

ONLINE CAB BOOKING SYSTEM

Project report submitted in partial fulfillment of requirement of the degree of bachelor of
technology

In

Computer Science Engineering & Information Technology

Nishant Singh (141417)

Under the supervision of

Dr. Geetanjali Rathee



Department of computer science & engineering and information and technology

Jaypee University of information and technology wagnaghat, solan-173234,

Himachal Pradesh

Candidate's declaration

I hereby declare that the work presented in this report entitled "ONLINE CAB BOOKING SYSYTEM" In partial fulfillment of the requirements of the reward of the degree of bachelor of technology in information technology submitted in department of **computer science and engineering /information technology, Jaypee University of information technology wknaghat** in an authentic record of my own work carried out over a period from august 2017 to May 2018 under the supervision Dr. Geetanjali Rathee.

(Student signature)

Nishant Singh

141417

This is to certify that the above statement made by the candidate is true for the best of my knowledge.

(Supervisor signature)

Dr. Geetanjali Rathee

Assistant Professor (Senior Grade)

Computer science and engineering /information technology

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It is a pleasure that I find myself penning down these lines to express sincere thanks to the people who helped us among the way completing our project .I find inadequate words to express my sincere gratitude towards them. First foremost I would like to express my gratitude towards my training guide for placing complete faith and confidence in my ability to carry out this project and for providing me her time, inspiration, encouragement ,help ,valuable guidance criticism and constant interest. She took personal interest in spite of numerous commitments and busy schedule to help me complete this project. Without the sincere and honest guidance of my respected project guide I would have not been to reach the present stage.

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LIST OF ABBREVIATIONS

Abbreviations	Full Form
IDE	Integrated development environment
I/O	Input output
JVM	Java Virtual Machine
OOPS	object oriented language
OCBS	online cab booking system
SQL.	Structured query language
App	Applications
GSM	global system for mobile communication

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ABSTRACT

This project is being considered in order to reduce and eliminate customer loss to competitors. The current system is manual and it is time consuming. It is also cost ineffective (no standard price/rate) , and average return is low and almost diminishing. Currently, customers call or walk-in in order to rent/ reserve a vehicle. The software will check their file to see which vehicle is available for rental. The current system is too much error prone and customers are dissatisfied to an extent. The goal of OCBS is to automate vehicle rental and reservation so that customers do not need to walk-in or call in order to reserve/book vehicle.

User can go online through the application and reserve preferred vehicle that they want from the inventory of those available. The OCBS will maintain the database of all vehicles available and also will keep data of all the vehicle reservation done and return. Generation of reports will be done weekly.

CHAPTER -1 INTRODUCTION

1.1 INTRODUCTION

In today's era, everyone wants convenience and comfort in daily life activities but everywhere, it is not possible. Travelling is also a major part of day-to-day activities and in same case also, people wants same comfort assistance in whole journey.

Taking this statement, we came to the solution that will provide the comfort as well as secure journey provided.

OCBS is an android application which lets you book cabs for the intercity and intra-city travel purpose using your Smartphone and provides you the best service that will make your journey more luxurious.

The objective of OCBS project is to automate vehicle rental and reservation. So customers do not need to call & spend unnecessary time in order to reserve preferred vehicle. They can go online and reserve any preferred kind of Cab they want , which is available at that time.



Fig 1.1

1.2 PROBLEM STATEMENT

The problem statement of OCBS project is to develop an online process of Cab Booking Service. Present system is manual and it is time consuming as well as non standardized in terms of returns. Currently, customers need to make a manual call in order to rent / reserve preferred vehicle. The software of Online Cab Booking System will check their file to see which vehicle is available for rental. The objective of OCBS project is to automate vehicle rental and reservation. So customers do not need to call & spend unnecessary time in order to reserve preferred vehicle..

1.3 OBJEVTIVES

The objective of OCBS project is to automate vehicle rental and reservation. So customers do not need to call & spend unnecessary time in order to reserve preferred vehicle. They can go online and reserve any preferred kind of Cab they want , which is available at that time.They can go online and reserve any kind of vehicle they want and that is available.

In future the proposed update feature of OCBS allows the user associates to track the current status of the journey and also evaluates the remaining time till the passenger reaches its destination. The users will be provided with a provision login of the systems so they can check the status of their journey. The vehicle tracking feature is appreciated widely everywhere, at the time of emergencies such as accidents, the tracking device will trigger an alarm that will simultaneously inform the attendants about the incident & thereby asking for help.

1.4 METHODOLOGY

Methodology used in Project:-

Different method are used to solve pilgrims detection system

1 collection data

2 analyses data

- 1 confirmation
- 2 Investigation data
- 3 Upload data into app
- 4 Search data
- 5 Process data and download data

1.5 Organization



Fig 1.2

Organization:-

This report is divided into 5 chapters:

Chapter 1 is the current one and it gives an introduction about the project, explaining motivations and aims and objectives.

Chapter 2 discusses about literature survey used to complete the project.

Chapter 3 discusses the various methods used for development and their implementation.

Chapter 4 discusses the software artifact developed and its evaluation through various types of testing.

Chapter 5 gives reflection of the project and conclusion also discussing limitations and future work.

CHAPTER-2 LITERATURE SURVEY



Android:

Android products are widely used in our daily life such as mobile phones, televisions, tablets etc. Basically, an android is an open source which means it is available for every platform. Also, it is a type of Linux based operating system for smart phones and tablet computers.

The Open Handset Alliance has developed it. Android provides a platform to all the application developer to develop their applications and that can be run on different devices of android.

In 2007, Google has launched the first beta version of Android SDK (Software Development kit). Also, in September 2008, Google has launched the first Android 1.0 commercial version.

Benefits of Android:

The first basic advantage of android is that it is an open source and the code is available for free for Android developers. It provides a very attractive and good user interface for users. For data storage, a lightweight database is available name as SQLite (Structured Query Language), basically used to store and retrieve data in a database. An android supports great features such as messaging, connectivity, real time messaging (as Google Cloud Messaging), Wi-Fi direct etc.

There are many android applications are available in the market now a days. Some of are:-News , Sports, music, multimedia, travel, etc.

Android Versions:

Android versions are related to different code names such as

Version	Code Name
Android 1.6	Donut
Android 2.0	Éclair
Android 2.2	Froyo
Android 2.3	Gingerbead
Android 3.0	Honeycomb
Android 4.0	Ice cream sandwich
Android 4.1	Jelly Bean
Android 4.4	KitKat
Android 5.0	Lollipop
Android 6.0	marshmallow

Table 2.1

(Android versions)



Fig 2.1

(Android versions)

Intent:

Intent is a part of android application which is used to make relations between activities into an app. Generally it is used to link one activity of an app to other activities of the app. A bunch of code is need to write to open other activity of that app. The sample code for MainActivity class is given below:

```
Intent intent = new Intent(MainActivity.this, SecondActivity.class);
```

```
startActivity(intent);
```

As you may see on the above code, First we use an object of intent with their parameters and after that we pass the object in startActivity method. Actually, the startActivity method helps to move the user from MainActivity to SecondActivity.

