ICS 26011: APPLICATIONS DEVELOPMENT AND EMERGING TECHNOLOGIES 3 (MOBILE PROGRAMMING)

INTRODUCTION TO MOBILE PROGRAMMING

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Module Outline

- What is Mobile Programming/Development?
- Major Mobile Development Platforms
- iOS vs Android
- Types of Mobile Apps
- Why Native Development?
- Mobile Development Process

What is Mobile Programming?

- Mobile app development is rapidly growing. From **retail**, **telecommunications** and **e-commerce** to **insurance**, **healthcare** and **government**, **organizations** across industries must meet user expectations for real-time, convenient ways to conduct transactions and access information.

What is Mobile Programming?

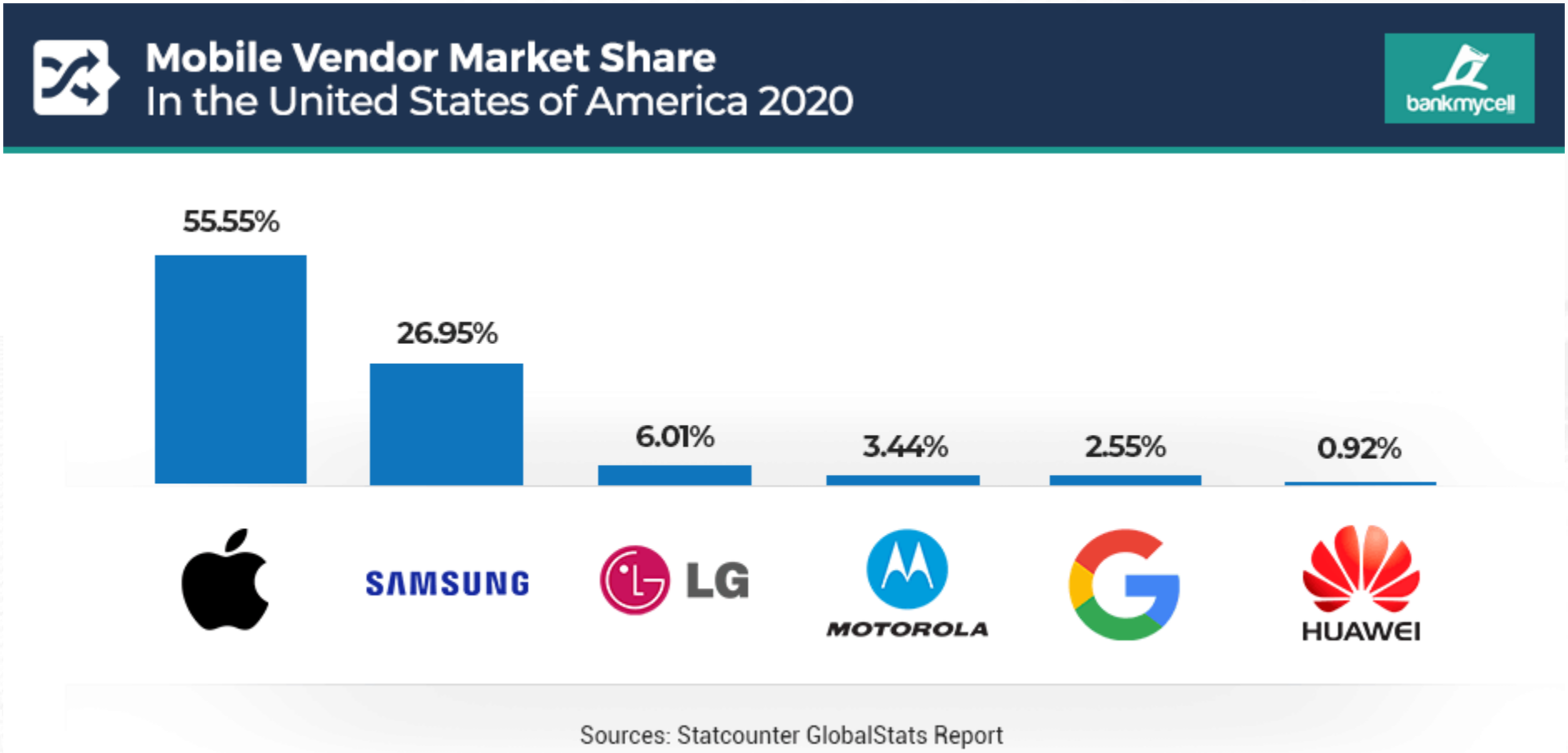
- Mobile application development is the process to developing software for smartphones and digital assistants, most commonly for **Android** and **iOS**.
- These applications can be **pre-installed** on your device, **downloaded** through various platforms for software distribution, or even **installed** on your device in the form of **native-like web apps** (dynamic client server programs that use the browser to perform tasks over the Internet).

