The iOS OS

Introduction

iOS is one of the most used operating systems across the world. In recent years, it has powered billions of devices. This OS has become a complete set of operating systems for various devices such as wearables, mobiles, smart TVs, tablets.

In this reading, you'll learn how to identify the key features and characteristics of iOS and iOS architecture.

What is iOS?

iOS is an operating system primarily designed for touch screen mobile devices such as smartphones. The operating system has evolved in recent years from a mobile OS to an operating system running on other devices such as wearables and smart TVs. It is the basis for three other operating systems made by Apple: iPadOS, tvOS, and watchOS.

Below are features and characteristics of the iOS, such as:

- It's more secure than other operating systems.
- iOS provides multitasking features. For example, while working in one application, you can easily switch to another one.
- iOS’s user interface includes multiple gestures like swipe, tap, pinch, and reverse pinch.
- iBooks, iStore, iTunes, Game Center, and Email are all user-friendly.
- It supplies Safari as the default web browser.
- It has a powerful API and camera.
- It has deep hardware and software integration.

The iOS architecture

The Apple architecture comprises different components that any iOS device would need to function effectively. iOS software is built on top of Unix, a multitasking operating system and many other C/C++ libraries exposed via application framework services.

Among all the components, Unix provides the main operating system functions for smartphones. An iOS is a stack of software components roughly divided into five sections as follows:

Core Bluetooth framework

The core Bluetooth framework provides the functions needed for your apps to communicate with Bluetooth devices.

External accessories framework

This framework communicates with accessories that connect to a device with Bluetooth wireless technology.

Accelerate framework

Accelerate performs optimized large-scale mathematical computations and image calculations so you can write apps that leverage machine learning, data compression, and signal processing.

Security services framework

This can be used to protect information, establish trust, and control access to software.

Local authorization framework

This is used to authenticate a user via Touch ID or Face ID within an app.

Conclusion

You should now be able to identify the key features and characteristics of iOS and iOS architecture.