



Make in India and The Revolution of Android Application Development

MR. RAMESH CHANDRAHASA

BE in (E&C), MBA, (Ph.D), ASSISTANT PROFESSOR, GLOBAL BUSINESS SCHOOL HUBLI, KARNATAKA STATE

ABSTRACT India is set to emerge as the world’s fastest growing major economy ; it gives boost to technology, innovation and research & development of mobile software. It’s brought revolution of android mobile application development. Android is known the most used mobile operating system in the world. Android know has more users, more phones and tablets worldwide than any other operating system . Smart phones have changed the definition of mobile phones by being a powerful tool inevitable in our daily life with varied options for fun and entertainment. As it is an open source and some of the development tools are free to develop application. So there are plenty of applications especially related to entertainment and socializing generated, which inspires people to use it. Android is very convenient hardware platform is also boon for developers to develop their idea into reality. All these factors make android application development more popular.

KEYWORDS Android, Smart Phones, Java, Eclipse – IDE, Android ADT, Android SDK.

INTRODUCTION

Android is the mobile operating system developed by Google. This mobile operating system is a Linux based software system; it is free and open source software. Android software provides a rich application framework that allows developer build innovative apps and games for mobile devices in java language environment. To start development, initially set up environment in the system, tool is provided by android developer’s website. In package included Eclipse IDE and Android SDK (Software Development Kit), we can ADT plug-in through this tool. Eclipse is the preferred tool for development it can easily access application programming interface (API) and update all version of android.

ANDROID ARCHITECTURE

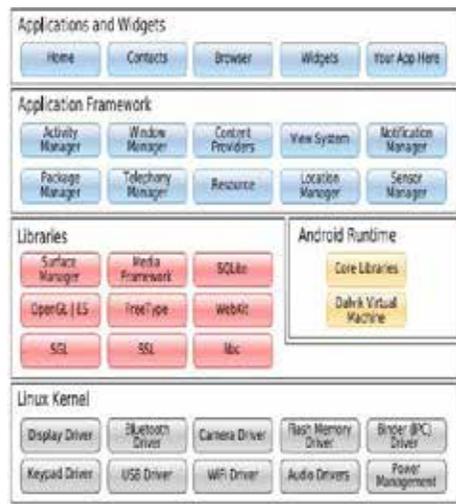


Figure 1: Android is a linux based operating system, which is used software stack architecture. As shown in Figure 1 android architecture consists of four layers: Application and Widgets, Application Framework, Libraries and runtime and Linux kernel.

Basic steps are used to develop application in android environment.

- Setup: - Install and setup development environment and

create Android Virtual Devices (AVD) and connect hardware devices.

- Development: - Set up and develop android project, it’s contain all of the source code and resource files of application.
- Debugging and Testing: - Build project into a debuggable and creating .apk (Application Package) file, we can use this file to install and run the application.
- Publishing: - Making configure and build application for release and distribute application to users.

Applications Developed Using Android
Android is designed primarily for

- Mobile Devices (Smart phones)
- Tablet computers
- Televisions (Android TV)
- Cars (Android Auto)
- Wrist watches (Android Wear)

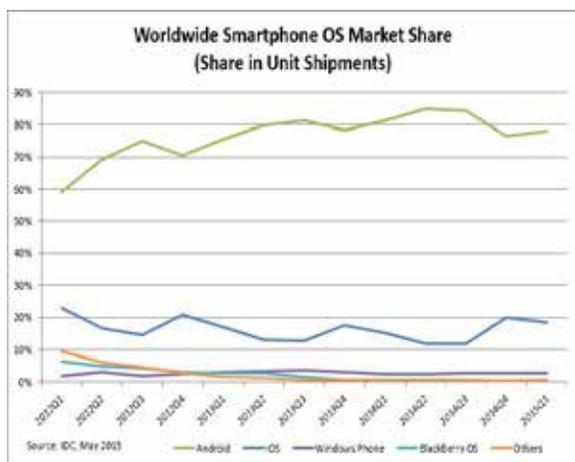
Google has an awesome new product in the pipeline using Android

- Smart Glasses – (HUL, GPS Tracker)
- Home Appliances – (Washing Machines)
- Cars – (Car Technology)
- Homes – (Home Automation Systems)
- Camera (Hybrid Cameras)

Global Android Market Share

The worldwide Smartphone market kicked off the year with an expected post-holiday dispersion in shipment volume compared to the previous quarter’s unprecedented results. According to data from the International Data Corporation (IDC) Worldwide Quarterly Mobile Phone Tracker, vendors shipped a total of 334.4 million smart phones worldwide in the first quarter of 2015 (1Q15), up 16.0% from the 288.3 million units in 1Q14 but down by 11.4% from the 377.6 million units shipped in 4Q14. Android dominated the market with a 78.0% share in 1Q15. Samsung reasserted its global lead with a renewed focus on lower-cost smart phones³.

