Problems & Suggestions for Android City Tour Guide System Based on Web Services for Mumbai

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Abstract─ **Mobile performs the important role in today's lifestyle of human being. All the convenient things are done through the mobile applications and the development of different application has been increasing day by day. In such applications, location dependent systems have been detected as an important application. We propose architecture of "Android city tour guide system based on Web service for Mumbai" that is able to provide tourism information to the mobile users for Mumbai city conveniently. The article can realize to query information for hotel, scenery, restaurant, traffic, schools.**

Index Terms— **Android, Web services, places, phone, travel, Mumbai, city.**

I. INTRODUCTION

World is contracting with the growth of mobile phone technology. As the number of users is increasing day by day, facilities are also increasing. Starting with simple regular handsets which were used just for making phone calls, mobiles have changed our lives and have become part of it. Now they are not used just for making calls but they have innumerable Android apps are available in the GooglePlay Store (formerly known as the AndroidMarket), on various Android App-focused sites, and the apps can run on Android smartphones, tablets, Google TVand other devices.

As with Apple and its AppleAppStore apps, Google encourages developers to program their own Android apps. While many Android apps can be freely downloaded, premium apps are also available for purchase by users, with revenues for the latter shared between Google (30%) and the software developer (70%).

Android comes with an Android market which is an online software store. It was developed by Google. It allows Android users to select, and download applications developed by third party developers and use them. There are around 2.0 lack+ games, application and widgets available on the market for users.

There are around 200000 applications developed for android with over 3 billion+ downloads. Android relies on Linux version 2.6 for core system services such as security, memory management, process management, network stack, and driver model. For software development, Android provides **Android SDK** (Software development kit).

Android applications are composed of one or more application components (activities, services, content providers, and broadcast receivers).

Each component performs a different role in the overall application behavior, and each one can be activated individually (even by other applications).

The manifest file must declare all components in the application and should

also declare all application requirements, such as the minimum version of Android required and any hardware configurations required.

Mobile tourism is a term that starts to appear in the last two decades. It involves using mobile device as electronic tourist guide. The tourist needs to search information about a Point of Interest (POI) from his mobile.

In this article, we propose the software development architecture based on Web services. This framework introduces the three-layer architecture of Web development into mobile phone software development. Based on the three-layer architecture, the android based city tour guide system for Mumbai is developed. Mumbai is one of the biggest city in Maharashtra, there are number of points for visiting.

Hence number of people visits for different places. The android based city guide system can realize to query information for Mumbai city places like hotel, scenery, restaurant, traffic and so on. The android based city guide system has more practical significance.

Earlier scenario there isn't any application that would help a tourist to get information about the place they are currently visiting in their mobile phone. Our application Android city tour guide system based on Web service is aimed to solve this problem.

A. Existing System

In Earlier tourism system, whenever a tourist visits famous spots, to know more about the place he hires a guide. The hired guide then narrates history of the place and there is no surety that all narrate story is true. The visitor is not aware about location or place before going there, hence the whole information is hidden by visitors. and that is the main disadvantage of visitors.

B. Advantage & Disadvantage of Existing System

In the tourism industry, tourist information is obtained mainly through newspaper, magazines, radio and other simple ways those are available easily. But problem is that tourists are not able to get travel information timely when they are on the move.

While today's mobile devices are becoming more intelligent, compared with PC, they still have the following limitations like small screen and tiny keyboard, limited CPU capacity, limited memory space, slow and fitful Internet connection. Many mobiles of recent decades have travel guide application. But the application on these mobiles works slow due to continues acquisition of the bandwidth. Therefore, the mobile end-user's operation is very difficult, and the contents display on the screen of mobile device is limited.

C. Propose System Solution

The proposed system doesn't require a physical guide. The Mobile application installed on the mobile of tourist can act as a guide.Without having a guide, it will help one to get information of the place in their mobile and check out the videos which explain the history/information of the place which they are currently visiting.

Our objective is to utilize an Android mobile phone to extract information about a place. We use the GPS (for getting user's current location) and GPRS (for internet connectivity between mobile and server) features of the Android phone. Using web service, user can query information about the places he visiting.

II. SYSTEM ARCHITECTURE

Android operating system is a stack of software component which is a stack of software components which is roughly divided into five sections and four main layers as shown below in the architecture diagram.

A. Linux

At the bottom of the layers is Linux - Linux 2.6 with approximately 115 patches. This provides basic system functionality like process management, memory management, device management like camera, keypad, display etc. Also, the kernel handles all the things that Linux is really good at such as networking and a vast array of device drivers, which take the pain out of interfacing to peripheral hardware.
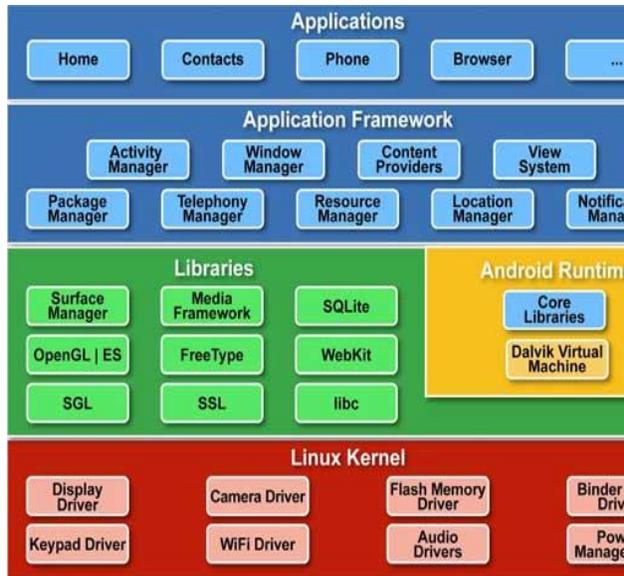
B. Libraries

