



# A STUDY ON IOS VS ANDROID FEATURES

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## ABSTRACT

Mobile applications and smart devices have become one of the basics of our life, institutions and all industries in the market depend on marketing their products through smartphone applications because of the preoccupation of individuals with them and their frequent presence on social media sites. Their use of mobile phones, especially in recent times. The mobile operating system is one of the most important ideas to focus on them by customers through the telephone purchase process and identify any family he belongs to. Before looking at the capabilities of the device in terms of screen, memory, capacity, and other services, the customer chooses which operating system family to organize. It is known that the market today is dominated by three systems: iOS of Apple, Android of Google, and Microsoft's Windows Phone. In this paper, different mobile programming languages will be compared depending on the most popular operating systems.

**Keyword:** Android OS, IOS, Android, Features.

## INTRODUCTION

Today mobile devices are multi-functional devices capable of hosting a broad range of applications for both business and consumer use. Like a computer operating system, a mobile operating system is the software platform that determines the functions and features available on your device, such as thumbwheel, keyboards, wireless security, and synchronization, messaging and more. Some of the more common and well-known Mobile operating systems are Google's Android and Apple's IOS because of their Popularity we are going to talk about these two operating systems which are commonly seen in market and then compare them with each other. Google's Android and Apple's iOS are operating systems used primarily in mobile technology, such as smartphones and tablets. Android, which is Linux-based and partly open source, is more PC-like than iOS, in that its interface and basic features are generally more customizable from top to bottom. Android and iOS are most preferred operating systems among various operating systems because of their technical and non-technical features.

## IOS (IPHONE OPERATING SYSTEM):

IOS (formerly iPhone Operating System) is a mobile operating system created and developed by Apple Inc. exclusively for its hardware. It is the operating system that powers many of the company's mobile devices, including the iPhone; the term also included the versions running on iPads until iPadOS was introduced in 2019, as well as on the iPod touch devices, which were discontinued in mid-2022. It is the world's second most widely installed mobile operating system, after Android. It is the basis for three other operating systems made by Apple: iPadOS, tvOS, and watchOS. It is proprietary software, although some parts of it are open source under the Apple Public Source License and other licenses. IOS is a mobile operating system that is provided by Apple Incorporation. It is mainly designed for Apple mobile devices like iPhone and iPod Touch. It was earlier known as iPhone OS. It is a Unix-like operating system that is based on Darwin's (BSD) operating system. It is the world's second most used mobile operating system after Android. It is mainly written in C, C++, Objective-C, assembly language, and Swift. The first version of iOS was launched in 2007.

## FEATURES OF IOS:

- ✓ Wi-Fi, Bluetooth and cellular connectivity, along with VPN support.
- ✓ Integrated search support, which enables simultaneous search through files, media, applications and email.
- ✓ Gesture recognition supports -- for example, shaking the device to undo the most recent action.
- ✓ Direct access to the Apple App Store and the iTunes catalogue of music, podcasts, television shows and movies available to rent or purchase. IOS is also designed to work with Apple TV.
- ✓ Compatibility with Apple's cloud service, iCloud.

- ✓ Siri is Apple's personal assistant. It can be used to set reminders, offer suggestions or interact with certain third-party apps. Siri's voice has been modified in recent years to make it sound more natural.

### ANDROID OPERATIN SYSTEM:

Android is a mobile operating system based on a modified version of the Linux kernel and other open-source software, designed primarily for touchscreen mobile devices such as smartphones and tablets. Android is developed by a consortium of developers known as the Open Handset Alliance and commercially sponsored by Google. It was unveiled in November 2007, with the first commercial Android device, the HTC Dream, being launched in September 2008. Most versions of Android are proprietary. The core components are taken from the Android Open Source Project (AOSP), which is free and open-source software (FOSS) primarily licensed under the Apache License. When Android is installed on devices, ability to modify the otherwise FOSS software is usually restricted, either by not providing the corresponding source code or preventing reinstallation through technical measures, rendering the installed version proprietary.

