
Software Requirements Specification

for

Transit Pakistan

Version 1.1 approved

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Revision History

| Name | Date | Reason For Changes | Version |
|---------------|--------|------------------------------------|---------|
| Maaz | 250116 | Initial Specification | 1.0 |
| Sajjad, Haris | 270116 | Added Appendix containing Diagrams | 1.1 |

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1. Introduction

1.1 Product Overview

Everyday 2 Million residents of Karachi uses public transport. There are a number of options available to these commuters including Buses, Mini Buses, Coaches, Chingchis, Rickshaws & Taxies. Yet an average commuter still wastes around 20 minutes per day waiting at the bus stop doing absolutely nothing which amounts to wasting 10 days per year. Moreover, vast majority of these commuters have obscure information about public transport routes. Transit will enable people's access to public transportation information like bus routes along with other cost effective travel options like cab service. This will empower commuters and increase the reach of urban transport. Transit will enable people's access to public transport information like bus routes along with other cost-effective travel options like cab service. The project will cover public transport routes, ride options, cost effective route & ride option, average time for each route along with a responsive highlighted visual representation of route on Map.

2. SPECIFIC REQUIREMENTS

2.1 External Interface Requirements

2.1.1 User Interfaces

The user will provide the starting point from where he need the ride and select destination and click on submit button. After users submit the information, the query will be process by online information server and result will be displayed on second user interface which shows the details of different rides along with the respective time and average cost. The details of different rides will elaborate the information related to the transports which goes from this route. Below the details there will be a Google Map which shows the shortest and suggested routes. It depend on the user to opt required respective route and map will be highlighted respectively.

2.1.2 Software Interfaces

The main software interface of our project is Transit Pakistan's API. Other software interface such as Mobile Apps on Android and iOS platform, Web pages and SMS service will use this API to get related information form Transit Pakistan Information Processing Server.

2.2 Software Product Features

Our Project will provide following Software product features.

- **Ride Options:** Our Project will give suggestions about the Routes & the Rides that users can take to reach your destination safely.

- **Map Navigation:** The selected Route will be highlight on Map. This will help users to better understand & visualize their selected routes & the areas around their routes.
- **Cost & Time:** Our Project will provide information about Ride suggestions with the average time & fares so users can select their Ride with time & budget constraints.
- **SMS Service:** Our Project will also have support for SMS queries. User will have to send his SMS with Location & Destination details, the Information Processing Server will process the query & respond suggestion in a replied message.

2.3 Software System Attributes

2.3.1 Reliability:

The information provided by Transit Pakistan API will have average reliability specially related to time, fare and highlighted map.

2.3.2 Availability:

Our app required internet service to access the information from online information server to attain the details related to routes and vehicles.

2.3.3 Maintainability:

The application is effectively maintainable incase changes have to be made in information related to rides, routes, cost or time. All this work will be maintain from Transit tool.

2.3.4 Portability:

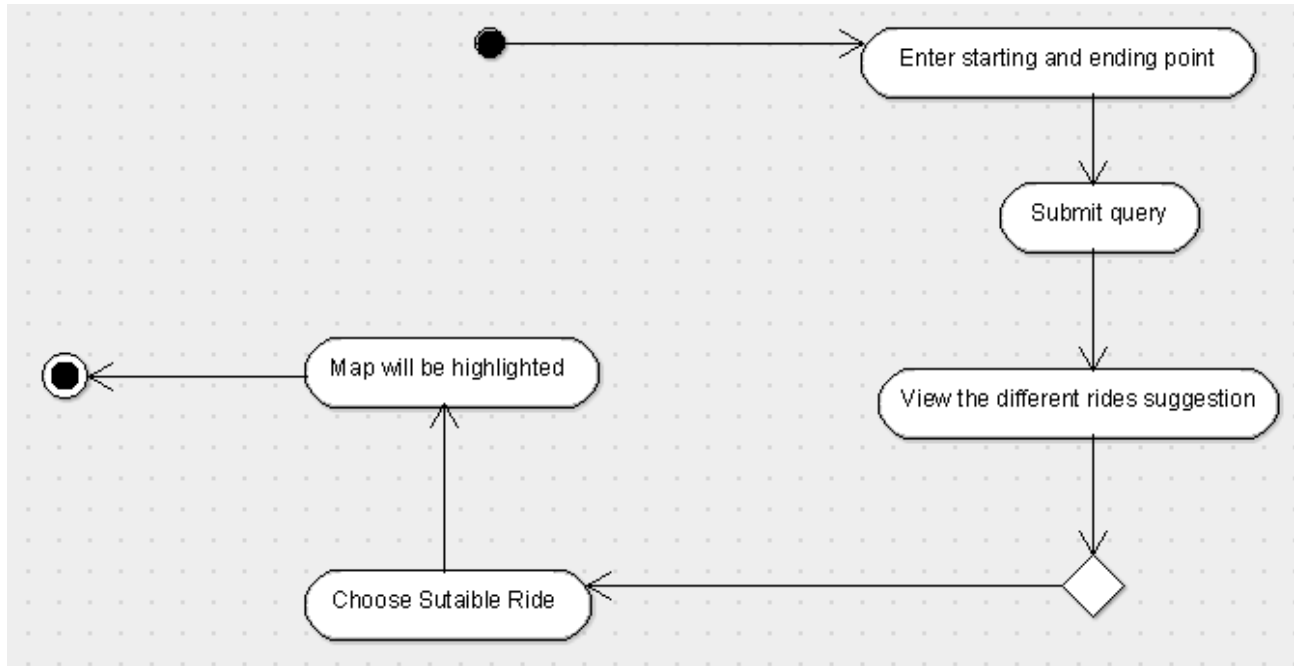
Our projects API can be used in different platform like iOS, Android Mobile and web application.

