

## Smart Passengers

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**Abstract:** The “SMART PASSENGERS” is android app used for railway and bus reservation. This software can work as long as it is supported by the mobile also this product is upgradable. Various additional features can be added as per the customers increasing needs in future. Upgradable stuff or additional features which can be included in future includes that this software can be upgraded for state indicator as the current product will be just implemented for Mumbai city which may also can be implemented for metro-politician cities. Further it can also be upgraded to include Express railways tickets reservations also user interface can be simplified. Thus project scope is for long period with upgradable qualities.

**Keywords:** Mobile App, E-Traveller, Data Warehousing.

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### I. INTRODUCTION

There are free as well as paid apps. There are few apps which initially are available for free, but later a minimum fee is required to relish premium benefits. So apps that do not need internet connection can be used “anywhere and everywhere” i.e. app can be used offline and “Smart Passengers” application requires internet. As we know the current software or rather the software’s which are used for railway indicators or bus indicators are only used for timely updating of the train or bus arrivals with other additional features like fare of train and buses by specifying source and destination. Also information about various spots or places is provided but there is no such software which provides railway or government buses tickets reservation. But what about ticket reservations where one can’t reserve tickets online when they rush out of time, people have to stand in long queues to take tickets thus to overcome this constraint we are creating a software product named “Smart Passengers”.

Unlike of such software’s the product which we are developing is such that which we will overcome the demerit of the earlier software i.e. demerit of the ticket reservation for government railway or buses. This product will be an android application which will allow the user or the customers to reserve tickets for railways and government buses without wasting time in long queues at railway station etc. This product will be very useful when people are in hurry for their work or rush out of time. This process is very much time consuming and it involves a lot of manual work to be carried

out Thus, the project entitled “Smart Passengers” has been developed for the betterment for peoples.

### II. MOBILE APP MARKET STATISTICS

The use of mobile application is widely increased (free, paid, and ad supported) applications, they says that the users of mobile application is increase day by day after the peoples starts using Smartphone’s. the top mobile phone manufacturing company Apple ruled the market in 2009 [2]. Other Smartphone companies like Android, Google, and Nokia have started creating a marketplace for themselves in the mobile apps field with the emerging smart phone market.

Not only android, nokia or other smart phone companies starts developing apps for their users. The android applications are very user friendly that’s why the smart phone users widely use applications for their ease.

Mobile applications attract wide smart phone users in the past years. And it is possible that it continues in near future also. Because without application the smart phone is useless. The biggest advantage of the mobile application is that the apps are easily upgradable and user friendly.

### III. BACKGROUND

In now days the wide crowd is traveling from bus and train especially in Mumbai (Local trains or Best buses) for traveling the session ticket or regular ticket is required. In Mumbai peoples are always in hurry and because of Mumbai’s large population peoples have to stand in queues to buy the ticket or pass that process is so stressful for peoples when the peoples are in hurry. We are creating an android app in which user can

reserve railway and bus ticket online from their smart phone and also they can renew their pass using this app they can have an e-wallet for that or we are going provide a monthly billing facility where user is going have a monthly bill for travelling charges. The “SMART PASSENGERS” is android app used for railway ticket reservation. This software can work as long as it is supported by the mobile also this product is upgradable. Unlike of such software’s the product which we are developing is such that which we will overcome the demerit of the earlier software i.e. demerit of the ticket reservation for government railway. This product will be an android application which will allow the user or the customers to reserve tickets for railways and bus without wasting time in long queues at railway station or at bus depot etc. This product will be very useful when people are in hurry for their work or rush out of time. Our “SMART PASSENGERS” app will have six basic functions which are accessible to the user as a GUI part which serves three major functionality first is ticket reservation for railways and busses where user can reserve ticket online for bus and railways. Secondly if a user is daily traveler then he or she can apply for a pass using this app for railway and bus and then user can renew he or her pass monthly or yearly basis. There are smart cards available that can be topped up and one can use it to print tickets for themselves from an Automatic Ticket Vending Machine-ATVM’s. A season ticket can be purchased one is commuting regularly. One can choose the validity of these tickets from 1 month, 3 months to a year. Season tickets are the most cost effective and time efficient option for regular commuters. But the disadvantage of this system is that some of the machines are not working properly sometime that’s why people have to stand in queues for a long time when they are in hurry.