### FEATURES OF ANDROID:

- Near Field Communication (NFC)
- Alternate Keyboards
- IR Transmission
- No-Touch Control
- Automation
- Wireless App Downloads
- Storage & Battery Swap
- Custom Home Screen
- Widgets
- Custom ROMs
- Headset layout
- Storage
- Multilanguage support
- Multi-touch
- Video calling
- Screen capture
- External storage
- Optimized graphic

### REVIEW OF LITERATURE:

- ✓ Both Android and iOS can access and transfer the photos via USB without apps. But the media files should use iTunes desktop apps in iOS. For this reason, many people prefer Android where is the transfer very easy without apps. In the last few years, the Smartphone market has grown up. Mobile devices have continued to develop in new layout, specs, and features. This has resulted in significant increases in the manufacture of different types and shapes of Smartphone's Major manufactures are Samsung, Motorola, LG and Sony (**Olear, 2016**)
- ✓ According to **Nusca**. (2017), Android ranked as the most popular operating system in 2017, because some people preferred to use different markets for the same operating system. Therefore iOS available on iPod Touch, iPhone, iPad and Apple TV (2nd and 3rd generation). For internet browsing, Google Chrome is the famous version internet browser while safari is iOS version.
- ✓ According to **Melissa and Ryan** (2018) Google's Android and Apple's iOS accounted for 99.7 percent of all new Smartphones shipped in 2017. That percentage rose even higher last year. Android and iOS operating systems share some similarities such as accessibility, apps affordability, and Calling app. However, they have a few differences such as availability, Face time, battery life and security.
- ✓ However android has some advantages over iOS, iOS has a strong advantages which are the Security and Accessibility. For this cause, majority of Smartphone shepherd in 2019 are iPhones (**Melissa & Rayan 2018**).
- ✓ **Christian J.D'Orazio**, Described those SSL/TLS validations such as certificate and public key pinning can reinforce the security of encrypted communications between Internet-of Things devices and remote servers, and ensure the privacy of users. However, such implementations complicate forensic analysis and detection of information disclosure; say, when a mobile app breaches user's privacy by sending sensitive information to third parties. Therefore, it is crucial to develop the capacity to vet mobile apps augmenting the security of SSL/TLS traffic. In this paper, we propose a technique to bypass the system's default certificate validation as well as built-in SSL/TLS validations performed in iOS apps. We then demonstrate its utility by analysing 40 popular iOS social networking, electronic payment, banking, and cloud computing apps.

**OBJECTIVES OF THE STUDY:**

1. To analyse the essential features of the major competitors of an operating system that is android and iOS.
2. To know the various factors causes the purchase decision made by the buyers.
3. To know which operating system is best and highly preferred by the consumers on the basis of features and price.
4. To find out the problems faced by the consumers on iOS and android operating system.

**NEEDS OF THE STUDY:**

- ➔ Android and ios are the major competitors of an operating system which is providing various features to their users.
- ➔ Hence ios and android is a leading operating system, its users are facing some problems by technically and design.
- ➔ While making a purchase decision, android and ios having lots of factors to consider like price, essential features which is expected by its users.

