OVERVIEW OF FEATURES OF SMARTPHONE OS- ANDROID, IOS AND WINDOW PHONE 8

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Abstract

Today the world is moving toward mobility, advanced mobile phones and a large portion of us who can say we ought to have PC or tablet substitution. Today's advanced mobile phones with portable PC working framework like multitasking feature, performs better. So here in this paper, we have discussed about iOS, Android and Windows Phone 8 portable working framework outline and correlation between them. We have listed the comparison of features of different phone OS to help engineers to develop new features.

Keywords: Smartphone, kernel, Mobile, Application, IOS, Android, Windows Phone, iPod, iPhone

1. Introduction

In this paper develop mobile applications for three different mobile OS have included. Android- it is utilized to make application that can keep running on an android base gadget. IOS- it is essentially utilized for develop application for iPhone. Windows: it is utilized to make an application that can be keep running on versatile having windows OS.

2. Mobile Operating System Basics

2.1 iOS: IOS, a mobile OS created and distributed by Apple Inc., for iPhone and iPad Touch it is, released in 2007. Dissimilar to Microsoft's Windows Phone (Windows CE) and Google's Android, Apple does not permit non-apple equipment to install license iOS. IOS UI depends on the idea of direct control, multi-touch signal sliders, switches and buttons that are used. IOS is separated into four unique layers the Core OS layer, the Core Services layer, the Media layer, and the Cocoa Touch layer.

IOS highlights gave by them are as per the following: Home Screen, Folders, Notification Center, Multitasking, Switching Application, Siri, and Game Center. IOS application written and compiled particularly for iOS and ARM architecture should be. IOS application are written in Objective-C language. In IOS for providing the development environment XCode is use which is for the iOS SDK.
2.2 Android:

Android operating system is developed and designed for touch screen smartphones and tablets. It is a Linux-based operating system. Android is an open source operating system which is release by google and its code are under Apache License. To develop an Android application developer use java programming language customized version. Android's UI user depends on direct control, utilizing touch input. Prompt reaction to user include gives a fluid touch interface. Boot Android device to the home screen. Android application symbols and gadgets home screen ordinarily are made of. Android 2.4 and Ice Cream Sandwich version of the bit Linux piece since adaptation 4.0 with middleware, libraries and APIs written in C and application libraries in light of Apache Harmony Java-good application structure which incorporates running on the premise of two comprise. Android is intended to oversee RAM to keep control utilization at least. Android consequently oversees applications stored in memory. Sandbox keeps running on the Android application, an alternate zone of the framework that does not permit whatever remains of the framework assets, the application is introduced, unless consent is given by the client.

2.3 Windows Phone 8: Windows Phone 8 is the second generation of Microsoft’s Windows Phone versatile OS. Windows Phone 10 is created by Microsoft. It was discharged on October 29th, 2012. It is known as the Modern UI interface. Windows Phone 8 on the Windows NT part found in Windows 8 with segments based engineering replaces CE. As of now Windows Phone 7.x that couldn't run or update portable application produced for Windows 8.x and the other way around. Nokia February 2011 declared an organization with Microsoft, Nokia Window Phone OS as the essential working framework on the gadget making. Substantial screen, multi-center processors, NFC, in reverse similarity with Windows Phone 7 applications, bolster for removable stockpiling, over the whole screen to the home screen with resizable tiles, Nokia Maps mix, with another gadget: Windows Phone 8 with the accompanying components of the gadget permits the wallet center, and BitLocker encryption VoIP application reconciliation.

3. Merits and Demerits of iOS, android OS and windows phone 8 OS

The merits and demerits of iOS, android OS and windows phone 8 OS is given following Table 1.

Table 1. Merits and Demerits of iOS, android os and windows phone 8 OS.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Merits</th>
<th>Demerits</th>
</tr>
</thead>
<tbody>
<tr>
<td>iOS:</td>
<td>Provide to user interact and manipulate user’s screen variety of ways.</td>
<td>Not provide feature to shockwaves or run flash video.</td>
</tr>
</tbody>
</table>
It comes with unique interface in smartphones.

If you're wearing regular gloves cannot communicate with a screen.

In social networking and sophisticated music experience it is with tight integration.

Lack of customization.

Android:

It is provide facility to customize any application freely.

Android software application containing the frequently hang or crash.

In Android user can use any smartphone as a USB storage device.

There are Inconsistency in application design.

It is make notification easy.

In Android required Internet connection is need Continuous.

User can download any application from google play store which is provide free of cost facility.

An easy to install quickly and easily access a variety of widgets that you can use.

Windows phone 8

Windows 8 OS is support multicore processor in mobile devise

This is a generation shift technology, which means it will not run the new start screen which is updated with the current hardware.

The new Start screen with Live Tiles interface that can be configured in 3 different sizes are embedded.

Xcode and the iOS SDK are required to make iOS applications, which is the fundamental need and apparatus gave by Apple. Additionally, Objective-C, the dialect that powers all IOS applications and systems, learn and investigate the Cocoa Touch structure is required. Xcode, Apple's coordinated improvement environment (IDE), application gives need to make a source editor, a graphical UI editor is additionally included. In order to develop an application
first we download the latest version of Xcode. OS Developers Register at the iOS developer program as an Apple Developer as shown in Figure 1.

![Figure 1. Setup to develop Apple Application.](image)

### 4. Comparison of features of iOS OS, Android OS and Windows Phone 8 OS.

The features of different phone operating system are compared and listed in Table 2.

**Table 2: Comparison of features of iOS OS, Android OS and Windows Phone 8 OS.**

<table>
<thead>
<tr>
<th>Features</th>
<th>iOS</th>
<th>Android</th>
<th>Windows 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Apple</td>
<td>Google</td>
<td>Microsoft</td>
</tr>
<tr>
<td>Current version</td>
<td>iOS 10(iPhone 7 and iPhone 7 plus only)</td>
<td>Nougat (Android 7.0)</td>
<td>Windows 10</td>
</tr>
<tr>
<td>OS family</td>
<td>Darwin</td>
<td>Linux</td>
<td>Windows</td>
</tr>
<tr>
<td>Supported CPU architecture</td>
<td>ARM</td>
<td>ARM, MIPS, Power Architecture, x56</td>
<td>ARM</td>
</tr>
<tr>
<td>License</td>
<td>Proprietary ELUA except open source component</td>
<td>Free and Open Source</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Package manager</td>
<td>iTunes</td>
<td>APK</td>
<td>Zune Software</td>
</tr>
<tr>
<td>Multi User</td>
<td>No</td>
<td>4.2 version only</td>
<td>No</td>
</tr>
<tr>
<td>Search all fields of internal objects</td>
<td>Version 6+ only</td>
<td>Search only contain name</td>
<td>Contain can be search by name, Nickname, company name only</td>
</tr>
<tr>
<td>Alternative input method</td>
<td>Available only jailbroken devices</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>External encryption</td>
<td>External storage not supported</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
Conclusion

In this paper, a solitary utilization of three distinctive stages (iOS, Android and Windows) is discussed in the paper. In the following couple of years, Internet-associated portable processing devices will drop in the cost of essential What's more, productivity will increment. Apple and Android have been launched in the market considerably. Comparison of features are provide to help the engineers to develop and innovate more applications.

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