IV. ALGORITHM

Smart Passengers

Begin

While app is running

    Display menu to user

    Choice = get User Selection ()

According to choice

If choice is reserve a ticket

    Make user enter source and destination

    Reserve a ticket for bus or railway

If choice is selecting duration of the pass

    Make user enter source and destination

    Select the duration of the pass

    Generate the barcode

If choice is selection of renewal duration

    Make user enter serial number

    Select the renewal duration

    Make payment

End

V. LIMITATIONS OF APPLICATION

Connectivity: Connectivity is often slow and unreliable on mobile devices. This will impact the performance of mobile applications that utilize these features. We have made a few observations (research reflections) that surface lot of scope for the future areas of research on mobile application development [3].

This prototype Module has a Database Limitation it can store only few Gigabytes of data

It has bandwidth limitation it can Handel few user per network

VI. LITERATURE SURVEY

Table 1: comparative analysis between M-Indicator and Smart Passengers

FEATURES	M-INDICATOR	SMART PASSENGERS
TRAIN TIMETABLE	YES	YES
TRAIN FARE	YES	YES
TRAIN TICKET	NO	YES
TRAIN MAP	YES	YES
TRAIN ROUTES	YES	YES
TRAIN PASS	NO	YES
BUS TICKET	NO	YES
BUS PASS	NO	YES
BUS NUMBER	YES	YES
ACCOUNT DETAIL	NO	YES
USER FRIENDLY	MODERATE	HIGH
INTERNET	NOT REQUIRED	REQUIRED

VII. PROJECT OBJECTIVES AND BENIFITS

The primary objects of the present project to provide a method to reserved ticket and make pass for month travelling and user can also renew their exist passes with eases of material deigned provided by the android.

Another object of the present invention is to provide user ticket and pass facility at their finger tips and quick transaction service.

We allowed user to set the preferences during the process of the user used for this or it can be done using mobile recharge monthly billing as per the convenient of the user.

VIII. PROPOSED SYSTEM

The primary objects of the present project to provide a method to reserved ticket and make pass for month travelling and user can also renew their exist passes with eases of material deigned provided by the android. Proposed system aims at developing an Android based mobile application that reserves the ticket and also buy the pass or renew the pass for both the train and bus.

As show above our “SMART PASSENGER” app will have six basic function which are accessible to the user as a GUI part which serves three major functionality first is ticket reservation for railways and busses were user can reserve ticket online for bus and railways. Secondly if a user is daily traveler then he or she can apply for a pass using this app for railway and bus and then user can renew he or her pass monthly or yearly basis The maintenance person will update this app for renewal for fair for bus and railways in the database. Those are known to user and user can sync there mobile phone or e-wallet account so that transaction can be transparent or user can apply an e-wallet account for this app where user going to get a monthly bill for all of his transactions.

Another object of the present invention is to provide user ticket and pass facility at their fingertips and quick transaction service.

We allowed user to set the preferences during the process of ticket reservation so that transaction can be done using w-wallet of the user used for this or it can be done using mobile recharge monthly billing as per the convenient of the user.

#### IX. SYSTEM ARCHITECTURE

System Architecture includes “the overall structure of the software” and the ways in which that structure provides conceptual integrity for a system. The Overall System Architecture defines, how the data from the Smart Passengers database server, and how the data it is reflected in MIS (Management Information System) as a Web Application [1].

#### X. AUTHENTICATION USER LOGIN

Users have to register himself in the “Smart Passengers” application. And to do that user have to login with their unique user name and password. Every time when a user login through the mobile application the IMEI number, along with login credentials and the mobile number are captured. By capturing these details we provide an authenticated way through which the users can use this mobile application.

#### XI. IMPLEMENTATION DETAILS

##### A. Ticket Reservation

This app will allow user to reserve ticket for bus and local railways. User just have to select there source and destination then app will calculate fair for the trip automatically and then if user want he can pay for the same from e wallet or billing option available over there.

##### B. Pass reservation

Same as ticket reservation user can apply for daily pass using this app. H n for the same.

##### C. Pass renewal

After reservation of the pass if validity get ended user can renew it using this app he just have to enter existing pass serial number renewal duration and rest will be taken care by the app.

##### D. Route for bus and train

When user want the route for his traveling, the application will ask the user to enter the source and destination then the app will provide the route that the user is request for.

##### E. Map for bus and train

Map which includes all the station names same as M-Indicator along with routes.

##### F. Fare for bus and train

When user wants the fare for particular places then user have to enter the source and destination then the app will give the fare for that journey including the fare for first class and second class also.