**SCOPE OF THE STUDY:**

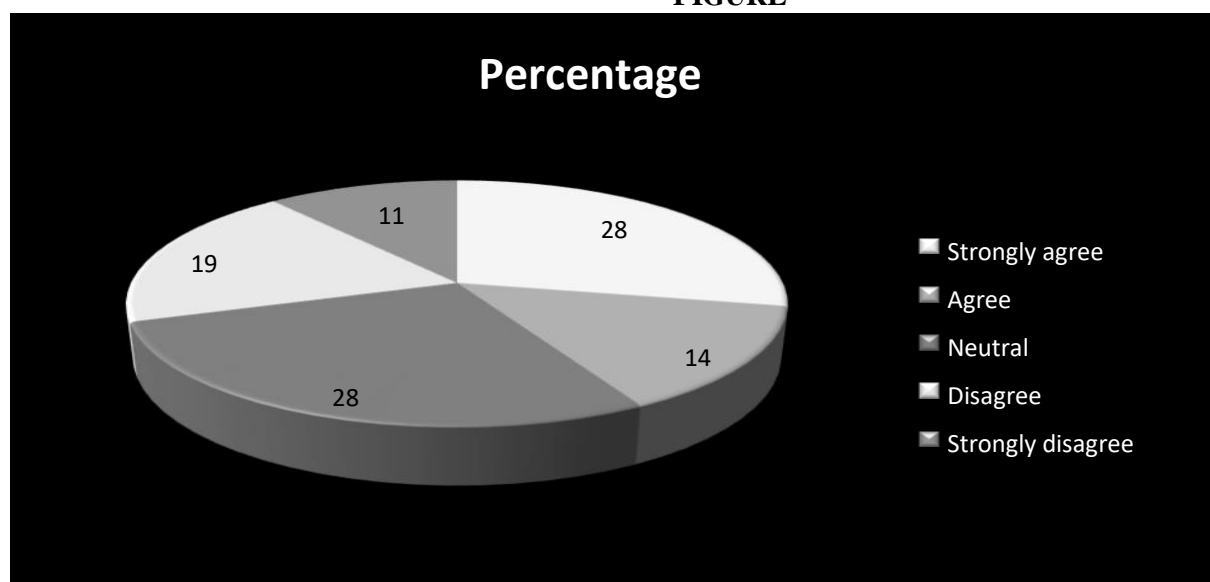
In the present scenario as the technology in the mobile operating system is getting wider and bigger and outcome of result is also having a great impact on their entire sector. Google's Android and Apple's iOS are operating systems used primarily in mobile technology, such as smartphones and tablets. Android, which is Linux-based and partly open source, is more PC-like than iOS, in that its interface and basic features are generally more customizable from top to bottom. Android and ios are most preferred operating systems among various operating systems because of their technical and nontechnical features.

**DATA ANALYSIS:****1. Opinion about features of Ios is better than android:****TABLE**

2. Particulars	No of respondent	Percentage
Strongly agree	20	28
Agree	10	14
Neutral	20	28
Disagree	14	19
Strongly disagree	8	11
<b>Total</b>	<b>72</b>	<b>100</b>

**INFERENCE:**

Majority (28%) of the respondents are strongly agree and neutrally agree that ios features are better than android.

**FIGURE**

## 2. Preference of the users:

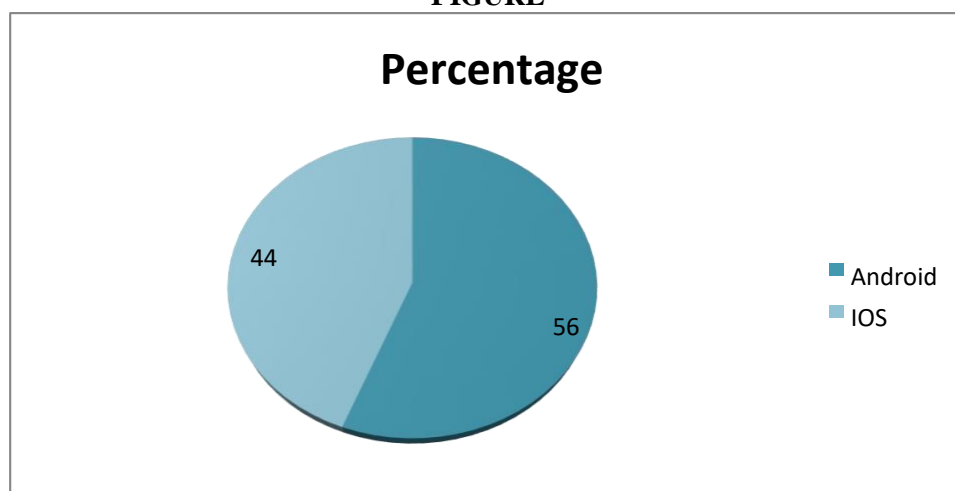
**TABLE**

Operating system	No of respondent	Percentage
Android	40	56
IOS	32	44
<b>Total</b>	<b>72</b>	<b>100</b>

### INFERENCE:

Majority (56%) of the respondents are preferred to use android operating system.

