Comparison Of Open Source Operating System And Close Source Operating System

Background

Since the invention of the computer, here are huge changes in society and nature which make it easy a bunch of jobs, increase the productivity growth of each process and activities of daily life and its effective and efficient for each single activity moreover, the emergence of information technology cause for too many positive changes for examples the rapid increase in the amount of data, convert of analog system to digital system furthermore, store a big volume data in organize form that can easily make a variety of reports and analysis. Overall, Information technology is the base or foundation for too many innovations in today's modern world.

After the emergence of the internet world completely gets shaped in the new face it’s the backbone of information technology improvement and the main cause of today amazing and wonderful modern world, the internet has a great impact both socially and technically, socially impact of the internet is to interconnect world to share their knowledge, skills, experience, build a personal relationship, save time and money, find jobs, familiarize with different cultures, improve the education sector and much more business opportunities overall, convert the vast and huge world to a small village internet is the main cause for today globalization. Technically, create internet communication which is cheaper than a phone call, electronic business, electronic banking, electronic education, send and receive large volume data in a short period of time. Consequently, although Information technology greatly simplifies and better our lives however it has a set of problems as well like most concern about security and privacy but everything in life has challenges’ luckily, there are too many organization, government and private sectors effort and policies and individual commitment to address such challenges they did a lot, they are doing and they will be done, it’s not a very big concern to think about it, its manageable and controllable compare to cons information technology have too many pros and advantages.

Information technology is a combination of two parts software and hardware, instruction of data or operating system (OS) is software and wires, transistors and circuits are in one package is hardware, the computer is the main device of information technology, smartphone, tablet, biotechnological devices, scanner, printer, copier, servers and so on are the devices of information technology

The operating system is soul for computer, its intermediary between computer programs and hardware, operating system have three main tasks, manage the computer resource, allow the user to communicate with computer programs, execute service for computer programs. Early computers hadn’t operating system after 10 years computers had an operating system but only dedicate for one task like calculator machine after scientist efforts and a lot of improvements currently, there are multi-tasks operating system in market in different functionalities, generally, there are two types of operating system open source and close source operating system

Closed source operating system also called proprietary system software which issued under license agreement to authorized users with limitations according to cost for a specific period of

time the source of the operating system is not published to the users to look and change it the most common and dominant company of computer closed operating system is Microsoft and apple company product IOS operating system for smartphones are examples of closed operating system and the other hand open-source operating system is free software everyone can download, install, use, modify and enhance the software without any cost limitation and restrictions. Linux company operating system is open source for computers and android operating system product of google for smartphones both open and closed source operating system have their own pros and cons.

Today phones are quite different from previous one it makes the user's many jobs easier but still the user looking for more convenience from different aspects currently, android and iOS are the key actors in the mobile industry, these two companies have a most shares of the market and these two companies create many jobs in the open market regarding business through android and iOS to develop their own application and make money. The truth is iPhones use iOS and Samsung and some other companies use Android as their operating system for smartphones, each of them has their good and bad points, I am not going to tell you which one is the best or which one is not, both of them are good because everyone has their own preferences.

Objective

The main objective of this report is to compare open source and closed source operating systems in a case study of Smartphone operating systems Android and iOS and which mobile operating system is a market winner and why? , today modern world, almost all economic and social activities cover by information technology and every user have to pay licenses fee to technology vendors because they are using their services actually, people need the technology to increase their production growth in other hand government, companies, organizations and people try to find the alternatives ways in each aspect and section of life to save the money toward economic growth So, in technology industry open-source lunch and emerge it freely for everyone, therefore, in this report attempt to find the answer for the question “which mobile operating system has more usage for smartphone business?” moreover, glance to the comparison of open-source operating system and closed source operating system.

Graphics Representation from Statista.com

The data illustrate from Statista.com the world mobile operating system share, in terms of consumers from 2009 to second quarter of 2018, which the 88% sold to consumers by android while the Apple have only 11.9 % market share which shows s a huge difference.

Closed Sourced Operating System

Closed soured operating system is also called propriety software its nonfree software which is provided to users under license agreement the code is either never shared to users and published publically for learn and modification purposes and the source are copyright only vendor can modify for further development and improvement and try to maintain their brand name for commercial intention.

Microsoft and Apple is famous companies for the closed-sourced operating system, both companies have an operating system for computer and smartphones, apple use iOS as the

operating system for their smartphones hardware management its Unix-based operating system.

iOS Users

iOS have a great market in developing country as the US, Europe, Brazil and others for many reasons the main reason is culture and economic situations the GDP of a developed country is high and the iOS is expensive compared to other manufacturing companies of the mobile industry, however, they can be afforded Furthermore, the interface of iOS products is easy and friendly, the design is very attractive with different necessary functions, Apple have a very good brand image in the market this also has an influence on Apple customers that they purchased and used in furthermore, the Apple company have loyal customer, the young generation is used as fashion like the iPhone have Apple watch, the camera is available in high pixel, its faster than other mobile manufacturers and finally it has Apple pay services for its user and it's very easy to use,

iOS Operating System

iOS operating system used in Apple product iPhone, iPads and iTouch, the abbreviation stand for (i) means iPhone and (OS) is operating system moreover, its initial release in 29-June-2007 and currently available in 40 languages.

From technical perspective iOS formerly use only CSS, HTML and JavaScript but after some time the code break out and people use any third-party software then apple change their idea and lunch iOS SDK(Software Development Toolkit) for the public in 2010 and the name of SDK is Allan.