2.4 Database Requirements

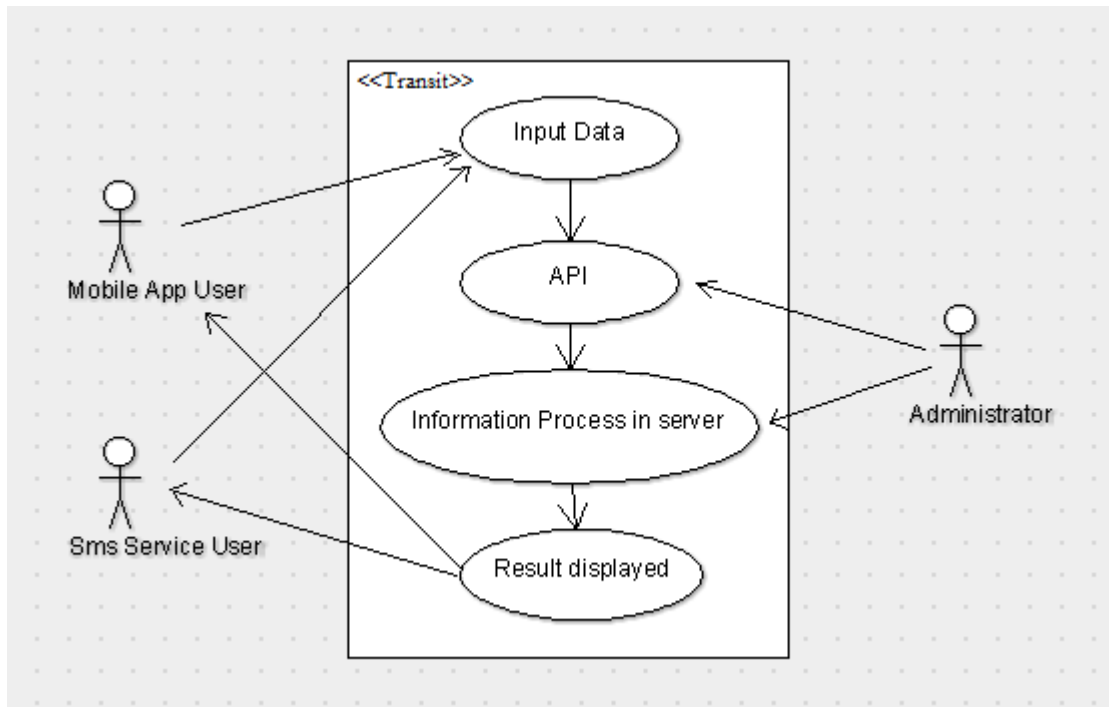
Transit Pakistan Information server consist of combination of MySQL and File system database while Transit Tool uses local MS SQL database.

