

Capital Point (Android Application): “Help people to reduce effort”

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Abstract: Imagine you are just visiting any capital city like Delhi for the first time on a travel tour and you have no idea about the transport services of the city & you don't know anyone. Now what? You are standing at a place and have no idea about the weird Route numbers on bus or anything. What will you do?

To overcome such scenarios, an application is required. Since everyone nowadays is equipped with a smartphone, so android application is a good domain to choose. The Prime objective of “Capital Point” is to create a full-fledged Android application which could provide you the different routes and means of transportation around your city.

This application is especially developed for those who are all new in the city and are totally unaware about the city.

Keywords: Application, Android, Capital City.

1. INTRODUCTION

The Capital Point is the part of the sample application that provides customers with offline city routes and transportation. Through an android application, a customer can browse the DTC Services, Metro Services, most of the taxi service provider, Major offices of the city and Navigate itself using GPS and Google map.

By integrating information and improving processes, Capital Point will help improve Tourist and local residents about different routes, transport and offices.

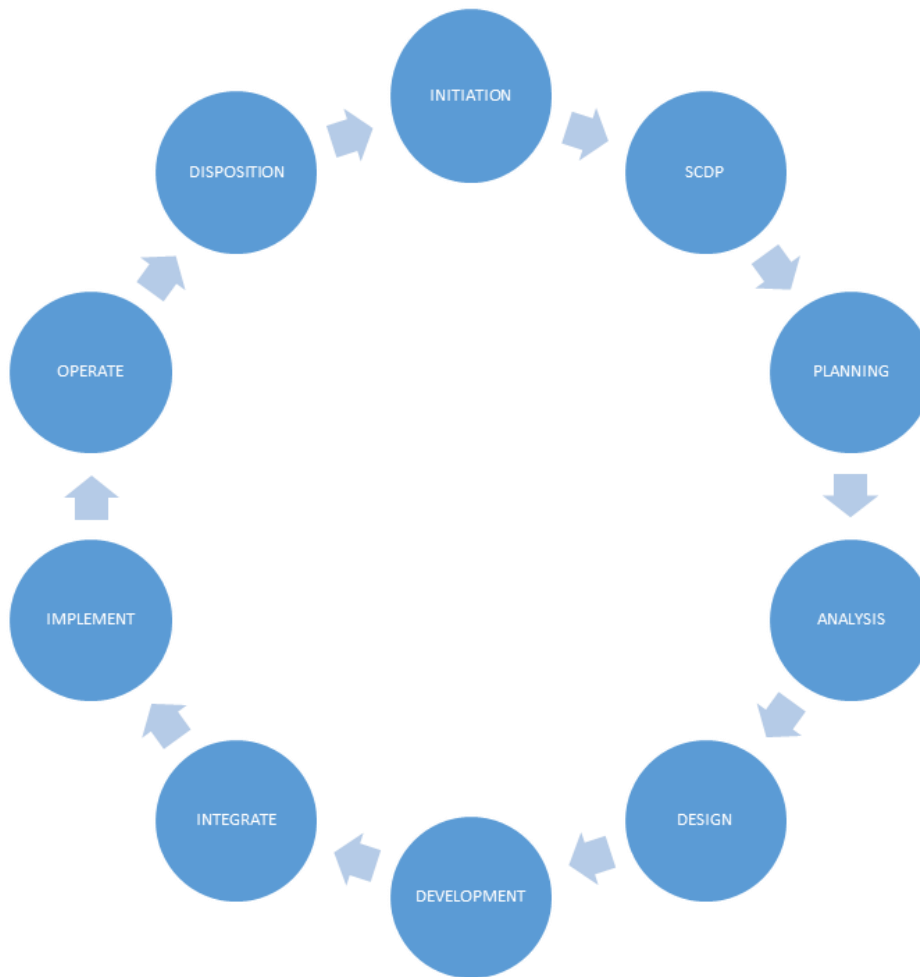
This application is especially developed for those who are all new in the city and are totally unaware about the city. The project provides an effective solution in planning route from one point to another point in the city and near around regions that occurs to every person who is new in city.