Also, there are two types of intent:

1. **Implicit Intent:** An implicit intent is used to perform an action instead of defining the exact activity of exact components. It has some predefined methods such as ACTION.VIEW, ACTION.MAIL etc that helps to directly perform the action to another application from your application.
2. **Explicit Intent:** In explicit intent, open an activity of your app from another activity which is already in your app. In it the components which is explicitly define, is called by the Android System. Remember that we do not use the predefined method such as ACTION.VIEW etc.
3. **Bundles:**

Generally, if we wish to pass a value or data between two activities, we use bundles. A Bundle passes the value in next activity, without any data type restrictions, with the help of intent. putExtra Method is used for sending the data between activities such as

```
Intent intent = new Intent(MainActivity.this, SecondActivity.class);  
Intent.putExtra("Key", value);  
startActivity(intent);
```

As you can see above sample code, the data is passed by putExtra method with two parameters, key and value. The key defines the specific name of that value which we wish to pass in activities and the value is depending on the user requirement.

Also, we can find or get the passed data from previous activity to next activity by bundle.

Here is the sample code for it:

```
Intent intent = getIntent();  
Bundle data = intent.getExtras();  
If (data != null)
```

```
{  
String fetchData = (String) intent.get("Key");  
}
```

As per the above code, first we need to make an intent object to get the intent which has the data by using getIntent method. And after that we use bundle object and add the passed values into it.

SharedPreferences:

Android provides different methods to pass and store the data in activities. Shared preference is also a part of it. By using key and value pair, you can retrieve/save data in shared preference.

The method use for shared preference.

Java is a programming language and environment invented by James Gosling and others around 1994. Java was originally named Oak in 1992. (Electronic devices)

java is internet based language and we can develop any application of internet in java.

Like e commerce web sites

- I. Onlineshopping
- II. Online trading
- III. Online counselling
- IV. Online recruitments etc.

Why android?

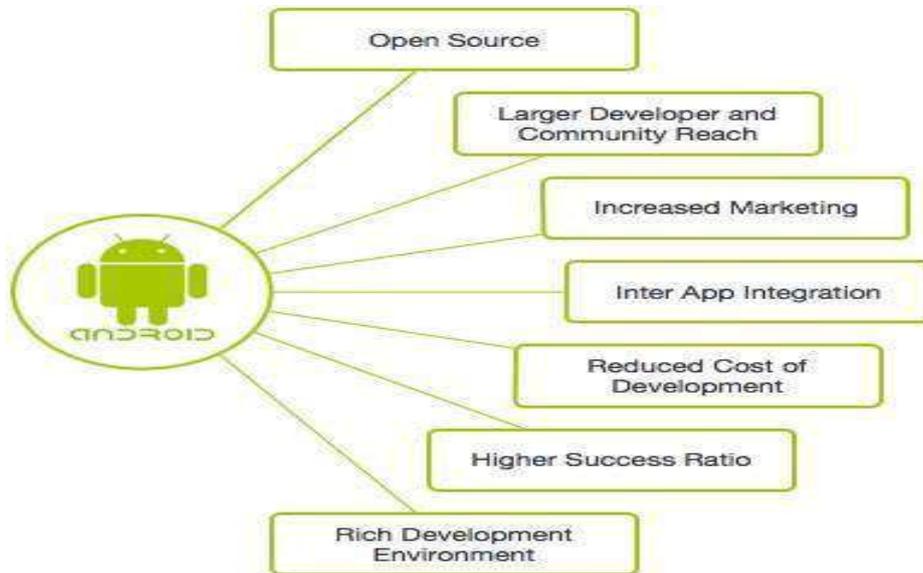


Fig 2.2
(why android?)

Features of Android:

1. Beautiful UI

With android one can design beautiful user interfaces.

2. Connectivity:

It supports all type of connectivity i.e. GSM ,CDMA etc.

3. Storage:

Android has its own database i.e. SQLite which is easy to use.

4. Media :

Supports all media content.

5. Messaging:
Has SMS features enabled.
6. Multi touch:
7. Browser availability:
Supports browsers for internet use at ease.
8. Multi tasking:
One of the most important feature of android is that it allows multitasking at ease.
9. Multi lingual:
Supports multiple languages.
10. Sharing:
Easy to share options available some even fast as hell like NFC

Architecture diagram of Android:

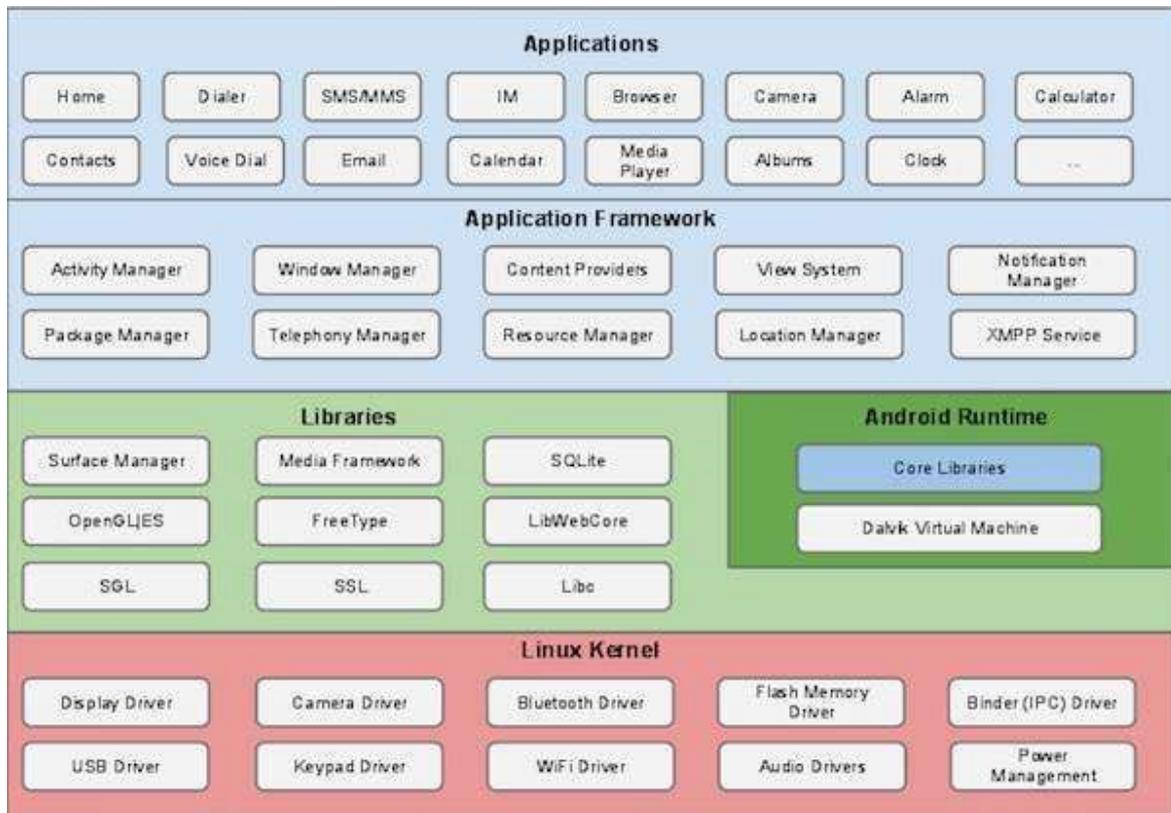


Fig 2.3
(Architecture design)

Features of JAVA

1. Simple

Javainherits syntax from c and oops concepts from c++.

