# SYSTEM STRUCTURE OF IOS





## **KERNEL:**

The iOS kernel is based on the XNU kernel, which is a hybrid kernel that combines features of both monolithic and micro kernels. It manages the system's resources such as memory, CPU, and other hardware components, as well as handling security features such as sandboxing and code signing.

# **SYSTEM SERVICES:**

These are a set of services that run on top of the kernel, which provide essential functionalities to the system. Examples of system services in iOS include launchd, which is responsible for launching and managing processes, and powerd, which manages power management tasks.

Here is an overview of the system structure of iOS

Kernel: iOS uses a Unix-based kernel, which is the foundation of the operating system. The kernel manages the system's resources such as memory, CPU, and other hardware components.

System Services: These are a set of services that run on top of the kernel, which provide essential functionalities to the system. Examples of system services in iOS include launched, which is responsible for launching and managing processes, and powers, which manages power management tasks.



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### **LIBRARIES**

iOS also uses a collection of libraries that provide low-level functionalities to applications. These libraries include libc, which is a standard C library, and libSystem, which provides system-level functionalities such as networking and file I/O.



# **APPLICATIONS**

iOS applications are written in Objective-C or Swift programming languages and run on top of the frameworks and libraries provided by the system. Each application is assigned a unique identifier and runs in its own sandbox, which isolates it from other applications and the system.