect the railway path. Furthermore it displays all the station where given train is stopped according to the train. For an example normal trains stopped at every station along the way, but intercity and express trains are stopped only at the main stations. System also contain a database management system to store special data. User can book trains, view train schedule via this mobile app. User can view path from current location to destination and identify where now they are. Without seen map throughout the journey user can keep alert to the destination station and do something else. Furthermore there is a system admin who manage the system. He is responsible for user authentication management and he is always keep alert with the system. Officer who is responsible with the system can add new train schedules, update train schedules, and he can made reservation when traveller books a seat.

Main user roles:

- System admin
- Officer
- Traveller

6. Deliverables.

Desired main output of the mobile application would be map which provide the feasibility to find out the path to destination and stations along the way. It contain railway map. Furthermore it provides train schedule and train reservation GUIs. It provide search feasibility via another GUI. It has alarm system to keep alert to station where user specify.

7. Overview of Existing Systems and Technology

Even though there are many apps to find time slots for trains [4][5][6], according to current experiments there is not such automated system having functionalities to find out path from source to destination along with the stations where train is going to stop while the journey. There are railway maps on internet but we can't find out source to destination path [2].

Sri Lanka railway department website contained a reservation blog [1]. But we can only find out a phone number and reservation is made via phone call. But through our system we can facilitate online reservation. And even destination alert system is also very new idea.

Tools/ Technology

Microsoft Visio - for design basic diagrams like class diagram, sequence diagram, use case diagram etc.

Android Studio – for design the mobile app. (use Java as language.)

SQLite – for database management

Android API Utility Library – for design google map view. [7]

8. References

- [1] <http://www.railway.gov.lk/web/>
- [2] https://www.google.com/mymaps/viewer?mid=1MWgzBW7Lpk...hl=en_US
- [3] <http://podimenike.blogspot.com/2012/10/rail-road-distance-in-sri-lanka.html>
- [4] <https://play.google.com/store/apps/details?id=lk.icta.mobile.apps.railway&hl=en>
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- [7] <https://developers.google.com/maps/documentation/android-api/utility/>
- [8] <https://developer.android.com/guide/index.html>