(Class &objects, Inheritance, polymorphism)

Tough topics of c & c++ are not included in java

.

Pointers/structure/preprocessor/union

Multiple inheritance

Friend function

Friend class

Virtual function

Virtual class

Destructor

Delete operator

Operator overloading

Pointers

2. Object oriented

Java is truly oops language c++ is not everything in java is defined inside a Class .We cannot write program without using class & objects.

Even the main function is also defined inside a class.

Primitive data types

int, char, float :- these are not objects not classes

class Xyz

{

public static void main(String ss[])

{

System.out.print("hello");

}

}

To compile javac--compiler

javac filename.java to execute we use interpreter

java classname

public:- it is an access specifier, it means we can use class data inside or outside the class.it class the JVM which provides run environment to execute any java program

Static:- it means no need to make object of the class

Void:- it does not return any value

Main ():- it entrypoint into java program

System:- it is java class which connect java with our system

out:- it is member of system class which show out put on console window

Print () it is function which show output

Conventions for programme

1. First Letter of Each word should be in uppercase for a inbuild class.

class StudentInformationTech{}

2. For function the rule is same but first letter of first word should be in lower case

calculateMarksTotal()

printStackTrace()

3. Platform Independent

There are no restriction of any os to java byte code

4. Machine independent

There are no restriction of any machine architecture to java byte code.

pc / mini / mainframe / super / mobile

5. Robust

I. type safety

we can not use variable before initialize them

```
int a=0;
```

```
System.out.println(a);
```

II. garbage collection

It automatically removes the unused memory space.

```
student s1;
```

```
s1 = new student();
```

```
s1 = new student();
```

GC [garbage collector] it is a program that runs on the background and keep watching unreferenced memory and automatically clears It.

III.

Exception handling

are run time errors if not handled may terminate your programmes.

divide by zero 5/0

```
int a[8];
```

```
a[12]=2;
```

6. Multithreading

Executing more than one part of a programme at the same time.

The programme is divided into threads

The threads runs in parallelin a round robin fashion.

notepad (singlethreaded)

ms-word(multi)

games(multiplayer)

chating(multi)

7. Networked.

We can develop following interfaces.

- I. peer to peer
- II. client server
- III. multiple client + multiple server
- IV. telnet/ethernet
- V. Topologies like star,ring,mesh etc.

8. Distributed

Using java we can control distributed servers

package (java.rmi) remote method invocation

corba(common object request broker architecture)

Ejb(enterprises java beans)

9. World Wide Web (WWW)

java is internet based language and we can develop any application of internet in java.

Like e commerce web sites

- V. Onlineshopping
- VI. Online trading
- VII. Online counselling
- VIII. Online recruitments etc.

Chat server

messenger

email server

ftp(file transfer protocol)

http

tcpip

proxy servers

anti hacking softwares(kerbros,pgp)

security concepts

like cryptography (encryption/decryption)

steganography etc. (hiding the information in a video/audio/image)

CHAPTER-3 SYSTEM DEVELOPMENT

SYSTEM DEVELOPMENT LIFE CYCLE (SDLC)

The system development life cycle - SDLC is a conceptual model that is used in project management which describes all the stages that are involved from an initial feasibility study through maintenance after completion of the application. Various SDLC methodologies have been developed to guide the process involved including the waterfall model which was the original SDLC method previously used. Documentation of the project is crucial irrespective of the model chosen, and is usually done side by side with the development process. Some methods work better for a specific type of projects but in the final analysis the most important requirement for the success is how closely the project plan has been followed.

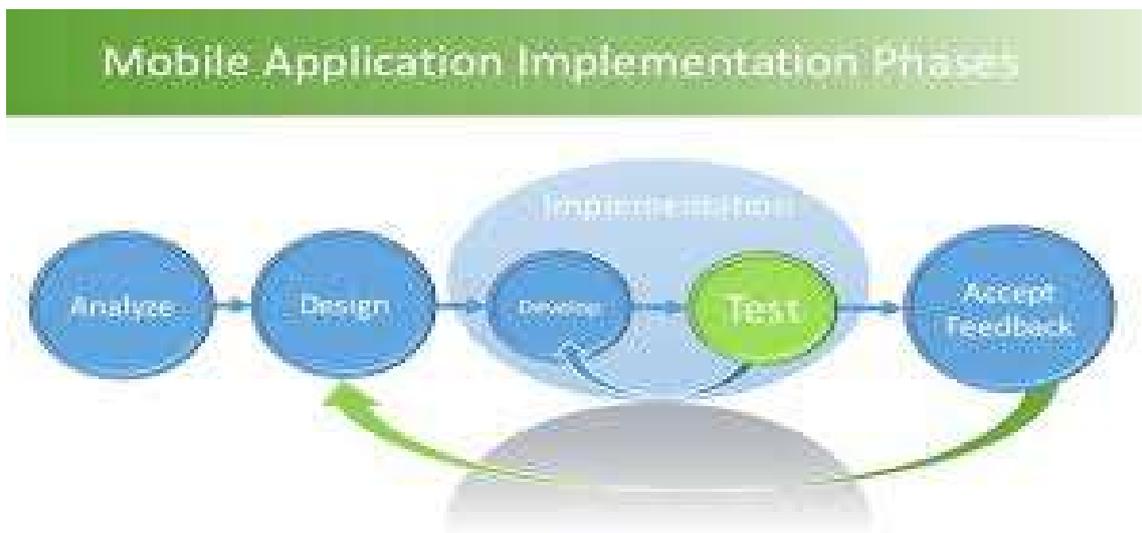


Fig 3.1

1. Requirement gathering:

In this first collect the formation which should be used to make app.

Information may be gathered from the people and other sources, and team requirements must be fulfilled by the manager of the team.

App information like database, design and other components may be requested.

2. Feasibility study:

After requirement gathering the team comes up with a rough plan of software process.

At this step the team analyzes if a software can be made to fulfill all requirements of the user and if there is any possibility of software being no more useful. It is found out, if the project is financially, practically & technologically feasible for the organization to take up. There are many algorithms available, which help the developers to conclude the feasibility of a software project.

- **Technical Feasibility:** This is concerned with specifying equipment and software that will successfully satisfy the use considerably, but might include
 - ❖ The feasibility to produce output in a given time because the system is fast enough to handle multiple users.
 - ❖ Response time under certain circumstances and ability to process a certain volume of transaction at a particular speed.
 - ❖ Feasibility to communicate data to distant locations.

- **Economical Feasibility:** Economic analysis is the most frequently used technique used for evaluating the effectiveness of a proposed system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that are expected from a proposed system and compare them with cost. Though the cost of

installing the system may appear high, it is one time investment. The resulting benefits is that automation results in turnaround time. The resulting cost/benefit ratio is favorable.