3. Appendix

3.1 Activity Diagram

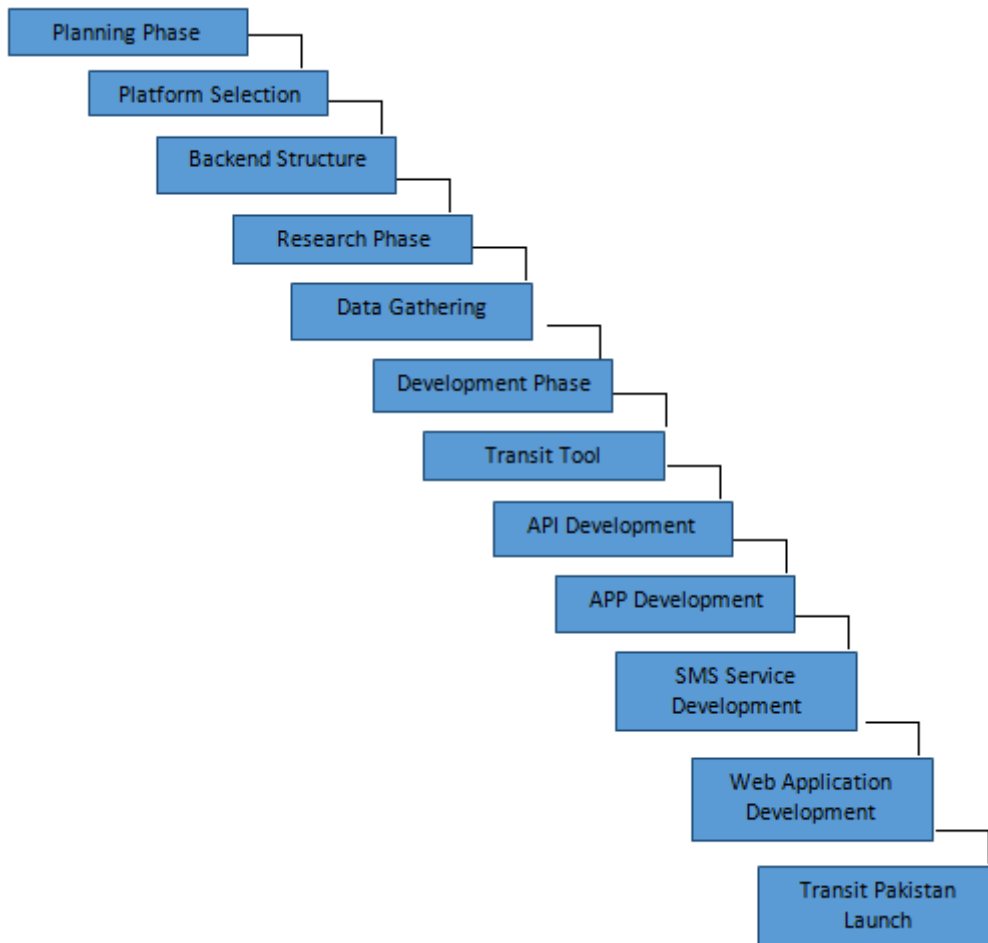


3.2 Use Case Diagram

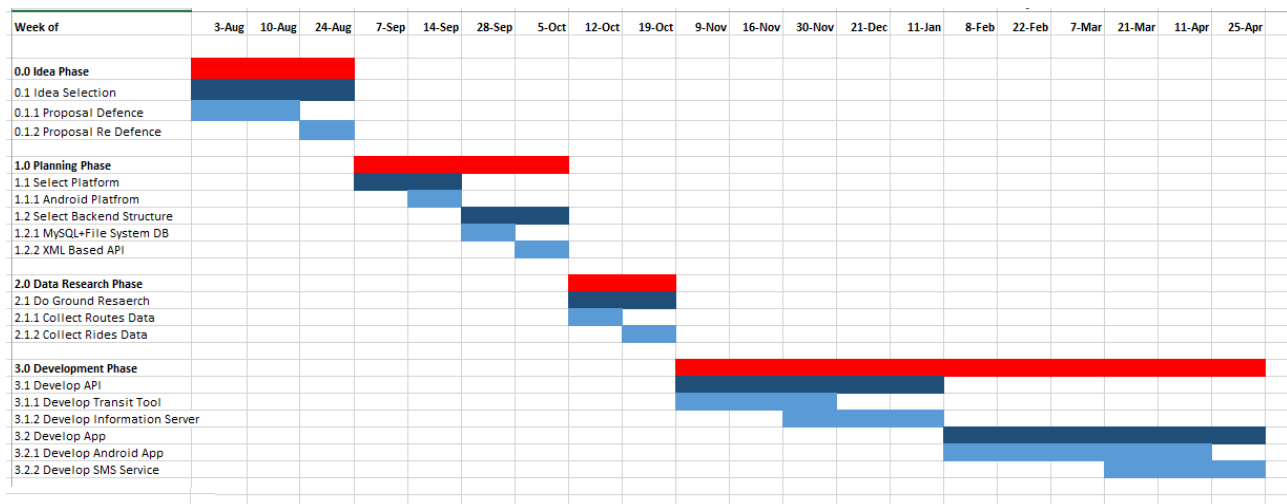