**FIGURE**



### CHI – SQUARE TEST:

Null Hypothesis  $H_0$  – There is no significant relationship between user opinion about IOS is better than android and android is better than IOS

Alternative hypothesis  $H_1$  - There is a significant relationship between user opinions about IOS is better than android and android is better than IOS

**Table showing the user opinion about IOS is better than android and android is better than IOS:**

### Opinion \* Android

#### Crosstab

Expected Count

		Android				
		52	58	62	64	Total
opinion	Strongly agree	.4	.2	.2	.2	1.0
	Agree	.4	.2	.2	.2	1.0
	neutral	.4	.2	.2	.2	1.0
	disagree	.4	.2	.2	.2	1.0
	strongly disagree	.4	.2	.2	.2	1.0
Total		2.0	1.0	1.0	1.0	5.0

**Chi-Square Tests**

	Value	df	Asymptotic Significance (2sided)
Pearson Chi-Square	15.000 <sup>a</sup>	12	.241
Likelihood Ratio	13.322	12	.346
N of Valid Cases	5		

a. 20 cells (100.0%) have expected count less than 5. The minimum expected count is .20.

**Opinion \* IOS****Crosstab**

Expected Count

		IOS				Total
		8	10	14	20	
opinion	Strongly agree	.2	.2	.2	.4	1.0
	Agree	.2	.2	.2	.4	1.0
	neutral	.2	.2	.2	.4	1.0
	disagree	.2	.2	.2	.4	1.0
	strongly disagree	.2	.2	.2	.4	1.0
Total		1.0	1.0	1.0	2.0	5.0

**Chi-Square Tests**

	Value	df	Asymptotic Significance (2sided)
Pearson Chi-Square	15.000 <sup>a</sup>	12	.241
Likelihood Ratio	13.322	12	.346
N of Valid Cases	5		

a. 20 cells (100.0%) have expected count less than 5. The minimum expected count is .20.

**INFERENCE:**

Here the significance occurs 0.000 and it is less than 0.5. Hence null hypothesis is accepted.

**RESULT:**

There is no significant relationship between user opinion about IOS is better than android and android is better than IOS, so according to the user opinion android is better than IOS operating system.

**REGRESSION ANALYSIS:**

Null Hypothesis H<sub>0</sub> – There is no significant relationship between preferences and usage of operating system.

Alternative hypothesis H<sub>1</sub> - There is a significant relationship between preferences and usage of operating system.

**Table showing the relationship between preference and usage of the operating systems that is android and IOS:**

**Model Summary**

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	1.000 <sup>a</sup>	1.000	.	.	.

a. Predictors: (Constant), Usage

**Coefficients**

Model		Unstandardized C		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	27.000	.000		.	.
	Usage	.250	.000	1.000	.	.

a. Dependent Variable: preference

**INFERENCE:**

Here the significance occurs at 1.000 and it is greater than 0.05. Hence the null hypothesis is rejected and the alternative hypothesis is accepted.

**RESULT:**

There is a significant relationship between preferences and usage of the operating system that is android and ios.

**SUGGESTIONS:**

- ➔ The expensive accessories of IOS products are the major problem facing by the IOS users so if Apple produces their smartphones with needed accessories can help them to increase their customers.
- ➔ The features of IOS is not highly preferred by the users compare to android
- ➔ Lack of regular updates in android is a problem in android operating system so android need regular updates.
- ➔ IOS operating system is less than use by Android operating system.

**CONCLUSION:**

Among various operating system android and IOS operating system are the most preferred operating system. So in this study I have taken the comparison study of android and IOS features. With the various references and analyses like percentage analysis, chi- square and regression analysis the various opinions of users of the both operating systems are analysed and the responses from the respondents are collected through Google form and the result has been obtained. In this study android operating system is mostly preferred and using by the users than IOS. The features of android are mostly liked by the users.

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