- **Operational Feasibility:** It is mainly related to human organizational as social aspects. The points to be considered are - The system interface is standard, user friendly and provides extensive help. Hence no special training is not required.
- **Social Feasibility:** Social feasibility is determination of whether a proposed project will be acceptable to people or not, So this project is totally Social and Feasible



Fig 3.2

3. Software Design:

First step is used to design the app using xml layout. We first makes the design of the app and add menus , button, edit text and other images using xml layout like constrain ,frame layout etc.

We first design homepage and then add list of panels like admin login, Student menu and teacher menu etc.

4. Software testing:

Software testing is a process through which we can analyze and verify a user requirement i.e our software can full fill the customer requirement or not. Does our software is given accurate and complete result, and result is effective.

Testing is process and set of tools to check a software. There are many types to test software like blackbox, whitebox, graybox, integration testing and acceptance testing. Testing of the software tells us or shows us that ur software upto which extent it is ok and what part of code are not working properly.

Software testing makes the project accurate and show limitation of our project.

It is tools which works on the project and check each module manually by enter details into modules and it shows errors also.

Testing further is of three types:

- A. Whitebox testing:
- B. Blackbox testing:
- C. Graybox testing:

Whitebox testing: in which we know about the internal function or working of the software/application while we do the testing on that basis.

Blackbox testing: in which we don't care about internal function or working of the software/application.

Graybox testing: is a hybrid of both whitebox testing and graybox testing.

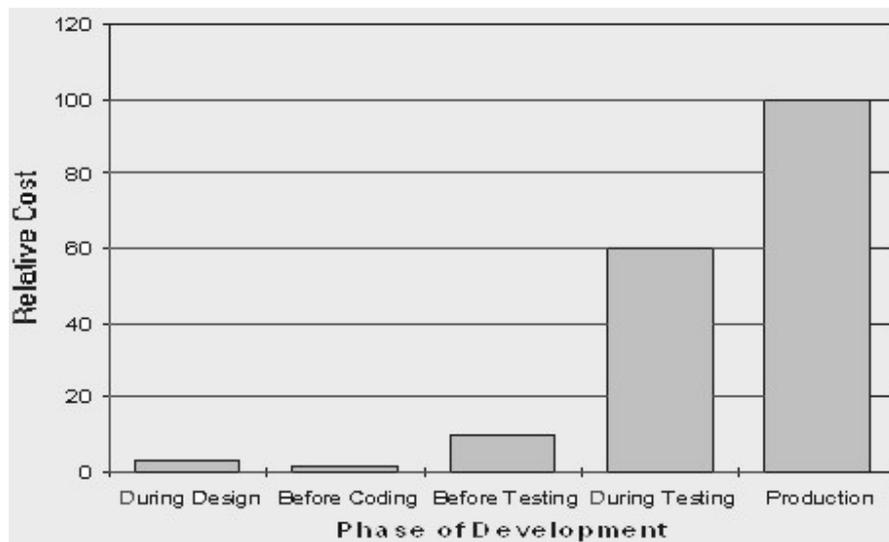


Fig 3.3

6. Integration:

In this module we integrate all modules to each other to build this app. First make database connection using mysql and then make connection between app and database server. Which give notification about the connections,

In android app functions are now connected with database . We use Json to make server request, We use Php language in backend to make server of this app.Php language is platform independent languages and we read many book to develop code in php.

Each part now connected with database.

Everything is working with app and installed on the mobile app.



Fig 3.

7. Implementation:

First we install the android studio on the system, install java jdk8 version on the system.

First set environment variable with the system. Then make the account on server i.e firebase.

Create the database table there like for user, teacher, students and subjects data etc

Then make a project on the android studio and make java files according to requirements.

Then make layout screen for app which are used to design the front end.

Then make virtual device on the android studio to launch the app.

Then deploy the application , first on the internet connection and then update the gradle for the app which is used to load graphics driver into app.

Then if you install the app on your mobile device then build apk file which is used to deploy android app into mobile and then first install mobile driver into system to connect mobile with your laptop.

It will directly build apk file into your mobile device and automatically launch the application.



Fig 3.4

This phase is used to maintain software and to implements the technology updates in the software used. Like Our software is made into advanced java and core java , here in this we

are using jdk 8 verioson ,if new version of java will launch then we must update library of our jdk . because somtime old function deprecated into java program and some function may not work after the updation , so we must make updation to our software and environment uses in the system , The team who develop this project may update their knowledge to keep maintenance of this project.

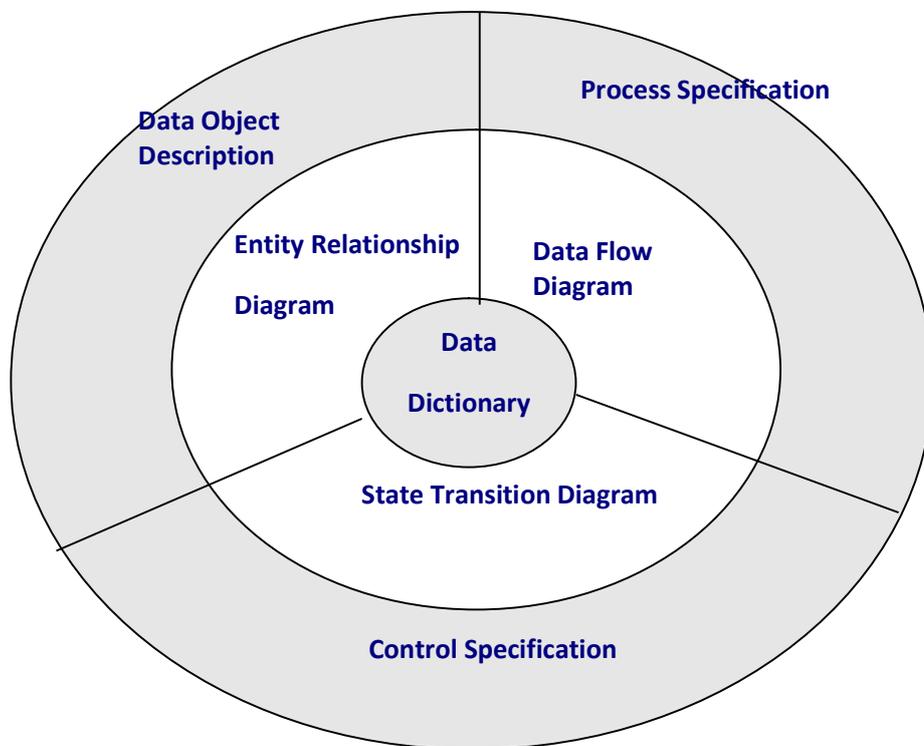


Fig 3.5

Implementation means installing the software on user machines. At times , software needs post-installation configuration at user end. Software is tested for portability and adaptability and

integration related issues are solved during implementation. This will be implemented over the internet, and it will save the programmers' time.

It will be implemented when we upload the project over a particular domain and then it will be accessible over the web. Then we must fill the signup page to become a member of the project.



