1.2 Need of Android, Features of Android

Need of Android

There are so many reasons you should choose Android platform for mobile application development.

1. Zero/negligible development cost

The development tools like Android SDK, JDK, and Eclipse IDE etc. are free to download for the android mobile application development. Also Google charge a small fee $25, to distribute your mobile app on the Android Market.

2. Open Source

The Android OS is an open-source platform based on the Linux kernel and multiple open-source libraries. In this way developers are free to contribute or extend the platform as necessary for building mobile apps which run on Android devices.

3. Multi-Platform Support

In market, there are a wide range of hardware devices powered by the Android OS, including many different phones and tablet. Even development of android mobile apps can occur on Windows, Mac OS or Linux.

4. Multi-Carrier Support

World wide a large number of telecom carriers like Airtel, Vodafone, Idea Cellular, AT&T Mobility, BSNL etc. are supporting Android powered phones.

5. Open Distribution Model

Android Market place (Google Play store) has very few restrictions on the content or functionality of an android app. So the developer can distribute theirs app through Google Play store and as well other distribution channels like Amazon's app store.

Features of Android

There are numerous features of android. Some of them are listed below:

Feature	Description
Connectivity	Android supports multiple connectivity technologies including 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	Android supports various type of audio/video/still media formats like: H.263, H.264, MPEG-4 SP, AMR, AMR-WB, AAC, HE-AAC, AAC 5.1, MP3, MIDI, Ogg Vorbis, WAV, JPEG, PNG, GIF, BMP and WebP
Web browser	The web browser available in Android is based on the open-source Blink (previously WebKit) layout engine, coupled with Chrome's V8 JavaScript engine supporting HTML5 and CSS3
Messaging	SMS and MMS are available forms of messaging, it also include threaded text messaging and Android Cloud To Device Messaging (C2DM) and now support the enhanced version of C2DM, Android Google Cloud Messaging (GCM) is also a part of Android Push Messaging services
Multi-tasking	Multitasking of applications, with unique handling of memory allocation, is available, using this user can jump from one task to another and at the same time various application can run simultaneously
Resizable widgets	Widgets are re-sizable, so users can expand them to show more content or shrink them to save space
Multi-touch	Android has native support for multi-touch which was initially made available in handsets such as the HTC Hero
Wi-Fi	A technology that lets apps discover and pair directly, over a high-bandwidth peer-to-peer connection.
Screen capture	Android supports capturing a screenshot by pressing the power and home-screen buttons at the same time. This features supports after Android 4.0
Android Beam	A popular NFC-based technology that lets users instantly share, just by touching two NFC-enabled phones together
Multi-Language	Android supports multiple languages, also supports single direction and bi-directional text

1.3 Tools and software required for developing an Android Application

The android developer tools let you create interactive and powerful application for android platform. The tools can be generally categorized into two types.

- SDK tools

- Platform tools

SDK tools

SDK tools are generally platform independent and are required no matter which android platform you are working on. When you install the Android SDK into your