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Design and Implementation of an Android Application for Booking Banquet Halls and Other Services

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Abstract: A great development has been seen in android applications and products. This paper presents an application using android platform for development, firebase as the database and the application will use basic functions present on an android device such as WIFI, mobile data and GPS. This app requires login of users at certain instances, otherwise, displays data without sign up form. The statistics for page hits and counts will be generated in the firebase application on Google account. Also, the end-user application will not require any such special specifications to run but an internet connection, a GPS and a user account (only if user wishes to use full features). The services will be displayed based on user's location and preferences. Since, almost every service is being provided online, here's an application that lets a user book banquet hall online with this application's help.

Keywords: Android Operating System, Mobiles, Database, GPS, Location Tracker, API, Firebase.

1. INTRODUCTION

In the recent years, the development in mobile telecommunications allowed for appearance of several services based on user's location. Android is now becoming the dessert being loved by every developer and gaining popularity in embedded market for two genuine reasons. First is, the source code being completely free of cost and there's no fees charged for JVM (Java Virtual Machine). And, the second being its suitability for expansion as per the developer's choices. This paper presents an approach towards the android application development using Android SDK and various APIs. A user can perform various tasks using an application. For example, a user can book a cab in his/her location, can order food with available options, can buy goods and commodities through online shopping, can do anything with just a click of thumb. Smartphones are being developed with enhancement in every kinds of features. One such feature is GPS (Global Positioning System). Smartphones are now being integrated with new sensors every day. One such example is of GPS, which is used to determine a user's location and keep track of every service that is using GPS.

The problem of going from one place to another in search of commodities and services has been running from past and faced quite a typical hassle for the users. This problem was long running and had to be solved by someone in IT department. The analysis of this job had to be made and a clear solution had to be made. Realizing this problem, the digitalization came into implementation and now, after detecting the flaws and defects, an application was developed for the same problem. This application provides people with a platform where they do not have to run from pillar to post in search of Halls for booking. A list of halls is presented and the user can choose from the various available options based on the budget and the time period.

2. PROJECT SCOPE

This project is purely an android based application which only runs on android devices or android phones. Basically, this application provides a list of all the marriage, wedding, party halls in the particular location of a user through which the details about the hall, photos, location, ambience and contacts can be found. This application can also save the time of user who do not want to go through the hassle of physically going and visiting every place and finding out the details. It also provides with the user feedback, rating and reviews.

3. USER REQUIREMENTS AND CHARACTERISTICS

- ✓ User must have an android device.
- ✓ User must have GPS in his/her device.
- ✓ The user should be disturbed while performing any task on their device. Like making or receiving calls, sending SMS, MMS and etc.

- ✓ When user sets a parameter for location only those places should be shown that are registered in the admin database.
- ✓ User should sign up if he/she asks for more details such as the contact of a responsible authority. Like, manager.
- ✓ If someone's location changes then it must be refreshed.
- ✓ Phone must have GPS.

4. LITERATURE SURVERY

4.1 TRADITIONAL HALL BOOKING SYSTEM

In this era, where we're living in 21st century, where everything is being digitalized and everybody is using the Internet. It has become quite a necessity to have the net access to fulfil daily chores. In a hassle, to complete multitask and complete them, people use these applications. Hall booking sector is facing a trouble as people only rely on word of mouth from others and do not opt for better options available in the same price range.

4.2 ANALYSIS OF THE PROBLEM

Since, it has now become much easier for everyone to use online services and it has become even more comfortable and flexible for developers to recognize real world problems and build applications according to them. This application completely solves the difficult hard-work and saves time by providing the services for booking halls, caterers, florists, etc. with just the click of a button.

4.3 A MOBILE APPLICATION FOR SOLVING THE PROBLEM

This project has been developed to solve the above problems. This paper proposes a mobile application that gives precise information about the halls, location, price, dates available, florists, decorators, etc. Also, it let's users get contacts of the managers and the responsible authorities.

4.4 IMPLEMENTING THE REAL-TIME SYSTEM

It is often quite difficult for people to visit each venue, find the prices and also get an available date for them. People travel from one place to another, wasting a lot of time, energy and of course, money.