Major Mobile Development Platforms

https://dev.to/shibililac/ios-vs-android-which-is-better-for-business-188o

Major Mobile Development Platforms

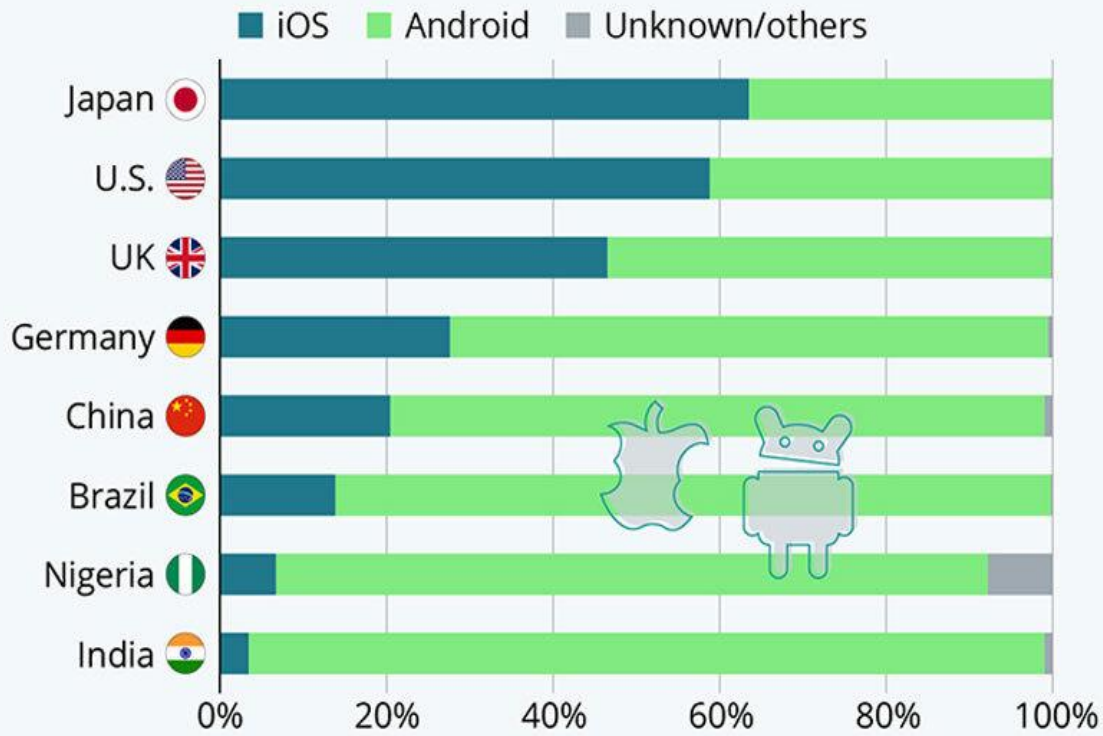
- **Android** is backed by **Google**.
- **iOS** is backed by **Apple**.
- Anyone can build an Android device, and it is designed to run on a variety of different hardware platforms and devices with very different form factors and capabilities.
- **iOS** is designed to run only on a specific set of **Apple devices**.
- **Android** is based on the **Linux kernel**, and Google releases the source code for Android as **open source**.



https://www.bankmycell.com/blog/how-many-phones-are-in-the-world

Apple or Android Nation?