The Capital Point is an android application that provides you the different routes and means of transportation around your city.

The system has information about the DTC services, DMRC services, taxi service provider & major offices in city such as embassy, tourism etc. User can simply choose any of the services and can have details about the stops or stations. They can simply plane their route. User need not to login for using this app. This application uses different services such as GOOGLE Maps and GPS to locate you.

Eventually, for the person new to city can easily get familiar to the city's transport.

2. SYSTEM DEVELOPMENT LIFE CYCLE



Objective:

The summary of the objective of this software is to completely automate the process of:

- Provide better understanding to the city & transport system of city.
- Provide excellent and easy to access means of public transport route planner.
- Capital Point help's you plan your route around the city
- The Capital Point app will search for Delhi Metro and bus directions and schedules without requiring Internet data.
- Get directions to any DMRC metro station or Delhi bus stop.
- Customer Support from DMRC and DTC services.
- Book a taxi just by dialing a number and need not to go through your phonebook.
- Have details like address, contact number etc. about the major offices in city like Income Tax Office, Embassy, Headquarter of Various Brands, Fire stations etc.

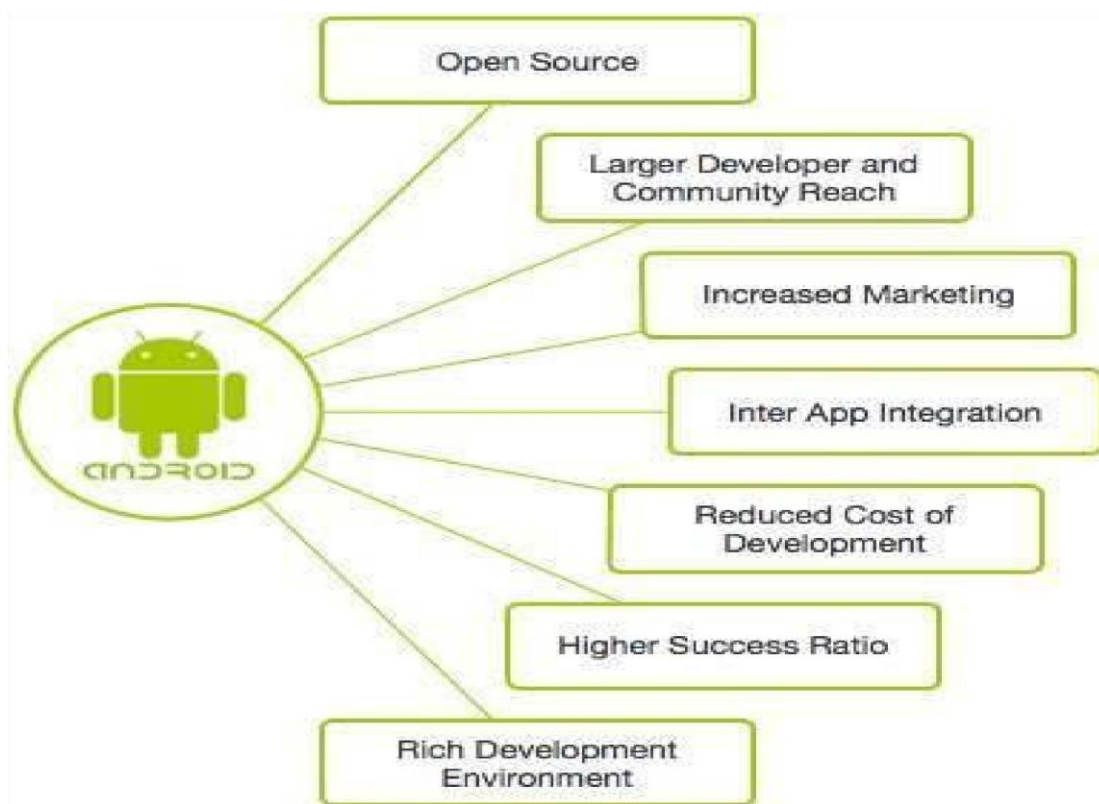
Java:

Java is a high-level, third-generation programming language like C, FORTRAN, Perl and many others. It is a platform for distributed computing – a development and run-time environment that contains built-in support for the World Wide Web. JVM tool is used in android development.

