



SNS COLLEGE OF TECHNOLOGY, COIMBATORE –35  
(An Autonomous Institution)  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
(UG&PG)  
19CSB303 Composing Mobile Apps

---



## Mobile Operating System

A mobile operating system is an operating system that helps to run other application software on mobile devices. It is the same kind of software as the famous computer operating systems like Linux and Windows, but now they are light and simple to some extent.

The **operating systems** found on smartphones include Symbian OS, iPhone OS, RIM's BlackBerry, **Windows Mobile**, Palm WebOS, Android, and Maemo. Android, WebOS, and Maemo are all derived from **Linux**. The iPhone OS originated from BSD and NeXTSTEP, which are related to Unix.

It combines the beauty of computer and hand use devices. It typically contains a cellular built-in modem and SIM tray for telephony and internet connections. If you buy a mobile, the manufacturer company chooses the OS for that specific device.

### Popular platforms of the Mobile OS

1. **Android OS:** The Android operating system is the most popular operating system today. It is a mobile OS based on the Linux Kernel and open-source software. The android operating system was developed by Google. The first Android device was launched in 2008.
2. **Bada (Samsung Electronics):** Bada is a Samsung mobile operating system that was launched in 2010. The Samsung wave was the first mobile to use the bada operating system. The bada operating system offers many mobile features, such as 3-D graphics, application installation, and multipoint-touch.
3. **BlackBerry OS:** The BlackBerry operating system is a mobile operating system developed by **Research In Motion (RIM)**. This operating system was designed specifically for BlackBerry handheld devices. This operating system is beneficial for the corporate users because it provides synchronization with Microsoft Exchange, Novell GroupWise email, Lotus Domino, and other business software when used with the BlackBerry Enterprise Server.
4. **iPhone OS / iOS:** The iOS was developed by the Apple inc for the use on its device. The iOS operating system is the most popular operating system today. It is a very secure operating system. The iOS operating system is not available for any other mobiles.
5. **Symbian OS:** Symbian operating system is a mobile operating system that provides a high-level of integration with communication. The Symbian operating system is based on the java language. It combines middleware of wireless communications and personal



information management (PIM) functionality. The Symbian operating system was developed by **Symbian Ltd** in **1998** for the use of mobile phones. **Nokia** was the first company to release Symbian OS on its mobile phone at that time.

6. **Windows Mobile OS:** The window mobile OS is a mobile operating system that was developed by **Microsoft**. It was designed for the pocket PCs and smart mobiles.
7. **Harmony OS:** The harmony operating system is the latest mobile operating system that was developed by Huawei for the use of its devices. It is designed primarily for IoT devices.
8. **Palm OS:** The palm operating system is a mobile operating system that was developed by **Palm Ltd** for use on personal digital assistants (PADs). It was introduced in **1996**. Palm OS is also known as the **Garnet OS**.
9. **9. WebOS (Palm/HP):** The WebOS is a mobile operating system that was developed by **Palm**. It based on the **Linux Kernel**. The HP uses this operating system in its mobile and touchpads.

## Operating System for Mobile

An operating system for mobile devices enables users to use other kinds of application software on their phones, tablets, etc. Additionally, we can state that it is a particular category of operating system created especially for smartphones, tablets, smartwatches, etc. Additionally, they combine PC operating systems with some mobile-specific functionality. They are also rather lightweight and straightforward.

An operating system (OS) is a piece of software that serves as a conduit between and the system hardware the user. Additionally, it manages all communications in both the software and hardware. Let's examine several operating system functions before learning about various mobile operating systems.

### Features of OS

Various duties are carried out by an operating system. Let's research them. These are a few of OS's features:



SNS COLLEGE OF TECHNOLOGY, COIMBATORE –35  
(An Autonomous Institution)  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
(UG&PG)  
19CSB303 Composing Mobile Apps

---



## 1. Memory Control

It is the control of the major or main memory. Moreover, the main memory must contain the application that is being run. Consequently, more than one application may be active at once. Consequently, managing the RAM is necessary.

- Memory is allocated and released.
- Maintains track of who and how often uses each part of the primary memory.
- Enables memory distribution when multiprocessing.

## Management and Scheduling of Processors

The OS decides the manner in which every process will utilize the CPU when a system has multiple processes executing. So, CPU Scheduling is another name for it. The OS:

- Gives and takes away processors from processes.
- Records the state of the CPU.

## 3. Device Organization

Devices could be needed for the processes to be used. The OS is responsible for managing this. The OS:

- Assigns and releases devices to various processes.
- Keep track of the equipment.
- Specifies which process and for how long is allowed to utilize a specific device.

## 4. File Organization

A system's files are kept in various folders. The OS:

- Maintains track of the location and status of files.
- Resources are allocated and released.



SNS COLLEGE OF TECHNOLOGY, COIMBATORE –35  
(An Autonomous Institution)  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
(UG&PG)  
19CSB303 Composing Mobile Apps

---



## 5. Safety

The OS manages to keep the application and system secure and safe through authentication. User ID and password are used to verify a user's identity.

## Examples of Common Mobile Operating Systems

### 1. Android OS



In terms of mobile operating systems, Android OS is the most popular. Google also developed the Android operating system. The OS is also open source and free. The Linux kernel is the foundation of this OS. Every new update's name is inspired by a "dessert," such as a cupcake, donut, eclair, oreo, or kitkat, for example.

### 2. Bada





---

The company that launched this operating system is Samsung. In 2010, it first hit the market. Additionally, it has features like multipoint touch, 3-D graphics, and software installation.

### 3. Blackberry OS



Research In Motion is the company that created this operating system (RIM). It was created especially for BlackBerry-compatible devices. Additionally, business users find it handy.

### 4. Apple iOS



It is among the most widely used operating systems (OS) after Android. It is made to work with Apple products including iPhones, iPad tablets, and other mobile devices. Furthermore, just like Android devices, there is a playstore where you may download



---

apps. The app store is also a feature of Apple iOS. Additionally, it contains many robust security features.

## 5. Operating System for Windows Mobile



Microsoft created this operating system. Technically, it is intended for smartphones and portable PCs. Additionally, it incorporates elements from the Windows OS for computers as well as other functionality for mobile devices.

## 6. Symbian OS



This OS was developed by Symbian Ltd. Additionally, Nokia was the first company to implement this OS in its mobile phones. Additionally, it offers communication at a high degree of reliability.



SNS COLLEGE OF TECHNOLOGY, COIMBATORE –35

(An Autonomous Institution)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

(UG&PG)

19CSB303 Composing Mobile Apps

---



## 7. Harmony OS

