How does a mobile OS work?

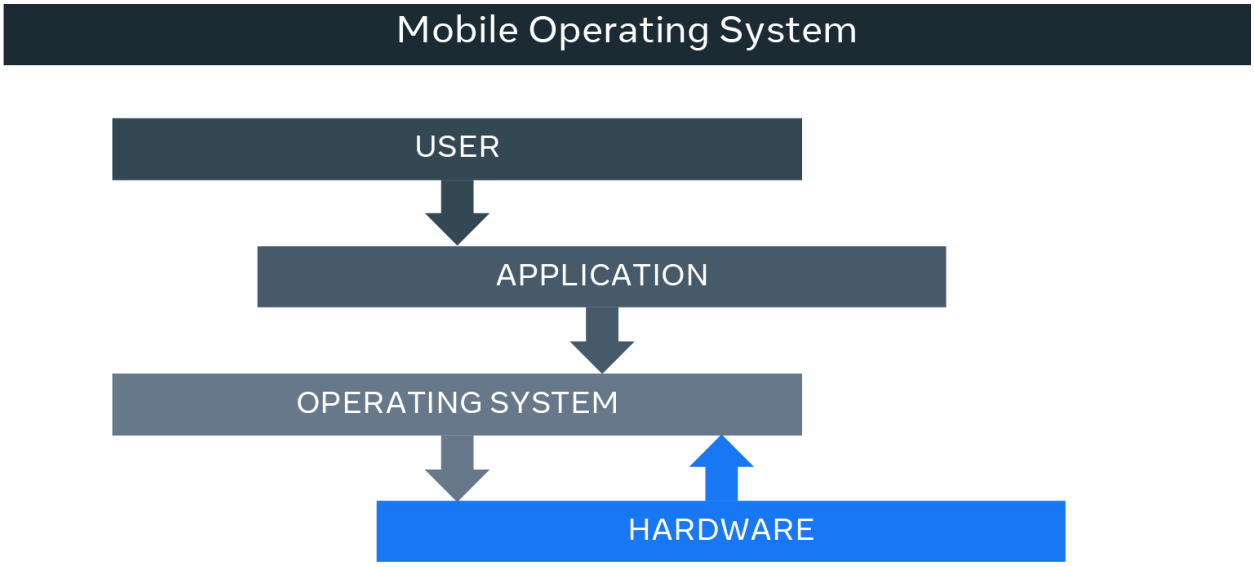
Introduction

The most fundamental software for any smartphone is its operating system (OS). An OS is designed to coordinate communications that occur between the hardware and software resources of mobile devices. Popular platforms such as Android and iOS provide a wide range of software stacks in addition to the built-in OS.

In this reading, you'll explore the basics of a mobile operating system to understand how it works.

Mobile operating systems

A mobile OS typically starts when a device powers up, displaying different application icons and user interface (UI) elements to users. The overall experience of the application and adapting, swiping or tapping is managed by the mobile OS.



The function of mobile operating systems

The major function of mobile operating systems is to allow smartphones, tablets, personal digital assistants (PDAs) and other handheld devices to run applications. The OS provides a channel for applications to access device resources such as the processor, memory, Wi-Fi and Bluetooth. Most of the mobile operating systems in the market are based on open (Android) or closed-source (iOS)software.

Popular mobile operating systems

Android

Android is a mobile OS released in 2008. You'll likely find that it is the base OS of most phones and tablets worldwide.

Android OS is based on a modified version of the Linux kernel and other open-source software. It is built primarily for smartphones, Chromebook, Android TV, Android Auto, and wearables such as smartwatches.

iOS

iOS is Apple's proprietary OS on the iPhone, iPod Touch and iPad. iOS gives users a multitouch feel, meaning all user input is via touch gesturing. Through several actions, such as swiping, pulling, and tapping, users can seamlessly interact with the screen. With built-in sensors such as gyroscopes and accelerometers, Apple devices allow users to switch between the orientations of applications when tilting the devices.

With the popularity of iOS, developers now have more control and access to its features. After the release of iPhone 2.0, Apple also released a software development kit (SDK), a set of tools that allows developers to build apps for the OS. Due to huge improvements with iPhone OS 3.0, developers were given more power with core location and push notifications. Finally, multitasking was introduced in iOS 4.0.

Conclusion

A mobile operating system (or OS) helps devices to run applications. Popular mobile operating systems include Android and iOS. You should now understand how a mobile OS works, and the common types available.