Overview Model of Java based Android Application:

An Overview model design is implemented to show the different phases of Android Development. Therefore, the phases include:

- Open Source
- Larger Developer and Community Reach
- Increased Marketing
- Inner App integration
- Reduced Cost of Development
- Higher Success Ratio
- Rich development environment



Java Virtual Machine (JVM):

The client application or operating system must have a java byte-code interpreter to execute byte-code instructions. The interpreter is a part of a larger program called the JVM. The JVM interprets the byte code into native code and is available on platforms that support Java.

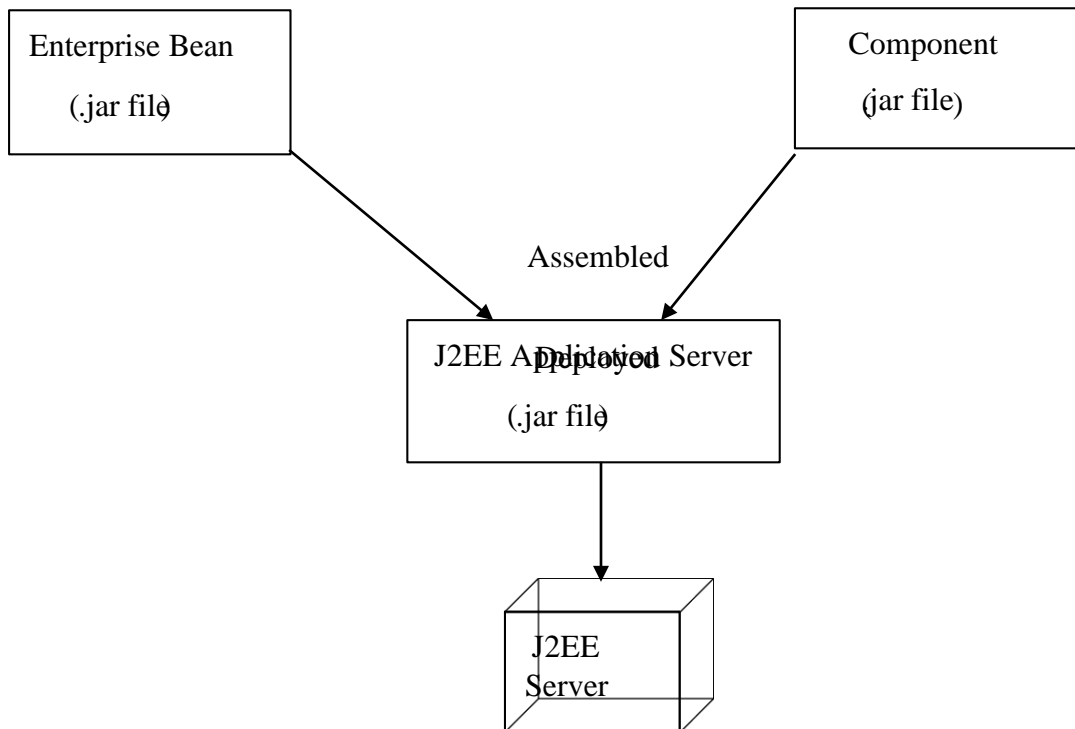
When the user runs a Java program, it is up to the JVM to load, possibly verify, and then execute it. The JVM can perform this function from within a browser or any other container program or directly on top of the operating system.