On top of Linux kernel there is a set of libraries including open-source Web browser engine WebKit, well known library libc, SQLite database which is a useful repository for storage and sharing of application data, libraries to play and record audio and video, SSL libraries responsible for Internet security etc.

C. Android Runtime

This is the third section of the architecture and available on the second layer from the bottom. This section provides a key component called **Dalvik Virtual Machine** which is a kind of Java Virtual Machine specially designed and optimized for Android.The Dalvik VM makes use of Linux core features like memory management and multi-threading, which is intrinsic in the Java language. The Dalvik VM enables every Android application to run in its own process, with its own instance of the Dalvik virtual machine. The Android runtime also provides a set of core libraries which enable Android application developers to write Android applications using standard Java programming language.

D. Application Framework

The Application Framework layer provides many higher-level services to applications in the form of Java classes. Application developers are allowed to make use of these services in their applications. Application components are the essential building blocks of an Android application. These components are loosely coupled by the application manifest file *AndroidManifest.xml* that describes each component of the application and how they interact.
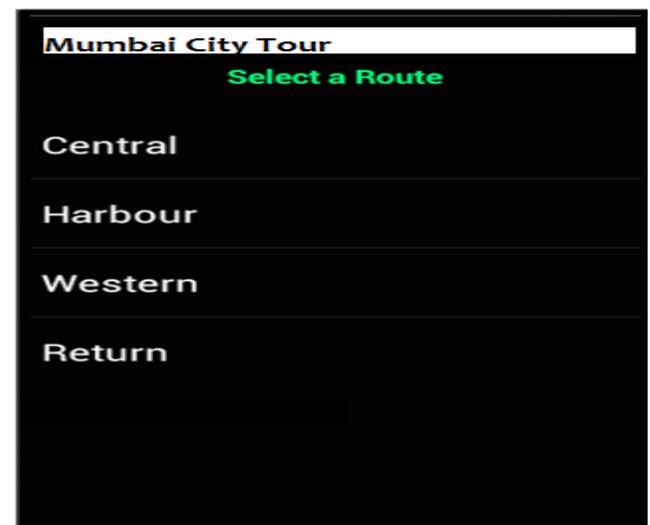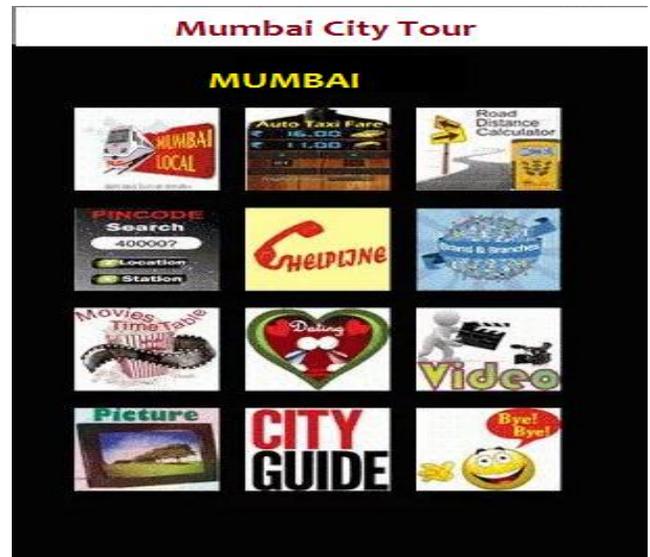
III. BASIC CONCEPT OF APPLICATION

The application aims to develop detailed texts, pictures, videos and other guidance information are provided, and so people can better understand the tourist attractions and make decision objectively. A problem is shown that tourists are not able to get travel information timely when they are on the move.

In order to help the user who is newer to the city at the travelling time and gets current location, map, and distance between two cities, whether report, find video.

Modules in Application

- Find Current Location of Mumbai city
- Locate in Mumbai Map.
- Calculate Distance between two sub cities of mumbai
- Video Search
- Weather Forecast

- Find the most popular sites like colleges, hotels, parks, school, hospitals.

The image below is showing the different elements of the tourist guide for Mumbai city.Where all the mapping is for Mumbai city. Hence, the person is new for Mumbai can get the overall guide through this app.

IV. CONCLUSION

In this paper, we presented the design and implementation of a mobile application called Mumbai city Travel Tour, with which mobile users can get tourism guidance information they need anytime and anywhere .user can attract towards its detailed information, including text, picture and video. User can search the nearby attractions after he or she configure the distance between the current location and the view spots.

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