Fig 3.6

Operation and maintenance :

This phase is used to check which part of application is working properly and which part have errors. This phase tell us which part work slowly and secure or not.

This part also used to maintain the system properly .

How we can check the security issue.

How our app will interact with the user.

App is working with database ad how can we modify the app in the future.

Creating an Android application:

Step 1:



Fig 3.7

Step 2:

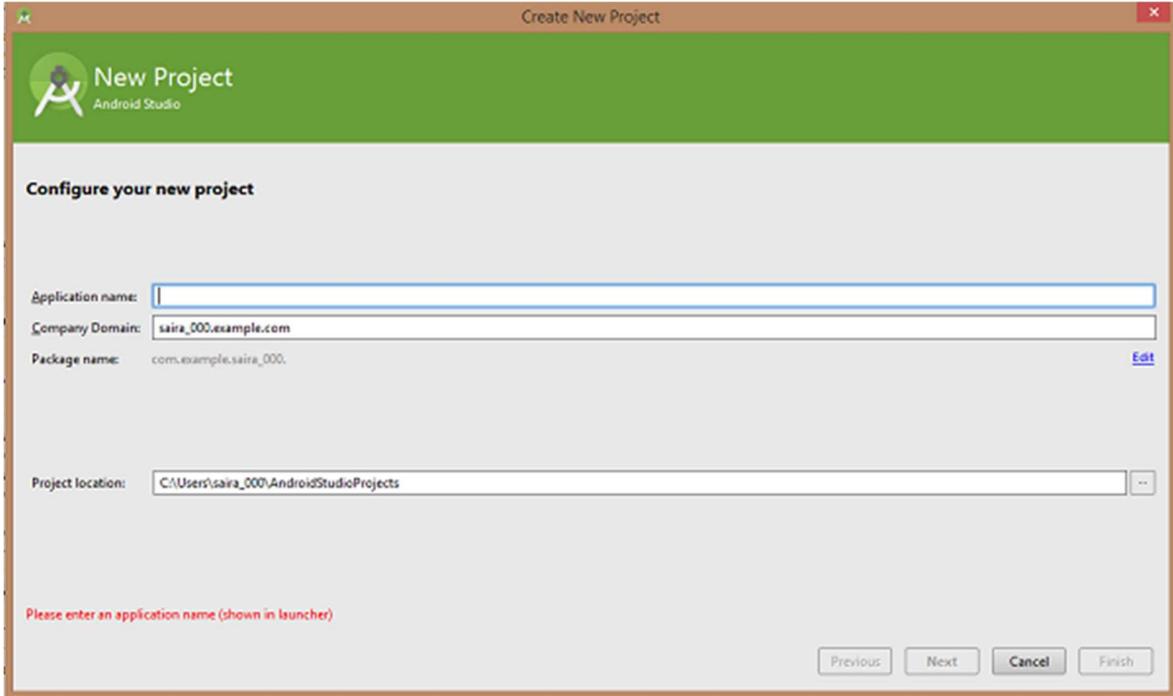


Fig 3.8

Step 3:

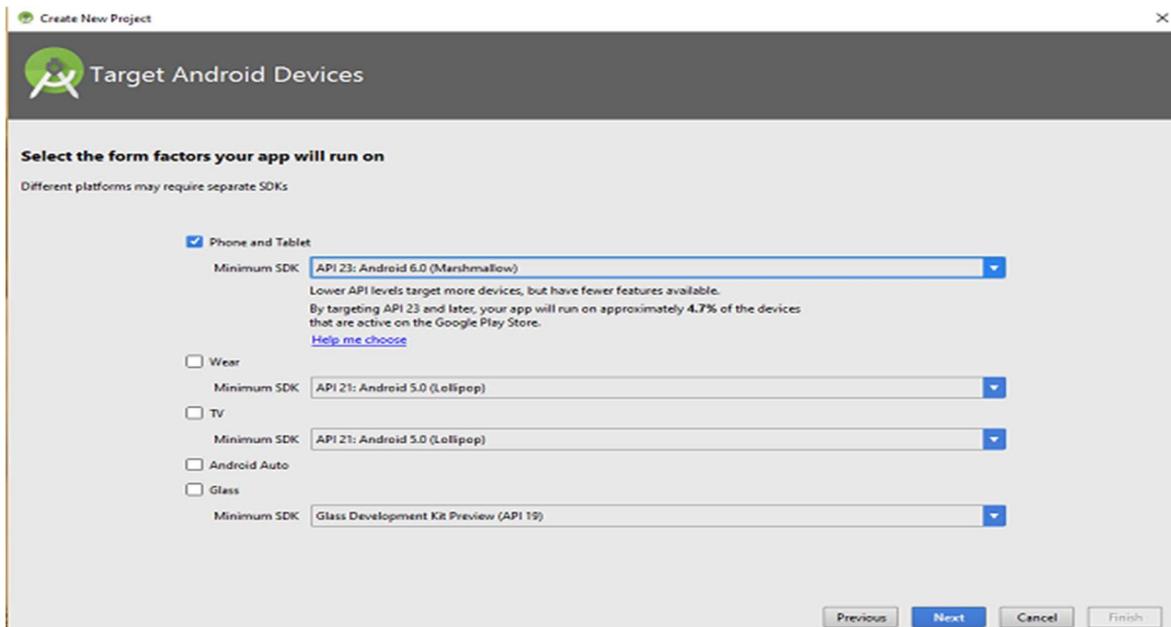


Fig 3.9

Step 4:

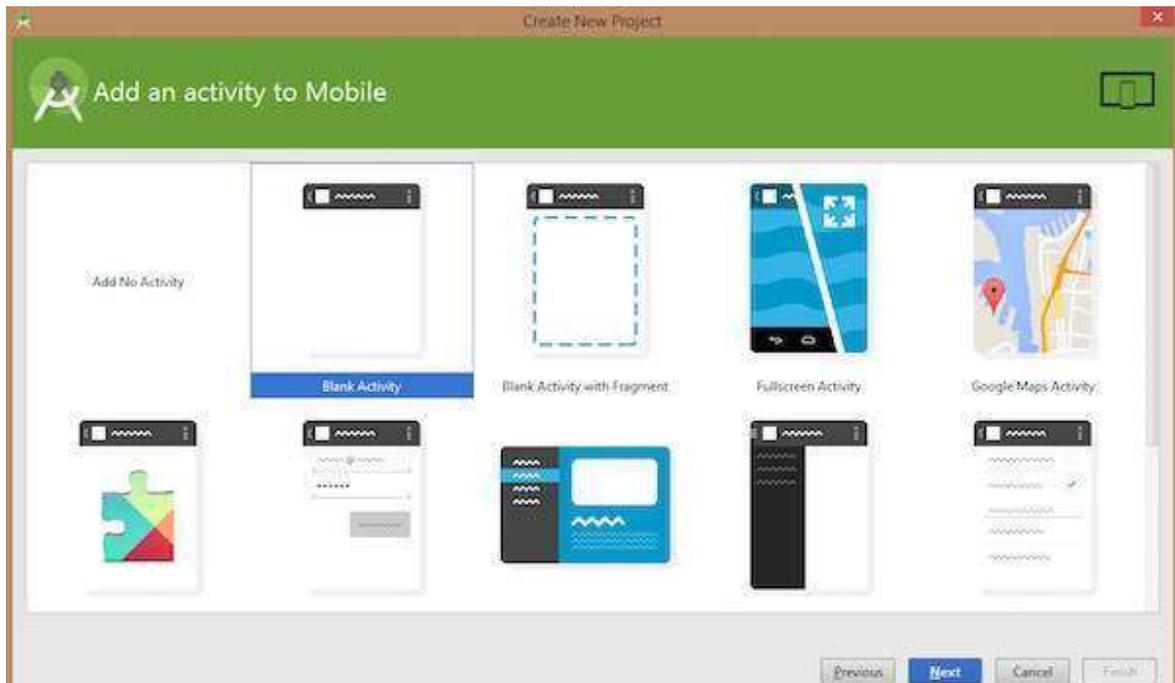


Fig 3.10

Step 5:

