

Mobile Device Architecture

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I. MOBILE DEVICE ARCHITECTURE

A. Hardware

- Processor (CPU): The heart of the device responsible for executing software instructions. Mobile processors are generally designed for high performance and power consumption.
- RAM: Stores data and operational processes temporarily for quick access to applications.
- Internal Memory: Where the operating system, application, and user data are stored.
- Battery: Provides power to the device.
- Touch screen: Allows direct interaction with the device.
- Sensors: Including accelerometers, gyroscopes, light sensors, GPS, etc., which provide data for various functions.

B. Operating System (OS)

- Android: Developed by Google, it is the most widely used mobile operating system.
- iOS: Developed by Apple for iPhone and iPad.

C. Application Layer

- Native Apps: Developed specifically for the platform (Android or iOS) using languages such as Java or Kotlin for Android and Swift or Objective-C for iOS.
- Web Application: Access through a web browser.
- Hybrid Apps: Combine web technologies (HTML, CSS, JavaScript) with native containers to run on multiple platforms.

D. Connection

- Mobile networks: 3G, 4G, and 5G are used for data transmission.
- Wi-Fi: Allows you to connect to local wireless networks.
- Bluetooth: For wireless communication between nearby devices.
- NFC (Near Field Communication): Used to transfer data over short distances.

E. Security

- Biometric authentication: fingerprints, facial recognition.
- Data encryption: protects user privacy and security of stored information.

F. Software Updates

- Operating system updates: provided by manufacturers to improve security and add new features.
- Application updates: Download from the App Store.

G. App Store

- Google Play Store (Android): Available for Android devices.
- App Store (iOS): Only for Apple devices.

H. References

- 1) “Características y hardware de los dispositivos móviles - Tecnologías para el desarrollo de aplicaciones móv”. Introducción - Videojuegos para Dispositivos Móviles con Cocos2d-. Accedido el 11 de enero de 2024. [En línea]. Disponible: <https://mastermoviles.gitbook.io/tecnologias2/caracteristicasy-hardware-de-los-dispositivos-moviles>
- 2) “Arquitectura de Dispositivos móviles”. Arquitectura de Dispositivos móviles. Accedido el 11 de enero de 2024. [En línea]. Disponible: <https://arqmoviles.blogspot.com/2012/11/presentacion-una-de-las-definiciones.html>