The iOS SDK consist all require tools for development ,like design , debug and deployment of mobile application and web application in other hand in the back end three library are very important and play vital and key roles for development of iOS applications, Xcode is use for developing application in back end , interface builder is for assembling User interface and iOS simulator use for testing of application furthermore, for development of iOS applications SDK require Intel Mac Operating system 10.6.6 version or later version , more than 10 GB free memory of hard disk in and apple id as register apple developer moreover , programming with iOS is easy to learn and develop an application the interface and environment of SDK is user friendly however its require much practice of programming and iOS university program have some limitation regarding deployment of application , the iOS university i only allow 200 register devices ,when you want to test your application the testing device must be base on the list of iOS university program(Apple 2012)

Creation and setting up the environment for the development of iOS, its quite expensive, however, the software are somehow free but hardware requirement is last costly thus, hardware of apple is expensive, all devices of apple are good for development but for convenient development, the iMac desktop is specially designed for development of iOS application and its more expensive last but not the least, iOS application also require Mac computer having Intel processor and virtual iPhone from store likewise, you have to purchase for testing you application

Pros and Cons of iOS

During a short period of time, Apple become very famous and achieve a good brand image in the market especially it's become popular for different innovations them made in the last ten year, the use of the iPhone is very simple even who don't know how to use the learn very easily, Apple provide the best privacy and security to their customers and all user is fully satisfied regarding personal data, the Apple products are strong enough, it looks very attractive, however, Apple have some negative factors and disadvantages such as, all products are expensive, different charges about services, closed source it's a very big headache for developers and business, OS of iOS is incompatibility with other devices

Open Source Operating Systems

The open-source operating system is software provide to any user freely with whole source code under license to study, modify, improve, developed and provide likewise to another to repeat the same process of by adding a new feature or re-correct the part which not working properly, every person can maintain for better result.

Google, Red hat and IBM is famous vendors is famous for open source software both for computes and smartphones, the android is a google product for smartphones it isn't only used by Google many firms and individual use this software as a smartphone operating system big firms such as Samsung, Huawei, Xiaomi, Oppo, Motorola, LG, Vivo, Lenovo, Sony, HTC and etc.

User of Android

Android has many users in Asia and Africa, android has high-level segmentation and a variety of products that have every one choice furthermore, easy to use and maintain, and its cheap compared to the iPhone and most parts and people of the world are poor and can't afford the expensive smartphone, as a world have different culture and languages so android available more than a hundred languages so, many users of android are non-English speaker every one with other famous languages can use their mobile in their own languages and android focus is to decrease the prices and increase the number of languages

other reason open source software because it helps them become better programmers. Because open-source code is publicly accessible, students can easily study it as they learn to make better software. Students can also share their work with others, inviting comments and critiques, as they develop their skills.

Android Operating System

Android Operating System is used by many mobile manufacturers such as Samsung, Huawei, Xiaomi, Oppo, Motorola, LG, Vivo, Lenovo, Sony, HTC. Initial release on 23-Sept-2008 by Google and currently available in more than a hundred languages.

From a technical perspective, all android applications are programmed and developed in java, XML and Eclipse IDE moreover, all devices of android have predefine necessary applications like, calendar, email, contact, browser, and so on . the main factor of the android framework is

(APIs) Application program interface which is the package of different protocols, programming tools and routines that all programming standards and regulations are defined to how the component of android interact with each other.

Android consists of seven important libraries which carry out important different jobs in application development the system C Library is responsible to connect and bring the Linux services, the Media Library, responsible for all media activities like video, image, audio and it related jobs and for database use the SQLite library and so on.

Linux Kernel is the intermediary between software and hardware moreover, one of the main tasks of the Linux kernel is the overall security of the android operating system moreover the IDE (Integrated Development Environment) work by the eclipse, this IDE allows the user to communicate and develop the android application trough eclipse and regarding the hardware requirement for the android operating system its require 600 MB free space of hard disk and less than 512 MB RAM (Random Access Memory).

Pros and Cons of Android OS

Android operating system , the most positive point of Android OS it is open source which is more convenient and efficient for business and individual developers moreover , this operating system have available more than hundred languages the people or nationalities who are not professional in English they can also easily use android operating system and beside of open source its free of cost available in market for free and most of today world business entities think about how to reduce the expenses in technology and other aspect of business so , many business entities chose android for their business for the reason of free of cost furthermore , the operating system have the feature of external expandable storage in devices and last but not the least ,all devices of android application is cheap compare to Apple however , android have some cons, the security and privacy is good enough but ,not that much secure as Apple , the source code of the operating system is heavy some time it cause to warm up or hot the device main board which emerge some problems in hardware and software in additions, for 3D game development some time need for third party applications and devices .

Conclusion

After studying many journals ,books ,online websites and observing the data to write this report about comparison open source and close source operating system in case study of smartphones , find Android is the winner of market because , its open source and free moreover , android have many other positive features but the main success features are open source and free because, today modern world need technology to increase in their quality , productivity rate and increase their brand image in other hand the big companies have a lot of expenses in order to decrease their expenses and increase the profitability of the companies all of them think about increase productivity rat and cheap effective technology so , many national bank , huge enterprise , firms and individual entities save millions of money using open-source operating system in both term computers and Smartphone however, close source have also good market but only in developed country who can afford the fee of closed source companies the close source have a good assistance and support system which its not appear that much in open-source operating system .

Overall, Apple and Android are two main dominators of today's smartphones market but the Android is the winner of this market by having 88% of the market share in terms of the end-user or consumers.