### XII. DETAILED SYSTEM DESCRIPTION

The “Smart Passengers” is android app used for railway and bus reservation. This software can work as long as it is supported by the mobile also this product is upgradable. Various additional features can be added as per the customers increasing needs in future. Upgradable stuff or additional features which can be included in future includes that this software can be upgraded for state indicator as the current product will be just implemented for Mumbai city which may also can be implemented for metro-politician cities .Further it can also upgraded to include Express railways tickets reservations also user interface can be simplified. Thus project scope is for long period with upgradable qualities.

#### A. Ticket Reservation

This app will allow user to reserve ticket for bus and local railways. User just have to select there source and destination then app will calculate fair for the trip automatically and then if user want he can pay for the same from e wallet or billing option available over there.

#### B. Pass reservation

Same as ticket reservation user can apply for daily pass using this app. He just want to select the source and destination for the pass and then select the time validity. App will calculate the amount payable and create bar code file which he has to submit over station to get the pass. He can pay the amount using app or at the station for the same.

#### C. Pass renewal

After reservation of the pass if validity get ended user can renew it using this app he just have to enter existing pass serial

number renewal duration and rest will be taken care by the app.

D. DATA Base Updating

The DATA Base for ticket and pass reservation is updated by the app daily so that it will be sink with other modules. This data is going to store in a central data center from where it is used by each user

XIII. DESIGN OVERVIEW

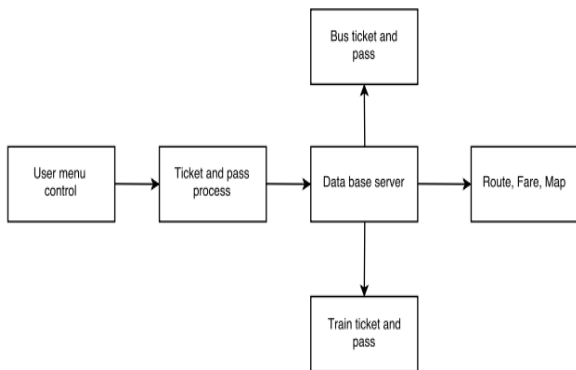


Figure 1. Block diagram (Smart Passengers Application)

As shown in the block diagram there are few basic modules first is user menu control module which is responsible for user choice selection for ticket and pass reservation and renewal the ticket and pass process block is used to calculate fair charges with help of database and user selected source and destination.

The database server is used to handle and store all the reserved information regarding registration of tickets and passes. This will be a centralized server where all the data will be get stored. Data is divided into two categories bus ticket and pass registration data and railway ticket and pass registration data which will be handled by separate blocks.

