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A Comparison; Mobile Operating System Android vs iOS

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Abstract: Today's mobile devices are multi-functional, capable of hosting a wide range of business and consumer apps. A mobile operating system, like a computer operating system which is a software platform that determines the operations and features accessible on your device, such as thumbwheels, keyboards, wireless security and synchronization, messaging, and more. There are numerous mobile device operating systems available today, the well-known Mobile operating systems are Google's Android and Apple's IOS. Android is a software set of software subsystems needed to provide a fully functional solution for mobile devices. IOS is a mobile operating system that allows all other applications to run on one of its iPhone, iPod Touch or iPad products. This paper aims to compare Android with iOS Mobile operating system. Specifically, the researcher aims to compare the adaptability and usability of Android and iOS. The method used in this research is documentary research. The researcher gathered similar researches and articles and was content analyzed. In terms of adaptability the researcher finds that Android is regarded as a versatile, highly adaptable operating system that gives its users a great deal of choice over how things are configured. In terms of usability although IOS outperforms Android in some area like interface and security, Android still proves that it have greater functionality over IOS in terms of price, storage, and data transfer. Overall Android is the best option in terms of usability and adaptability.

IndexTerms **- mobile OS, usability, adaptability, interoperability**

INTRODUCTION

Today's mobile devices are multi-functional, capable of hosting a wide range of applications for both corporate and consumer use. A mobile operating system, like a computer operating system which is a software platform that determines the operations and features accessible on your device, such as thumbwheels, keyboards, wireless security and synchronization, messaging, and more (Sheikh,Ganai, Malik, & Dar, 2013).

Some of the more common and well-known Mobile operating systems are Google's Android and Apple's IOS. Android operating system is based on Linux, while iOS is based on OSX and UNIX. These two are the main operating systems for mobile devices such as smartphones, tablets or smart TVs (Lixandroiu & Maican, 2014).

This study aims to compare Android with iOS Mobile operating system. Specifically, the researcher aims to compare the adaptability and usability of Android and iOS.

Adaptability

Android has long been regarded as a versatile, highly adaptable operating system that gives its users a great deal of choice over how things are configured. As a result, many mobile device manufacturers use Android (H. 2016). While Győrödi, Zmaranda, Adrian, & Győrödi (2017) stated on their research that iOS was designed to work on a very particular set of devices with a well-defined set of hardware requirements.

Verma & Sambhav (2020) justify that iOS is designed like that because if by chance virus comes along with an app it will not be able to harm other applications.

According to Maia, Nogueira & Pinho (2010) most of the updates in Android come in the form of ".X" updates that are actually additions rather than changes to the whole system. On the otherhand, Verma & Sambhav (2020) stated that iOS developers needs to optimize older iOS applications and make applications compatible with newest version. Moreover, due to Android`s powerful development framework users as well as software developers are able to create their own application for wide range of device (Chinetha, Joann, & Shalini, 2015). On the contrary, iOS have a propriety software which means it does not provide its source code to users or other developing team it can only be done by Apple`s developing team (Lockheimer, 2012).

Singh discusses on her research that Apple has long been at the top of the market in terms of cost, but the new iPhone X, with a starting price of 80000rs, has taken things to a whole new level. The iPhone firm set high prices for its phones, yet customers were willing to pay them because of their operating system. Even if you have to buy a used iPhone, you will have to spend between

30000 and 40000 rupees in the market. Nothing compares to Android in terms of scope and diversity. Android gives you a wide range of options, from low-cost phones to high-end headphones. The fact that Android has the most free apps makes it the obvious pick for those on a budget.

Usability

Mobile operating systems in terms of usability. According to Brad Yale (2014) the interface section iOS is convincingly leading over Android because of its more uniform, stylish and convenient interface, while in terms of user experience slight advantage is given to Android due to the huge set of choosing menus, their ease of use and an ideal customer QWERTY keyboard. On the research present by Lixandroiu & Maican (2014) both Android and iOS use touch interfaces, which are very similar, swiping, tapping and pinch-and-zoom. Both have a Home screen, similar to the screen of a PC desktop. Many application developers prefer to create games for iOS not for Android. Because it is usually easier to make money on IOS mobile application.

Although Android is often updated, some users do not receive new updates or even purchase new devices with outdated software from retailers. Device manufacturers are usually the ones who decide when certain updates are applied. Some updates are only available a few months after they are issued in some cases. While Asokan (2013) stated all iOS devices can receive iOS updates. There have been instances where iOS upgrades have failed to operate on devices that are more than three years old.