Mobile operating systems market share in selected countries (as of July 2020)



Source: StatCounter

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statista

PC PCMAG.COM

https://www.statista.com/chart/22702/andoid-ios-market-share-selected-countries/

statcounter GlobalStats

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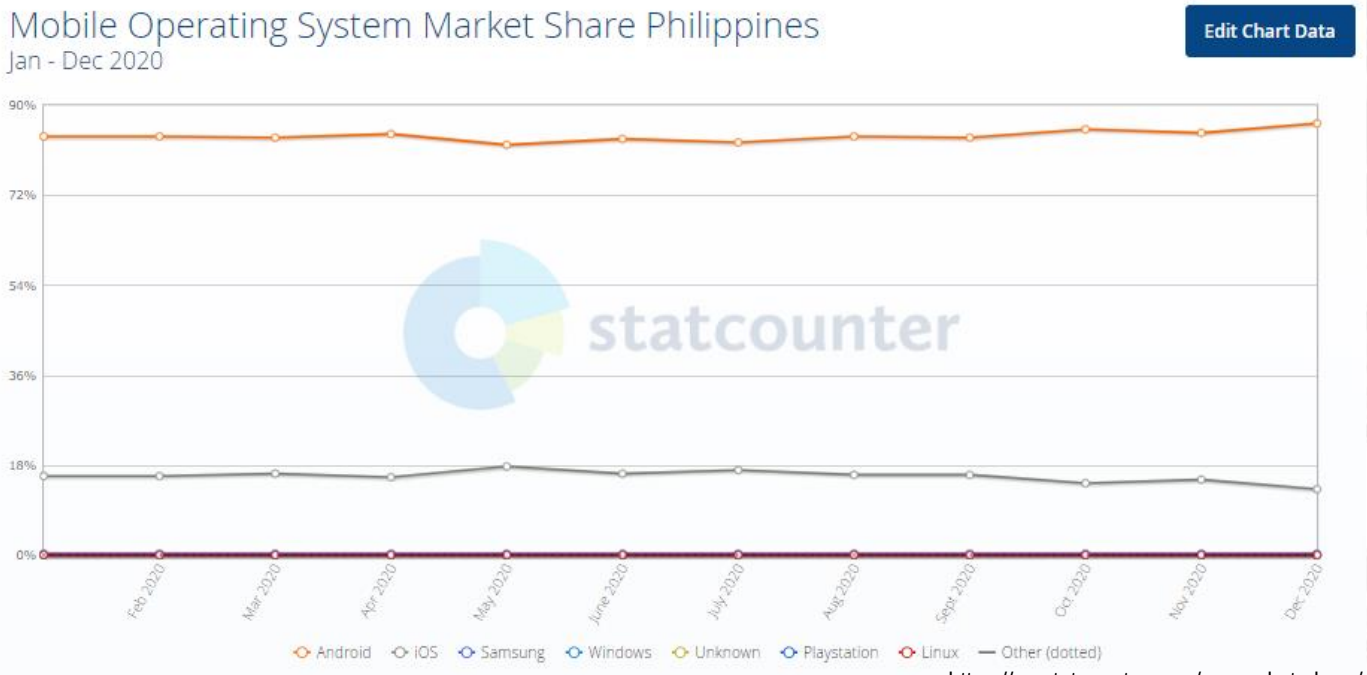
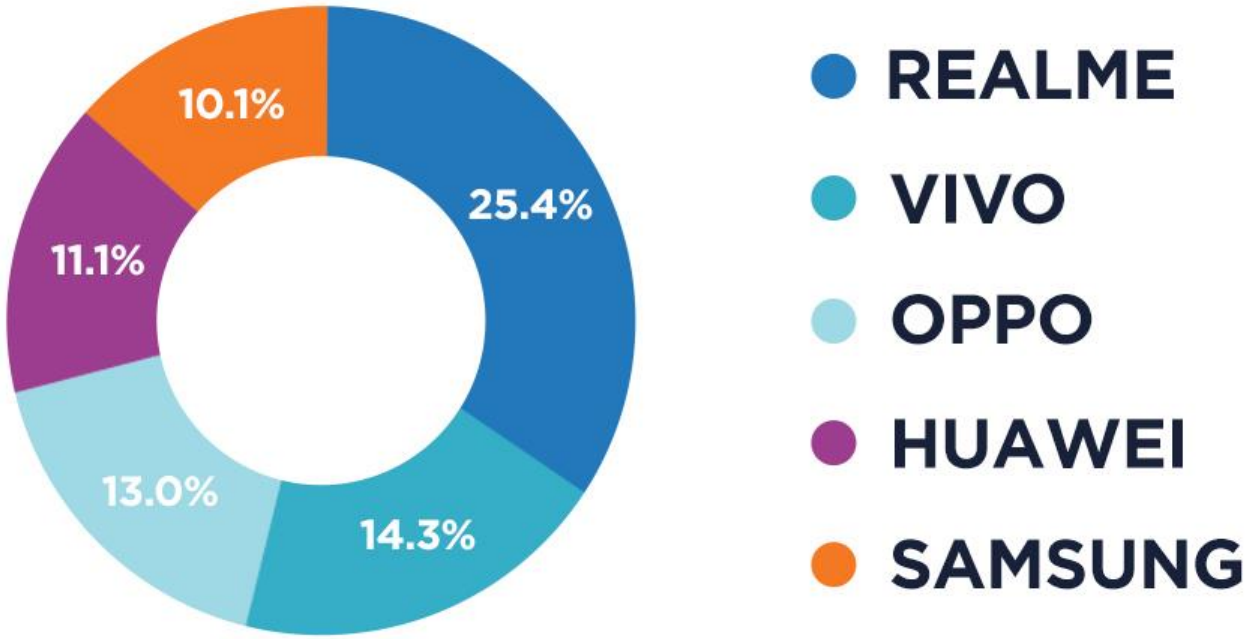
Android	iOS	Samsung	Unknown	Linux	Windows
88.12%	11.11%	0.7%	0.02%	0.01%	0.01%