Flowchart

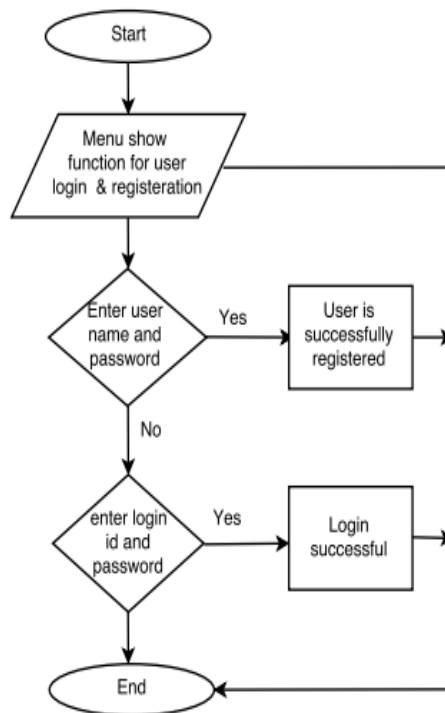


Figure 2. Registration

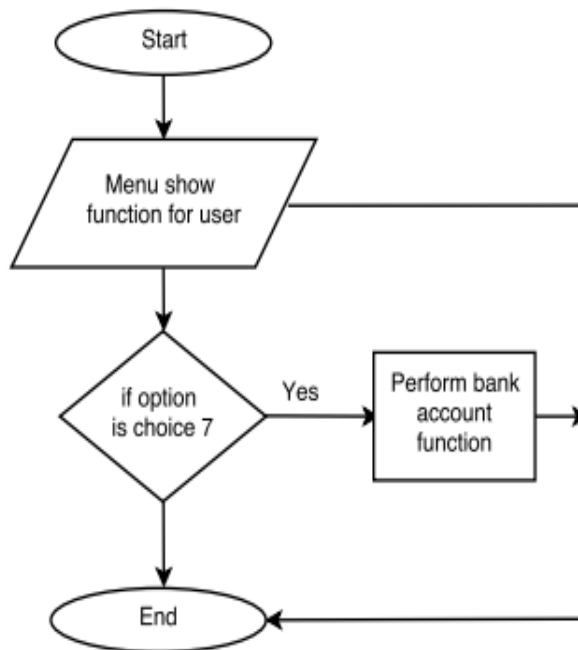


Figure 3. Bank Account

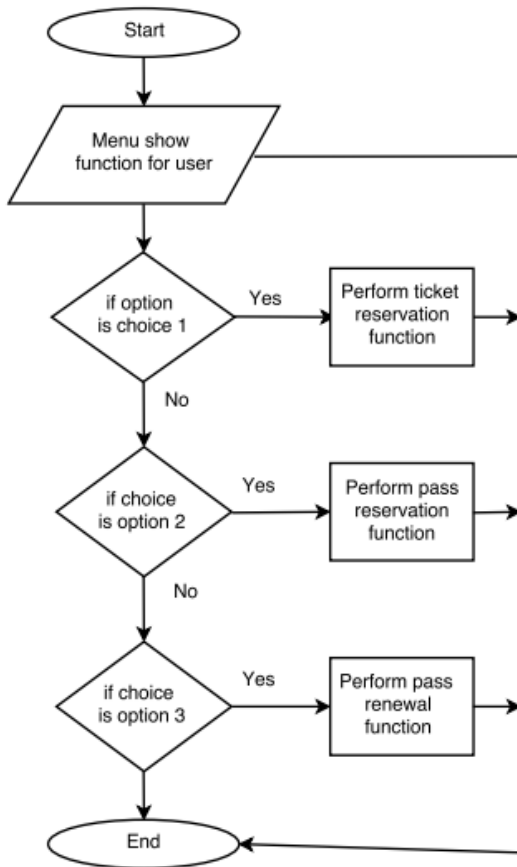


Figure 4. Reservation & Renewal

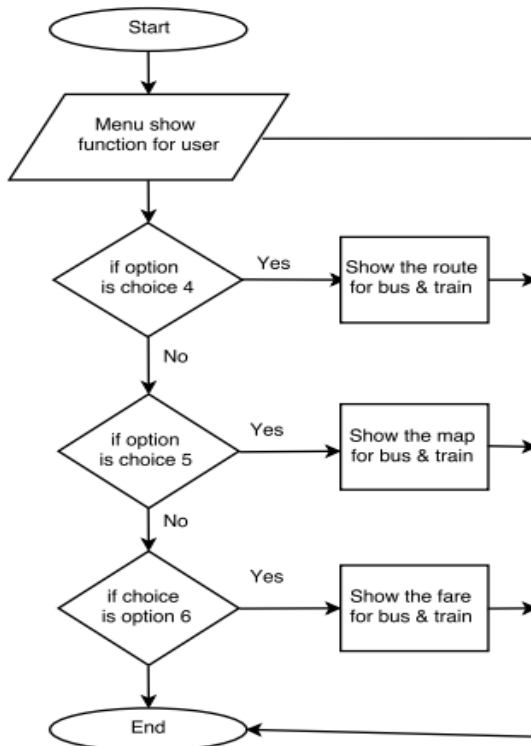


Figure 5. Route , Fare , Map

#### XIV. FUTURE SCOPE

The “Smart Passengers” is android app used for railway and bus reservation. This software can work as long as it is supported by the mobile also this product is upgradable. Various additional features can be added as per the customers increasing needs in future. Upgradable stuff or additional features which can be included in future includes that this software can be upgraded for state indicator as the current product will be just implemented for Mumbai city which may also can be implemented for metro-politician cities .Further it can also upgraded to include Express railways tickets reservations also user interface can be simplified. Thus project scope is for long period with upgradable qualities. In future this application can be extended to other Mobile operating systems. With the App Store is such a phenomenal success, mobile apps have become an essential part of the user’s daily life.

#### XV. CONCLUSION

The project title “Smart Passengers” is android application provides or reserves the ticket for bus and train and also provides route, map, fare etc. for both. Thus using this application the users can easily reserve their ticket or pass and various works and their day-to-day needs.

Various additional features can be added as per the customers increasing needs in future. Upgradable stuff or additional features which can be included in future includes that this software can be upgraded for state indicator as the current product will be just implemented for Mumbai city which may also can be implemented for metro-politician cities .Further it can also upgraded to include Express railways tickets reservations also user interface can be simplified. Thus project scope is for long period with upgradable qualities.

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