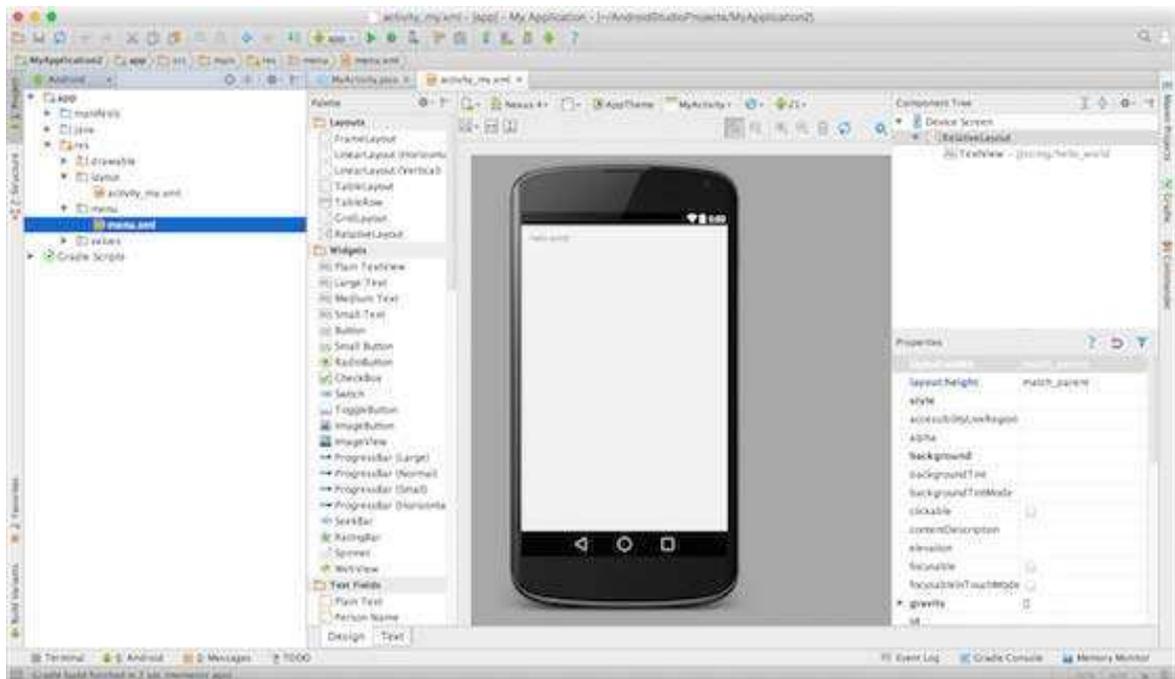


Fig 3.11

Step 6:

Then work on layout file to set layout of the activity , for this you should have a keen knowledge about xml.

All the permissions are granted in manifest file .

All rest intents and other features are done using java main file which is by default generated at the beginning.

CHAPTER-4 PERFORMANCE ANALYSIS

First run the application on your system after completion of code. Now trace your results from your system. If the performance is slow, your application started slowly then we must do following task

1 use trace view to measure the performance of application. First use `getView()` function to check the styles on the fonts, if necessary then change the styling of app.

2 Sorts the another pages if required

.

3 Use `findViewById()` functions to check the app compact are working properly are not.

4 Use the hierarchy view to check multiple views on your app, it will check unnecessary layers on your application.

We must do layout optimization i.e how to use frame layout, image view etc.

5 Remove the memory dump

.

6 Analyze the result, all these factors will help you to check performance issue of your application.



Fig 4.1

Now app is working on mobile with database. First when it was deployed on virtual device then execution was slow, because it uses more memory space. System configuration must be of good quality. minimum ram of 8gb required I5 processor should be required.



Fig 4.2

Each function deployment was slow,' But after installing the app on the mobile , it works fastly with database.

And after installing apk on the system. Now App is running fast on the mobile because we make the json request using php language ,because using json we take request on server by using Php code which is fast execution languages and android app works faster than the code developed using firebase and sqlite database, because admin can check the data on server side, which is not possible using sqlite database because insqlite database to see database table we first make the phone root than, it works, in this way we lost phone warranty period, so we decide to make the database using phpmysql and mysql as back end, mysql is light database which works on back end and it Is platform independent languages.

I. User Signup Page

The image shows a screenshot of an Android emulator window titled "Android Emulator - Nexus_5X_E...". The emulator displays a mobile application interface with a blue header bar containing the text "cab booking". Below the header, the page contains five input fields for user registration, each with a red label: "Username", "E-mail", "Password", "Repeat Password", and "Mobile no". The "Username" field has a red cursor. At the bottom of the form area is a grey button labeled "SIGNUP". The Android navigation bar is visible at the very bottom of the emulator screen.