Hence, to get rid of this problem, this application was developed to let users know about the current present halls in their location. Along with the list of halls, the users can view their ratings. Ratings will tell users whether the others who've once booked a certain hall, found the services up to the mark or not. They can certainly rate their services and their ratings will reflect in the commercial app.

Through this other user may get an idea about the services and commodities provided at the place. Along with this, there will be another feature, a calendar, that will help see users if a certain date is available for booking or not. If it's available then the user may book the desired date. Also, the price listings will be available based on the quality of service being provided. The user may then book either of the given slots by the respective hall (morning or evening).

It was also felt that there are different agencies for decoration. Decoration of venue is a much-required service. Hence, there will also be a feature for getting the best decorator for the given price range and quality.

For catering, options will be provided to a user out of which the user can decide which vendor to choose from a lot of options available online. This module can be considered as an application of online food ordering. From a long variety and list of options, the user can check the rating and a list of reviews that others have saved and the feedback that has been given by some of the customers that have already used the services by the vendor. Hence, maintaining clear transparency and display of services.

5. IMPLEMENTATION

5.1 ANDROID ARCHITECTURE

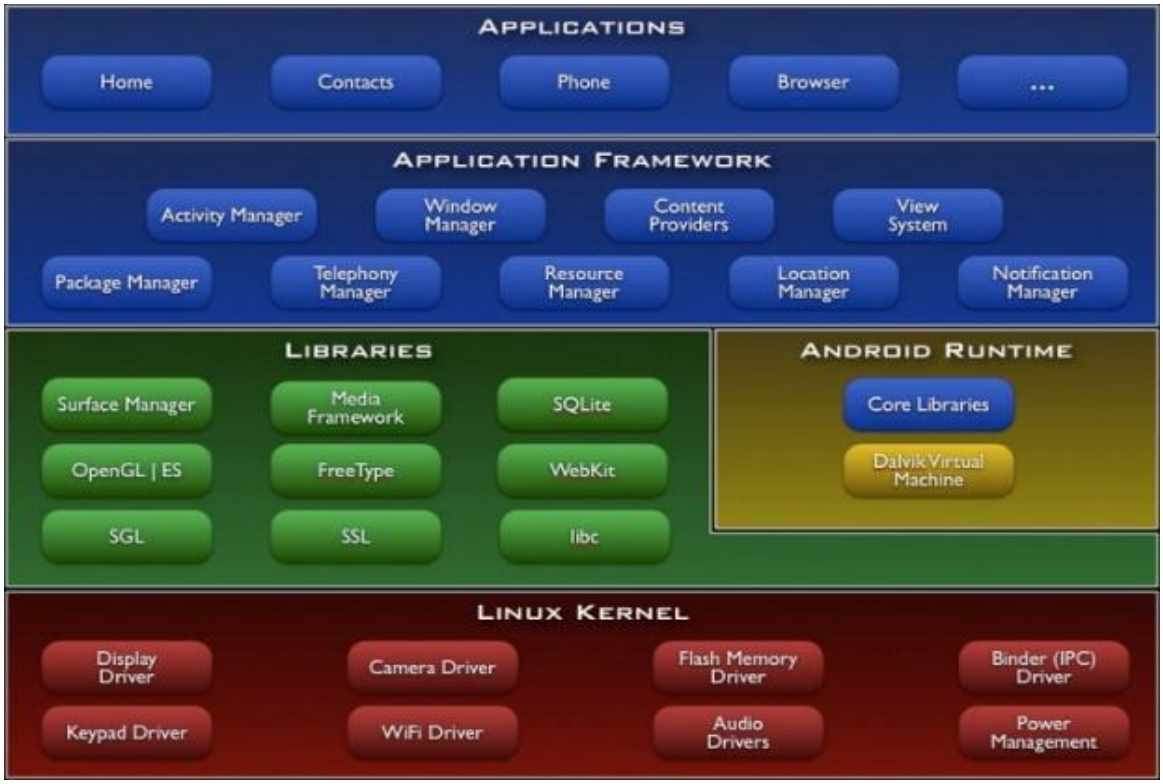

Figure 1: Android Architecture (Source: https://elinux.org/Android_Architecture)

Android is considered as the largest and ever-growing operating system. The above figure displays the architecture of android and its flexible eco-system, powering an innumerable device which certainly includes watches, mobiles, tablets, TVs and many more. Android's architecture is built in such a way that it completely supports applications, services, an operating system. The architecture is defined the best using the above figure, Figure 1: Android Architecture. The foundation of this Android software is the Linux Kernel that provides a level of abstraction between the Android software and the hardware being used. The OS can support multiple services and APIs (Application Programming Interface) which is at par the best thing about Android. Android libraries are those libraries which are based on Java libraries and are specific to Android development.