Period	Android	iOS	Windows	BlackBerry OS	Others
Q1 2015	78.0%	18.3%	2.7%	0.3%	0.7%
Q1 2014	81.2%	15.2%	2.5%	0.5%	0.7%
Q1 2013	75.5%	16.9%	3.2%	2.9%	1.5%
Q1 2012	59.2%	22.9%	2.0%	6.3%	9.5%



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Q1 2013	75.5%	16.9%	3.2%	2.9%	1.5%
Q1 2012	59.2%	22.9%	2.0%	6.3%	9.5%

Global app economy revenues in 2015

According to International Data Corporation (IDC) report, worldwide smartphone market statistics presents revenue distribution of global economy in 2016.

As per the IDC's forecast for 2020, android devices powered by google operating system are expected to grow 6.2% in 2016 with 1.24 billion shipments. Android still dominant technology. Android is expected to growth 81% to 84% from 2015 to 2016.⁴

Platform	2016 Shipment Volume*	2016 Market Share*	2016 Year-over-Year Growth*	2020 Shipment Volume*	2020 Market Share*	2020 Year-over-Year Growth*	2015-2020 CAGR*
Android	1,240.5	83.7%	6.2%	1,565.3	85.1%	5.3%	6.0%
iOS	226.8	15.3%	-2.0%	267.1	14.5%	3.5%	2.9%
Windows Phone	11.2	0.8%	-61.6%	6.8	0.4%	-9.5%	-25.3%
Others	4.0	0.3%	-55.7%	0.5	0.0%	-9.7%	-43.1%
Total	1,482.5	100.0%	3.1%	1,839.7	100.0%	5.0%	5.0%

Source: IDC Worldwide Quarterly Mobile Phone Tracker, June 1, 2016

IDC's forecast for the future (**International Data Corporation (IDC)**)

Mobile Application Developer Named "Best Computer Job for the Future"

Mobile application development is one of the world fastest growing sectors. According to International Data Corporation report, android grew to 84% of the global market share in 2015.

Android developer earns decent salary, and job market is growing rapidly, mobile application developers easily took number # 1 spot, as android provides interesting revenue model. This mobile sector provided unique advantage for developers, they can work as freelance and develop their own idea into reality, lot of innovation and R&D is happening in mobile sector.

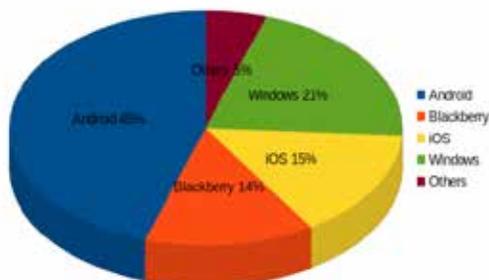


Figure 2 – Global Android share.



Figure 1 – shows salary of Programmers.

CONCLUSION

Mobile technology are fulfilling economic growth, driving recovery from the global recession

As per the Vodafone Institute Survey is contributing social and economic development of the country. Conducted by the Cologne Institute for Economic Research (IER Cologne) on behalf of the Vodafone Institute for Society and Communications.

The Growth of Android App Development Companies in India

India is the fastest growing countries in the world, especially in the field Information Technology. No other field has grown as rapidly in such a short period of time as mobile app development in the country. With the increase of Smartphones in

India, it is only logical that the Android Application Development Companies are hiring developers at high rate.

It is estimated that the number of people using Android Phone will reach nearly 2 billion this year. This phenomenal increase in the number of users automatically means widening of the market for mobile app development. Moreover plenty of online stores are now looking to come up with customized mobile applications that will encourage users to directly browse their online platform through these apps. All these factors are just an indicator of the incredible rise in the requirement for mobile app development.

This demand provides a high job opportunity for mobile app developers. Every year thousands of fresher's enter in the field of IT and choose mobile app development as their career path. Android app development companies in India, both small scale and MNCs are looking for fresh talent that can bring in innovation to their products.

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