Fig 4.3

II. Driver Signup page

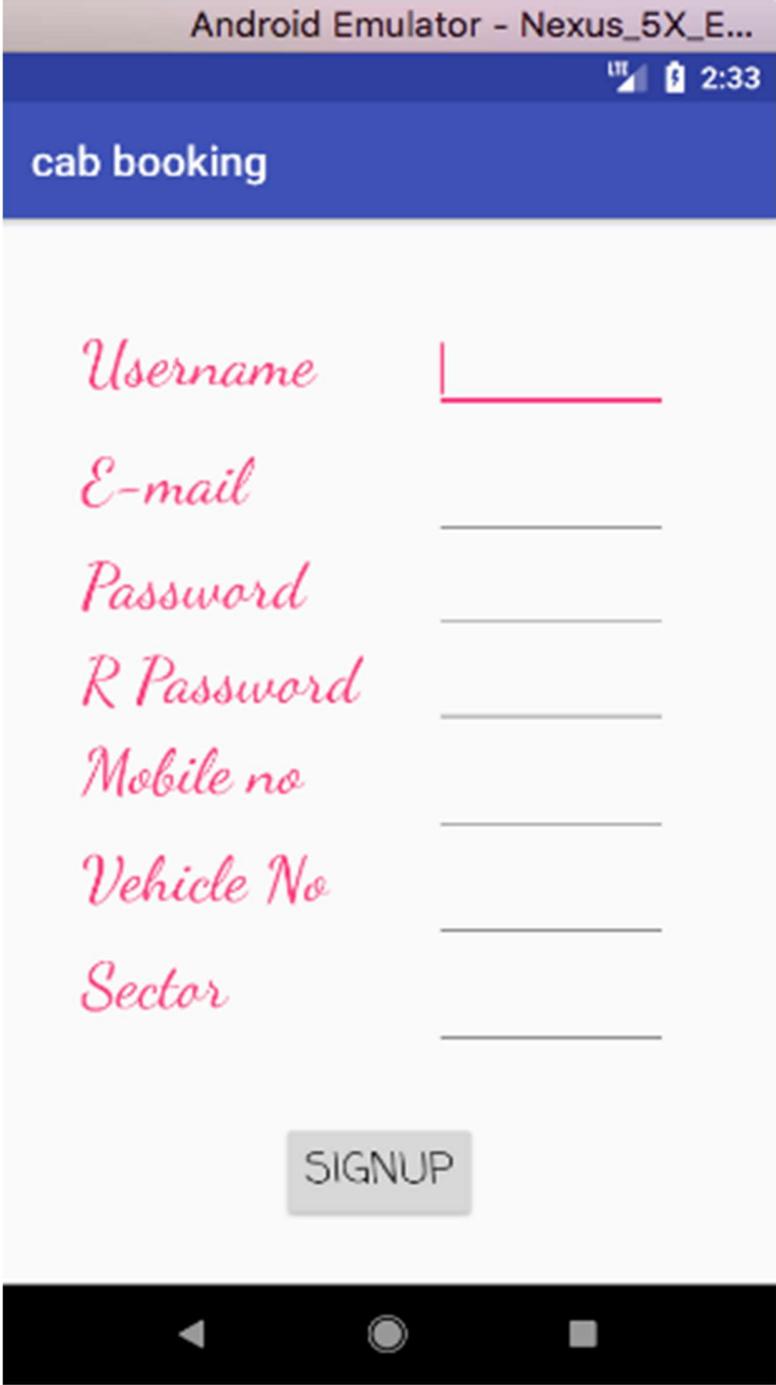


Fig 4.4

III. Home page:

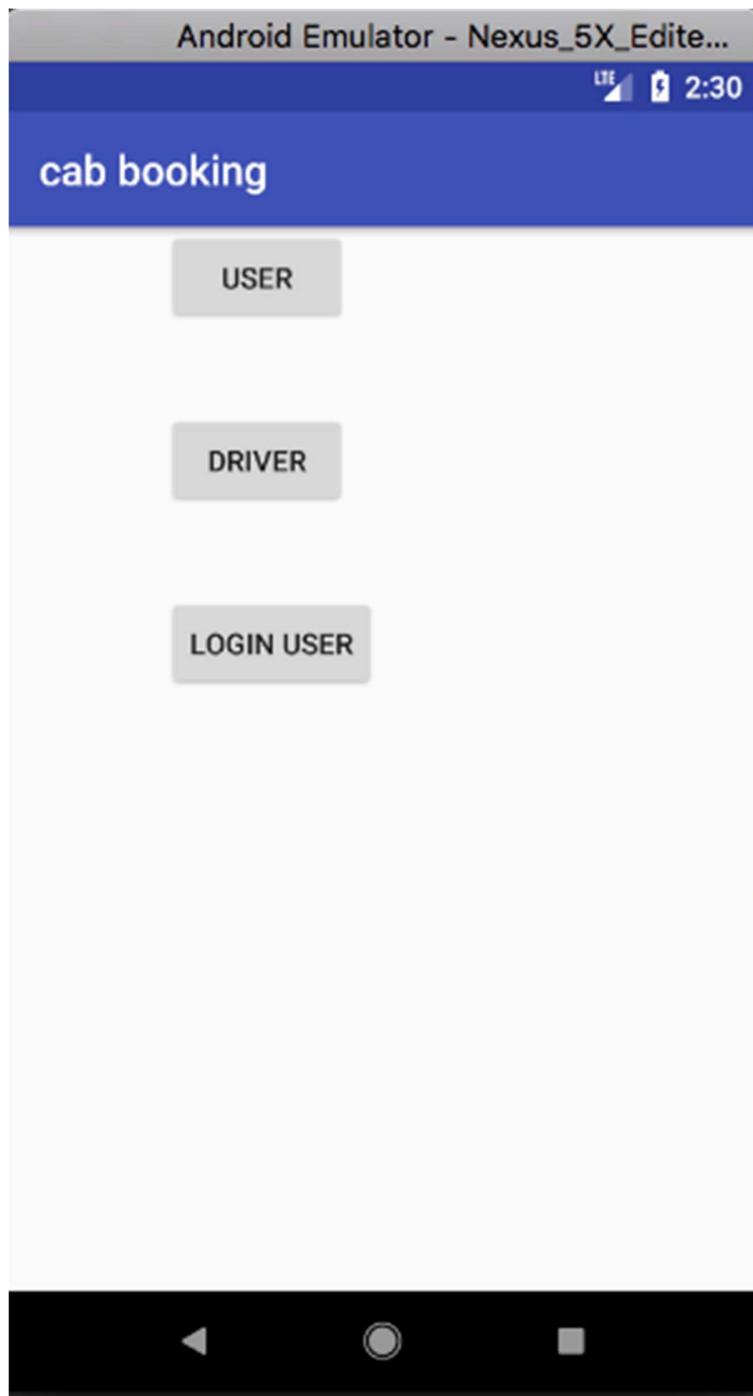


Fig 4.5

IV. Login page:

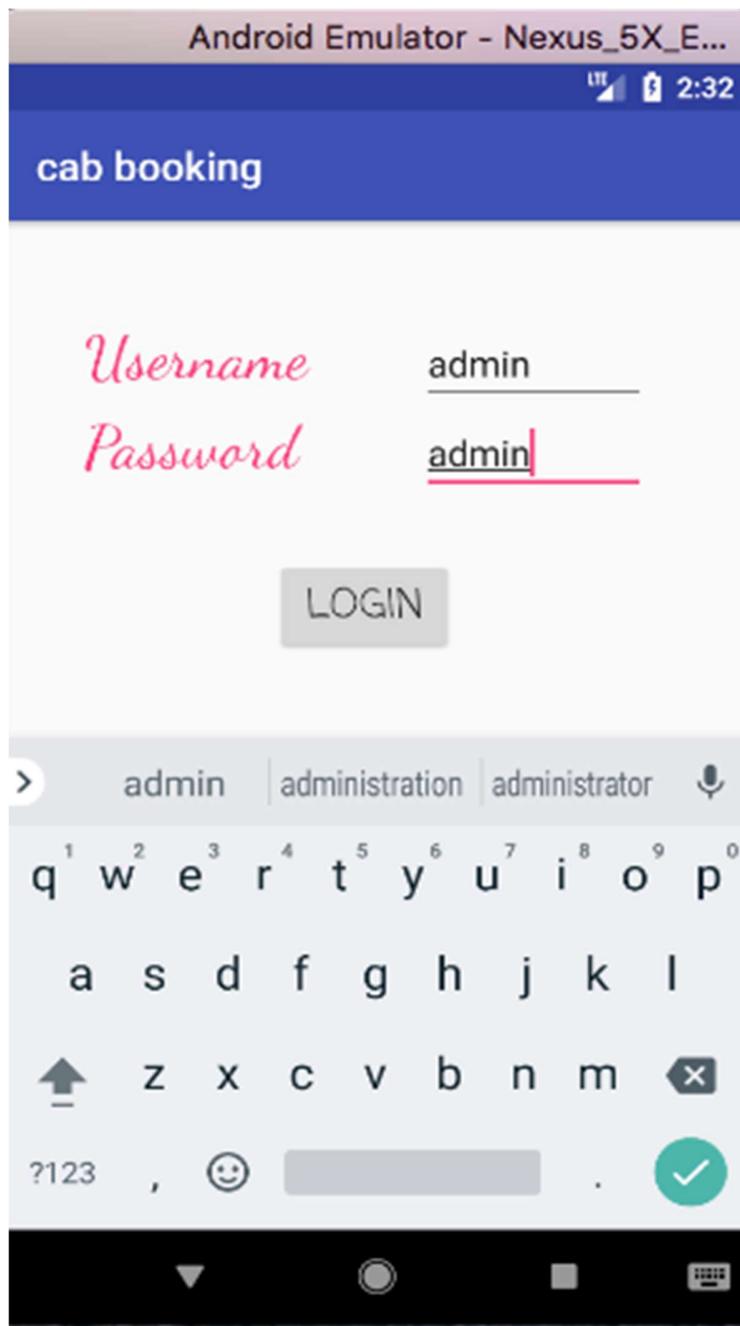


Fig 4.6

V. Booking page:

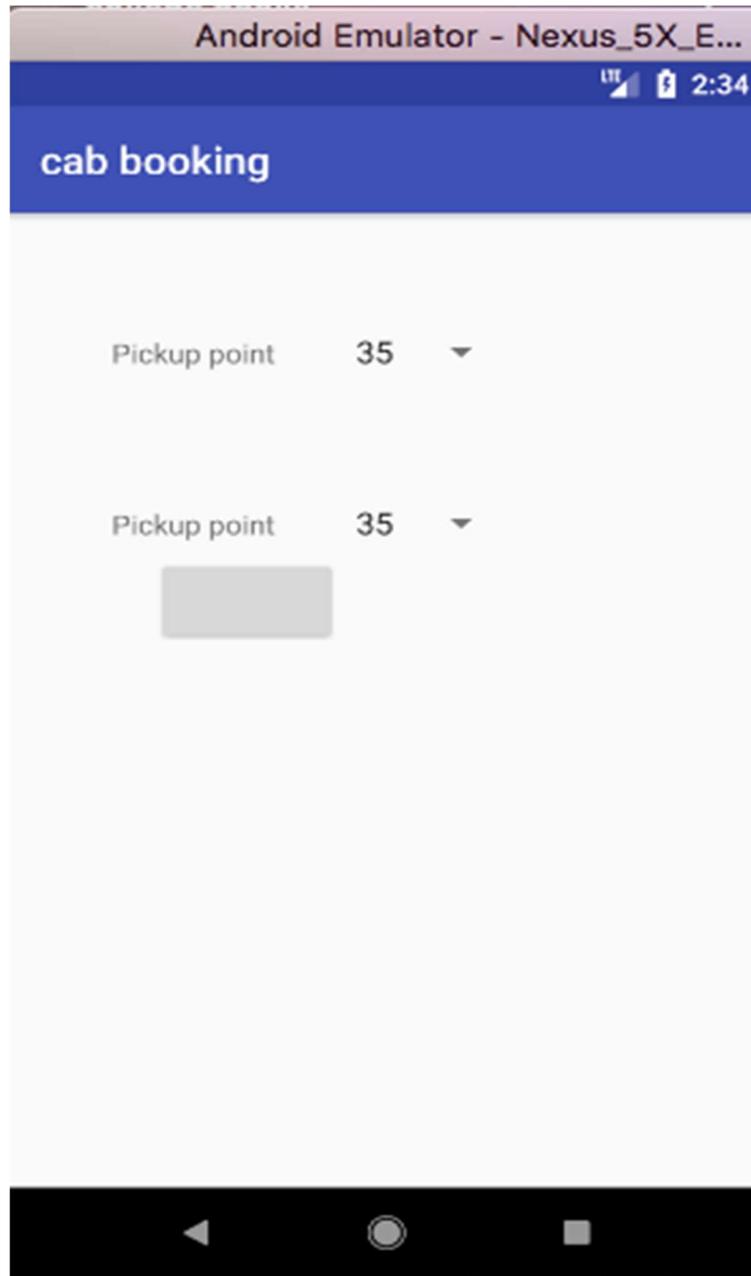


Fig 4.7

VI. Edit Profile:



Fig 4.8

Chapter-5 CONCLUSIONS

5.1 Conclusions

Our conclusion after making this app is that in today's world it is very difficult to travel manually from one place to another place. and if someone travel from far places, if he/she not known about city then it is difficult to travel from one place to another place. So we develop an online car booking service which will help the people to book people for desired place and desired vehicle i.e if you want big vehicle or i.e 4 seater, 5 seater etc.

This system will help the people to book a vehicle on time and it will save time for people and save extra money also.

Car booking service provide to facility to payment online and some time it provides free one time service when you become member of this app.

This is an android app which works online and any car driver can make member of this service and can participate in this service. This app will provide reservation system which will help to not to call to service agency, you automatically provide phone no, car no and full information of vehicle on your mobile, This will provide security during online payment also.

5.2 Future Scope

