**UNIT-I**

**Android:**- Android is an open-source software stack that includes the operating system, middleware, and key mobile applications, along with a set of API libraries for writing applications that can shape the look, feel, and function of the devices on which they run.

(or)

Android is mobile platform which consists of

* An Operating System(Linux kernel)
* Middle ware
* Key apps.

**History before Android:-**

1. Historically, developers, generally coding in low-level C or C++, have needed to understand the specific hardware they were coding for, typically a single device or possibly a range of devices from a single manufacturer. As hardware technology and mobile Internet access has advanced, this closed approach has become outmoded.
2. Platforms such as Symbian were later created to provide developers with a wider target audience. These systems proved more successful in encouraging mobile developers to provide rich applications that better leveraged the hardware available.
3. Although these platforms did, and continue to, offer some access to the device hardware, they generally required developers to write complex C/C++ code and make heavy use of proprietary APIs that are notoriously difficult to work with. This difficulty is amplified for applications that must work on different hardware implementations and those that make use of a particular hardware feature, such as GPS.
4. In more recent years, the biggest advance in mobile phone development was the introduction of Java-hosted MIDlets. MIDlets are executed on a Java virtual machine (JVM), a process that abstracts the underlying hardware and lets developers create applications [that run on the](http://www.it-ebooks.info/) wide variety of devices that support the Java run time.

The introduction of Java MIDlets expanded developers’ audiences, but the lack of low-level hardware access and sandboxed execution meant that most mobile applications were regular desktop programs or websites designed to render on a smaller screen, and didn’t take advantage of the inherent mobility of the handheld platform.

**History of Android**

***Android Inc.*** was founded in Palo Alto, California, in October 2003 by **Andy Rubin**, **Rich Miner, Nick Sears, and Chris White.**

1. The early intentions of the company were to develop an advanced operating system for digital cameras, and this was the basis of its pitch to investors in April 2004.
2. The company then decided that the market for cameras was not large enough for its goals.
3. Rubin had difficulty attracting investors early on, and Android was facing eviction from its office space.
4. In July 2005, Google acquired **Android Inc.** for at least $50 million. Its key employees, including Rubin, Miner, Sears, and White, joined Google as part of the acquisition.
5. At Google, the team led by Rubin developed a mobile device platform powered by the Linux kernel(with name Android). Google marketed the platform to handset makers and carriers on the promise of providing a flexible, upgradeable system.
6. In year 2007 Google added its own specific features application(Maps,play store, Notification etc.) to the platform and released a mobile platform with name **Android.**
7. In year 2007 most of the companies(Sony,HTC,Samsung) are struggling for mobile platforms(at that time famous platform are Symbian, IOS, windows, BlackBerry which are proprietary platforms) to develop the mobile phones and hence Google started a consortium with the name  **OHA(open Hand set Alliance).**The OHA was established on 5 November 2007, led by Google

***Imp-->****The Open Handset Alliance* ***(OHA)*** *is a collection of more than 80 technology companies, including hardware manufacturers, mobile carriers, software developers, semiconductor companies, and commercialization companies. Of particular note are the prominent mobile technology companies, including Samsung, Motorola, HTC, T-Mobile, Vodafone, ARM, and Qualcomm.*

*Google announced openly who ever joins in OHA they can get the Android platform(an Open Source).*

1. The first commercially available smartphone running Android was the HTC Dream, also known as **T-Mobile G1, announced on September 23, 2008**

**Why Android?**

1. With no licensing fees or proprietary software,
2. the cost to handset manufacturers for providing Android devices is comparatively low.
3. Rather than being a mobile OS created for a single hardware implementation, Android is designed to support a large variety of hardware platforms, from smart phones to tablets and televisions.