5.2 SETTING UP THE ENVIRONMENT

Android is being used everywhere these days. Android has now become a platform that can now be implemented on any device. Even a small digital watch can run android operating system. For this application, Android Studio, an Integrated development environment was used. It is the official IDE for Google's mobile operating system, Android. This IDE is built on JetBrains's IntelliJ IDEA, a software designed for Android development. This software can compile and debug java bytecode and run JVM (Java virtual machine). This software runs on Windows, MacOS and Linux as well. Earlier, Eclipse Android Development tools (ADT) was used but since, it had to be unified and made as one, Google made it the primary development environment for the use of native developers. IntelliJ IDEA include advanced code navigation and also has code factoring which is tightly integrated into it. Hence, this environment was the most suitable for this development.

5.3 SOFTWARE REQUIREMENTS

The basic hardware requirements for running this application is the same, Android Studio, IntelliJ IDEA, Java Compiler installed on our system and minimal hardware requirements for running the above software.

5.4 DATABASE CONNECTIVITY

This application uses Google's Firebase. Firebase is a web development and a mobile development platform that provides us, developers with an abundance of tools and utilities. This helps developers build splendid applications and grow their user database and simultaneously analyzing the statistics for the database.

The Firebase provides users with an API (application programming interface) that users can integrate into their projects for successful evaluation and implementation of their applications. A real time database is system which handles workloads and reflects changes in the database at a constant rate. These changes are directly fed into the system and are constantly changing. This differs from traditional databases which contains static data, which are not changed directly but through some query. An example can be thought of as a stock market, where the data is continuous and ever changing that is, quite rapid and dynamic. In a real time, database system, the input is fed very fast and the results are reflected are reflected quite quickly. The application of real time databases is in banking, medical records, reservation systems, etc.

6. PROPOSED WORK

The designed application is quite a user-friendly application like others and can be accessed by anyone, free of cost. The main motive behind the development of this application was to make it easy, convenient and hassle free for users to book halls, caterers and florists without actually going to different places and inquiring about the services. Moreover, the location can be displayed and navigated by the users of the less-known halls and caterers and florists so that they may get a chance to spread their business and level up their hospitality by providing excellent services. The aim is to overcome all the drawbacks faced in real life, making it much easier with just the click of a button and generate fast and accurate results.

7. CONCLUSION

Smartphones are already becoming even more complicated and capable. Both public and private sector needs to invest time and money into learning about new operating systems and developing new services. Android Operating System is already the most popular OS on devices and many more This application is going to be really helpful for the mass and is definitely going to lead the public to a much greater variety of options and services. The development of this application will provide a wider connectivity amongst the service providers and will increase their productivity and skills. Also, the rating and reviewing system will level up their work too. Using Google's API, the problem of logging into the servers can also be tackled easily.

REFERENCES

[1] Swati Narkhede Kisan Monitoring System Focused on Android based Application Volume: 03 Issue: 02, International Research Journal of Engineering and Technology (IRJET).
[2] Android (Operating System) https://en.wikipedia.org/wiki/Android_(operating_system)
[3] Monika Bazard, Sonia Bhardwaj Overview on Android – The New Mobile Operating System, Volume 2, Issue 1, April, 2011, International Journal of Science, Technology and Management (IJSTM).
[4] R.Raheema Nilofar, K.Sigappi, R.Soundarya, SP.Valliammai, AT.Barani, Vijaya Kumar, Android Based Mini ERP System for College Institutions, Volume 5, Issue 3, March 2016, International Journal of Advanced Research in Computer and Communication Engineering (IJARCCE).
[5] Android architecture https://www.techotopia.com/index.php/An_Overview_of_the_Android_Architecture .