Smart City Dapoli: An Android Application

[1]Prof. Atiya Kazi, [2]Mitesh Haldankar, [3]Kunal Sawant, [4]Akshay Pirankar

[1]Professor, [2]Student, [3]Student, [4]Student
[1]Information Technology,
[1]Finolex Academy of management & technology, Ratnagiri, India

Abstract : This paper is on the study of android application which will provide multiple features such as hotel booking, health care center, travelling schedule & places likely to visit. Basically it will be a tourist application for both commuters and citizens. The task such as booking a room in hotel becomes complicated task if it is done manually. Because keeping track of all the information of all visitors is not possible for us and so that we will need a proper hotel reservation system. This paper shows that how this task has become simple by using application, the application is made using Firebase database with java programming language which is purely object oriented language.

IndexTerms – **Smart city, Firebase, Java.**

I. INTRODUCTION

A smart city is defined as the integrated form of multiple technological solutions in a secure manner. This is used to manage the basic requirements of tourist. This application include various facilities such as booking hotels, Travelling, Directions to healthcare centers and popular places to visit. The main aim of building the smart city application is to improve the quality of the life of citizens and commuters. With the help of google maps getting directions information and communication system (ICT) smart city enhance the quality, performance and interactivity of urban services. It helps in reducing the costs and resource consumption. Smart city applications are developed keeping in mind that improving the management of urban flows. In today's world the mobile app is playing a major role in making the city as a smart city. This kind of application reduces the efforts of tourists.

II. LITERATURE REVIEW

The primary motivation of this project is an Android Application, A Doctor-Patient Portal for Parkar Hospital [1] which is deployed at Parkar Hospital in Ratnagiri for the patients or Medical Representatives or other visitors to choose specific doctor and book an appointment with him/her as per the slots specified by the doctor. We decided to adopt such an application for our city Dapoli too for the commuters and citizens' convenience. As it is not attainable for the commuters and citizens to always prefer the guide book, mentor or any other sources for the information of any location. To supply facilities to the user for the aim of tourism android application has been made. A urban area can be acknowledge as smart when city operation and services such as healthcare, transport are backed through ICT (Information and Communication Technology) infrastructure in order to promote efficiently and comfort of operation. It gives the detailed information about how to reach the destination via public transport city buses routes covered by it. Also about the timings for particular bus, list of nearby bus stops. It supply the detailed knowledge about the area, the famous places of those area, restaurant, hotels etc. and all the related details about these places. This provide the user very easy method to visit any place [2].

As it is not possible for the tourist to always prefer the guide book, guide or any other sources for the information of any location. To provide facilities to the users for the purpose of tourism different kind of android app has been made. In this paper we are providing with the comparison between the top 10 tourism apps which are trending in the market[3]..
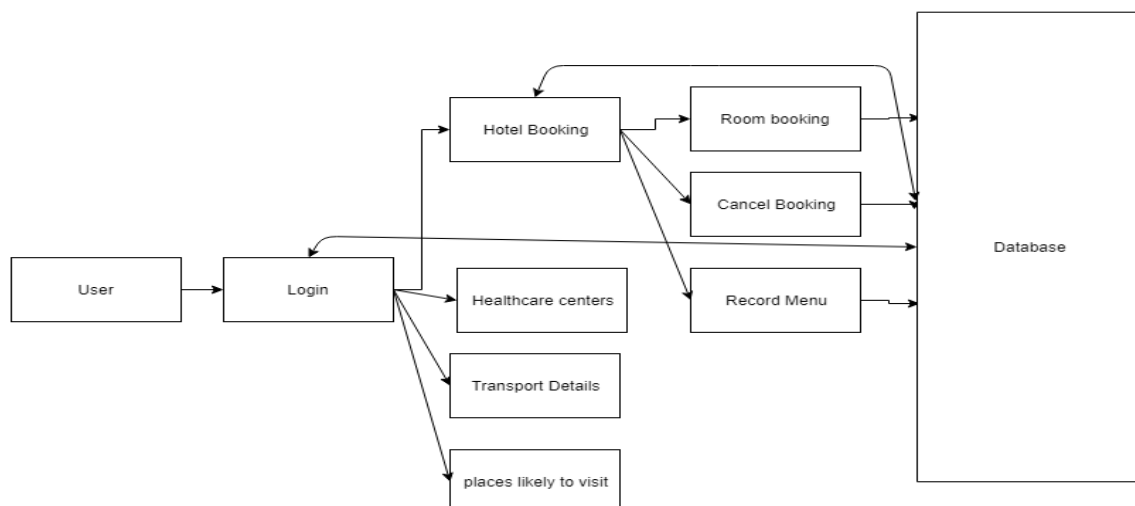
III. SYSTEM ARCHITECTURE

Fig 1. System Architecture

In above architecture fig.1, we have shown t e main modules of our system. We are using android studio and firebase to make this android application. This application will perform the regular operations precisely to fulfill the user objectives. Application will focus on securing the customer information and avoid data loses as much as possible. The Smart city Dapoli Android app is intended to make easy access to hotels, healthcare centers, travels and places likely to visit for the citizens and commuters of the city.

Data will be collected from user and hotel agents. The data will be stored in database. When the user needs any services the application will provide the smart Solutions. Following are the actions provided for each user.

Normal user:
- Can register for the app.

- Search the hotel details.

- Book the hotel room.

- Can check Travel schedule and fare.

- Can check the nearest health centres.

- Can modify the details.

Hotel Agent:
- Can register for the site

- Can add/update the details of the hotel.

Admin:
- Will approve the new hotel details added to the application

- Can delete the user/hotel details.

IV. IMPLEMENTATION

To login customer requires to enter two pieces of information, first a user name and then a password. The user name and password entered by the potential user are compared with data contained in databases on the system. To login customer can also login by using their Facebook, twitter and Gmail use rid. After getting approval by the application holder, the user can get the benefits of the application.
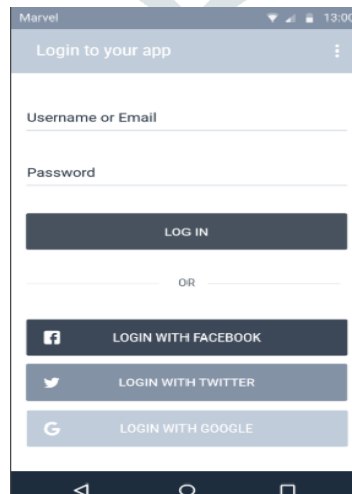
The home page contains the main information about the application. A customer will get the following services on the homepage.

I. Hotel booking

II. Restaurants

III. Places likely to visit

IV. Healthcare Centers

V. Railway Schedule

VI. Bus Schedule

The customer can book the hotels by using the application. Customers have freedom to choose the hotel online at a great prices and services. The customer get the mail of hotel booking after the reservation. Customers can also cancel the reservations made earlier. Customers can choose the services as per their needs.

Fig 4. Coding For Reservations

V. CONCLUSION

In this paper we have discussed various methods regarding tourism. This paper focuses on different features set of the application that make it eligible for helping the citizens and commuters which ultimately help in making a good application . This paper basically target on the finding out the different aspects for tourism based application so that we can have the idea about what sort of aspects should these kind of application generally have. For this we have examined some tourism based applications. On the basis of that we found out some ordinary things that the good tourism application should have to implant in itself for a smart application purpose. Apart from this we have also added two more features into this application. This application will help the tourist as well as the citizens in making it as a smart application.

VI. ACKNOWLEDGMENT

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