This is an online android application which will work on wide area after some time, It is just now in testing mode , and after review of customer , we will start it on large scale.

This will be an online solution to people for their safe and easy journey to one place to another place, They user can book car according to their location and according to their choice.

In this admin manage the whole app and he can add , remove the cars of old as well as new fashion.

It will save customers time and efforts to search vehicle on unknown place , if they travel from one place to another place.

When it will be on google play store, people can download the app on their smartphone and become member of the app , on their first booking he will be given coupons , it may be free or depends their luck. So it will be an online app which will help people to get vehicle on rent as soon as possible.

REFERENCES

1. C# 6.0 and the .NET 4.6 Framework by Andrew Troelsen and Philip Japikse.
2. SungdaTaxi Automation Using Real Time Adaptive Scheduling by Anurag Mandle, Akshay Jaiswal, Bhushan Dod, Roshan Lokhandee.
3. Real-Time Tracking Management System Using GPS, GPRS and Google Earth
Noppadol Chadil Apirak Russameesawang Phongsak
Keeratiwintakorn.
4. Real Time Tracking of Complete Transport System Using GPS Mr. Nilesh Manganakar
Mr. Nikhil Pawar.
5. Handbook of Scheduling: Algorithms, Models and Performance
Analysis. Edited by J.Y-T. Leung, Chapman & Hall, CRC Computer and
Information Science Series, 2004