3.3 Software Process Model

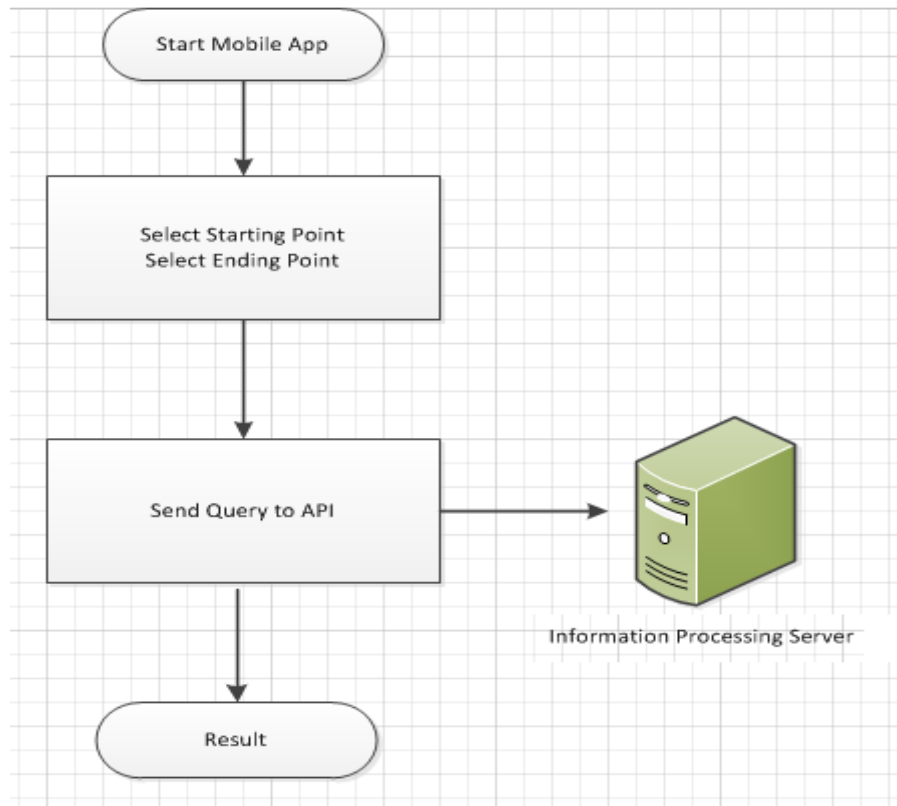
We are using Waterfall software process model to develop Transit Pakistan.