According to Singh, when compared to IOS, transferring is a lot easier with Android. You may transfer files in Android utilizing the USB port and the Android File Transfer app. Without the use of programs, photos and movies may be transferred through USB. However, file transmission on iOS is more complicated than on Android. Files may be transferred via the iTunes software, which is incorporated into IOS.

Chinetha, Joann, & Shalini (2015) discusses on their study that both phones provide superior security on their respective platforms. Both phones include a fingerprint sensor and facial recognition software. Both phones offer pin code and pattern locking capabilities. However, in other cases, Apple outperforms Android in terms of security. For example, Apple has better facial recognition software than Android, and Apple also has an IR system to unlock the phone in dark areas using face recognition.

Both Android and iOS have large storage capacities. Both phones come in 32GB, 64GB, 128GB, and 256GB storage options. Both phones are readily accessible in these configurations. However, Android offers expandable memory whereas iOS does not. Android has the HYBRID option, which allows you to combine two SIM cards or one SIM card and one memory card. (Lixandroiu, & Maican 2014).

Lixandroiu, & Maican (2014) also mention that both phones include a high-quality camera option. Both come with front and back cameras. Both include a dual camera on the rear with dual led flash, portrait mode, and video recording modes. However, in smaller and less expensive versions, Apple does not include twin cameras or portrait mode. These cameras are also available on Android in the 20000rs variant. When comparing the two cameras, they are nearly identical, but in low-light situations, Apple excels while Android shines. Both include face recognition in their front cameras, and both have IR technology that allows you to unlock your phone at night using face recognition.

RESEARCH METHODOLOGY

The method used in this research is documentary research. The researcher gathered similar researches and articles and was content analyzed. Documentary research are research that uses personal and official documents as a source material which include newspapers, diaries, stamps, directories, handbills, maps, government statistical publications, photographs, paintings, gramophone records, tapes, and computer files. The researcher gathered similar researches and articles and was content analyzed.

RESULTS AND DISCUSSION

In terms of adaptability the researcher finds that Android is regarded as a versatile, highly adaptable operating system that gives its users a great deal of choice over how things are configured. While iOS was designed to work on a very particular set of devices with a well-defined set of hardware requirements. Most of the updates in Android come in the form of "X" updates that are actually additions rather than changes to the whole system. IOS developers needs to optimize older iOS applications and make applications compatible with newest version. Due to Android's powerful development framework users can create their own application for wide range of device. The new iPhone X starts at a starting price of 80000rs. Even if you have to buy a used iPhone, you will have to spend between 30000 and 40000 rupees. Android gives you a wide range of options, from low-cost phones to high-end headphones.

In terms of usability the researcher finds that both Android and iOS use touch interfaces, which are very similar, swiping, tapping and pinch-and-zoom. Both have a Home screen, similar to the screen of a PC desktop. In terms of user experience slight advantage is given to Android due to the huge set of choosing menus. Although Android is often updated, some customers do not receive new updates or even purchase new devices from stores with obsolete software. While all iOS devices may get iOS upgrades. There have been reports of iOS updates failing to work on devices that are more than three years old. Both Android and iOS phones provide superior security on their respective platforms. Apple has better facial recognition software than Android, and also has an IR system to unlock the phone in dark areas using face recognition. The iPhone 7 and 7 Plus both offer pin code and pattern locking capabilities. Both phones are readily accessible in these configurations. However, Android offers expandable memory whereas iOS

does not. Both phones include a dual camera on the rear with dual led flash, portrait mode, and video recording modes. However, in smaller and less expensive versions, Apple does not include twin cameras or portrait mode. These cameras are also available on Android in the 20000rs variant.

CONCLUSION

I therefore conclude that in terms of adaptability Android is the best choice. Because of its extremely adjustable operating system, which allows users to customize their settings. Although in terms of software upgrades, iOS is the better choice because iOS updates are available to all iOS devices. However, in terms of pricing, Android will remain a winner.

In terms of usability of the two mobile operating system iOS interface clearly outperforms Android owing to its more consistent, elegant, and convenient interface, although Android has a minor edge due to the large number of menu options, convenience of use, and an excellent customer QWERTY keyboard. Transferring data and files using Android is a lot easier that IOS because you may use USB port and the Android File Transfer app. Although the two operating system have larger storage Android has a lot of edge because of the HYBRID option, which allows you to combine two SIM cards or one SIM card and one memory card. When comparing the two cameras, they are nearly identical, but in low-light situations, Apple excels while Android shines. Both include face recognition in their front cameras, and both have IR technology that allows you to unlock your phone at night using face recognition. Based on the information gathered, I believe Android is the best option in terms of adaptability and usability.

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