When a browser invokes the JVM to run a Java program, the JVM does a number of things:

- It validates the requested byte-code, verifying that they pass various formatting and security checks.
- It allocates memory for the incoming java class files and guarantees that the security of JVM is not violated. This is known as the class loader module.
- It interprets the byte code instructions found in the class files to execute the program.

Process of creating J2EE APPLICATION:

Process of Java based android application Includes following methodology:



3. FEATURES OF ANDROID

Android is a powerful operating system competing with Apple 4GS and supports great features. Few of them are listed below:

Features	Description
Beautiful UI	Android OS basic screen provides a beautiful and intuitive user interface.
Connectivity	GSM/EDGE, IDEN, CDMA, EV-DO, UMTS, Bluetooth, Wi-Fi, LTE, NFC and WiMAX.
Storage	SQLite, a lightweight relational database, is used for data storage purposes.
Media support	H.263, H.264, MPEG-4 SP, AMR, AMRWB, AAC, HE-AAC, AAC 5.1, MP3, MIDI, Ogg Vorbis, WAV, JPEG, PNG, GIF, and BMP
Messaging	SMS and MMS
Web browser	Based on the open-source WebKit layout engine, coupled with Chrome's V8 JavaScript engine supporting HTML5 and CSS3.
Multi-touch	Android has native support for multi-touch which was initially made available in handsets such as the HTC Hero.
Multi-tasking	User can jump from one task to another and same time various application can run simultaneously.

Resizable widgets	Widgets are resizable, so users can expand them to show more content or shrink them to save space
Multi-Language	Supports single direction and bi-directional text.
GCM	Google Cloud Messaging (GCM) is a service that lets developers send short message data to their users on Android devices, without needing a proprietary sync solution.
Wi-Fi Direct	A technology that lets apps discover and pair directly, over a high-bandwidth peer-to-peer connection.
Android Beam	A popular NFC-based technology that lets users instantly share, just by touching two NFC-enabled phones together.

Android Versions:**A : Alpha****B : Beta****C : Cupcake****D : Donut****E : Eclair****F : Froyo****G : Gingerbread****H : Honeycomb****I : Icecream Sandwich****J : Jellybean****K : Kitkat****L : Lollipop****M : Marshmallow****N : Nougat****O : Oreo****4. CONCLUSIONS**

The name Capital Point itself tells the complete working of the project. In the present technological world without android device life becomes incomplete. So, in every field it is must to have android device. Thus, in the exploring the city also there is a lot of need of android application as it is the most time and money saving for a new person to a city.

Due to this Capital Point app it becomes easy to find the route of a city and means of transport in such system there is no need of asking someone else and whole data is stored in application database. This makes it possible to save time and money. Also, in Android device files and information can be kept easily without any fear of losing the data.

The main aim of the project is to provide an easy to use application for searching your destination. So that we can save time of person in finding destination & routes at not well-known place.

Scope for Future Work:

The application can be improved in many ways and can be extended to support more devices like the tablets and iOS devices. Following are some of the possible extensions:

- The application can be extended to provide a more advanced search by providing the Time table of Public Transit.
- NCR Public transport system can also be added for betterment of person travelling nearby cities.
- Restaurants, Food chains & local fast food vendors could be added.
- Parking facility availability on stations can be introduced.
- Push-in notifications for effected service due to any reason.
- Opening & Closing time of tourist places can be Added & their entry fees, different activities available etc.

5. LIMITATIONS

Since, every system has some limitations, so our proposed system is also not untouchable in this regard. Although it includes every kind of features, but it can't be used everywhere and every time.

Since the application don't use internet, so user will be always unaware of any change in route or interruption in any services also it doesn't have different kind of access feature for different users.

Though it was planned for this system to be absolutely perfect but everything as such has some limitations, so does the System. Following may be the drawback in this system.

- Though this system is developed as a multi user system, but it is not a real time system.
- Any changes in database is done, then it will not get updated itself, rather user needs to manually update it by just updating the application each time.

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