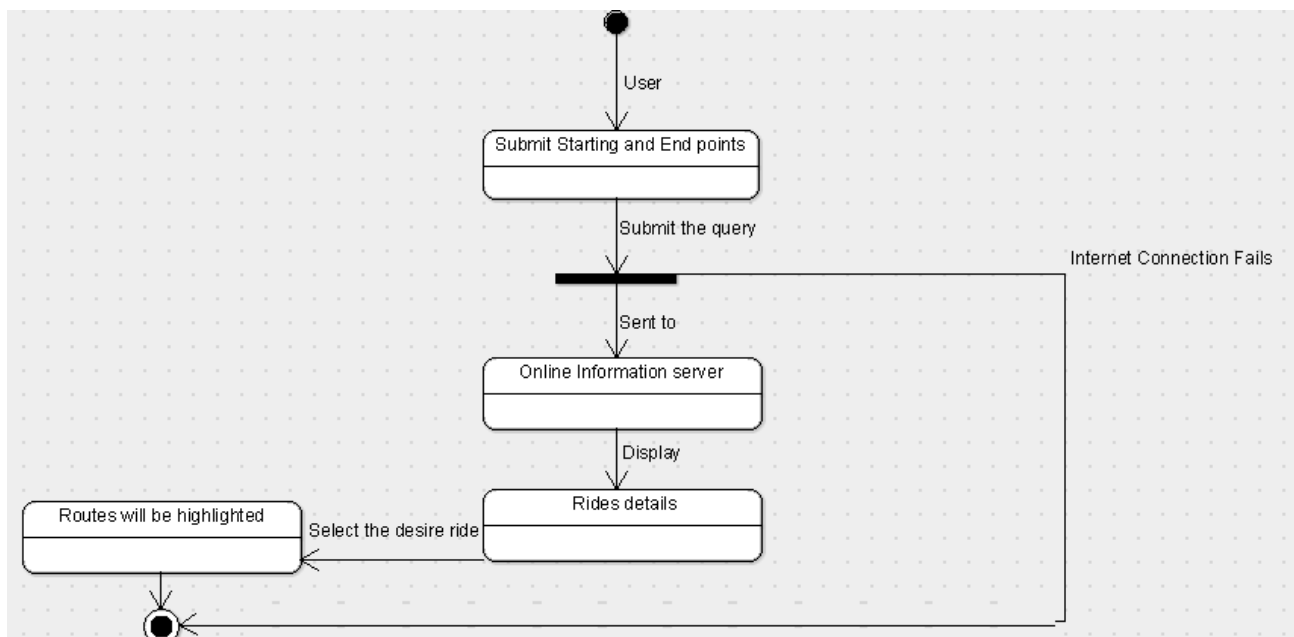
3.4 Gantt Chart



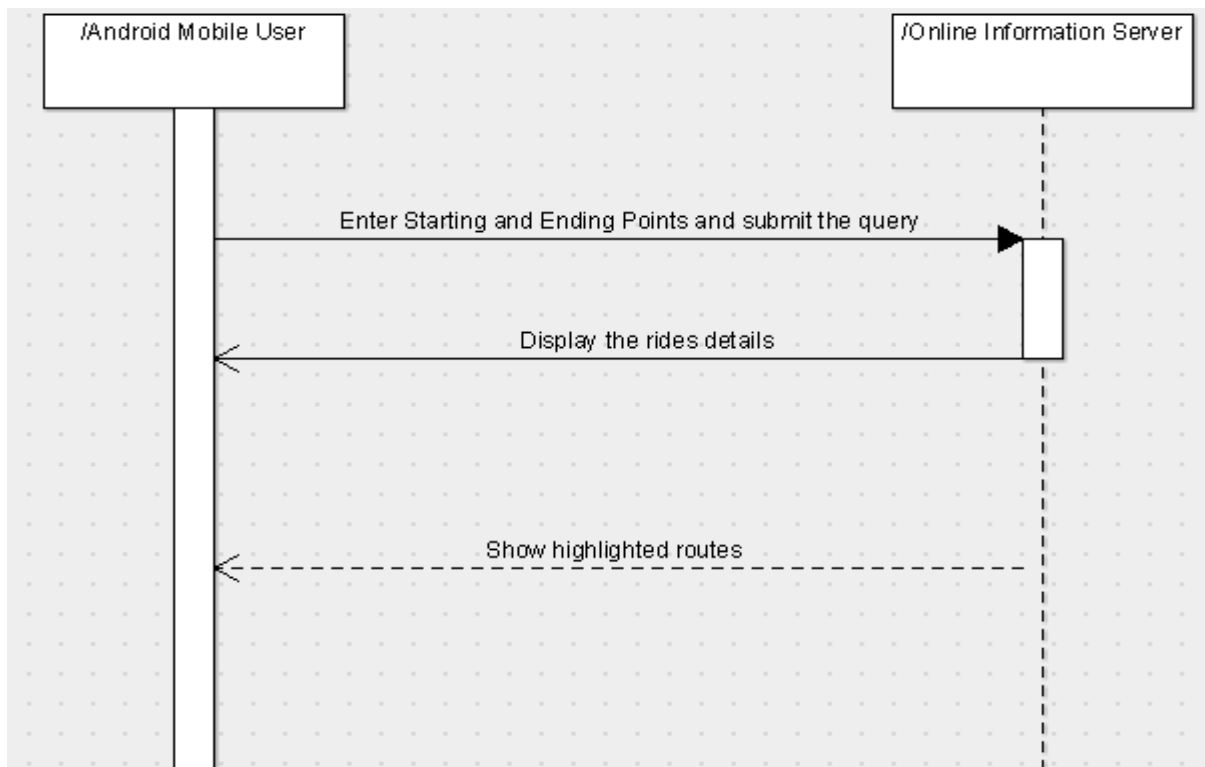
3.5 Work Flow Diagram



3.6 State Machine Diagram



3.7 Sequence Diagram for Android User



3.8 Sequence Diagram for SMS Service User