Mobile Operating System Market Share in Philippines - July 2021



https://gs.statcounter.com/os-market-share/mobile/philippines/2020

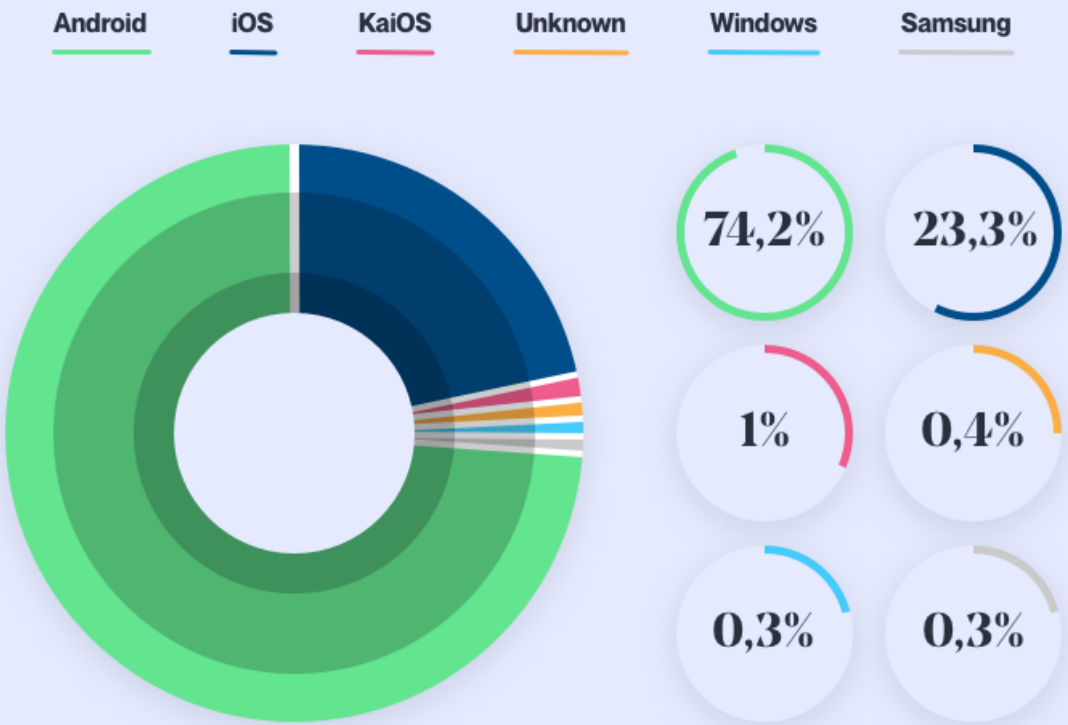
PHILIPPINES TOP 5 SMARTPHONE VENDORS, 2020 Q3 UNIT MARKET SHARE



Source: IDC 2020

https://www.rappler.com/brandrap/announcements/vivo-top-smartphone-brand-2020-international-data-corporation-mobile-phone-tracker

Mobile OS market share, 2019



https://www.statista.com/chart/22702/andoid-ios-market-share-selected-countries/

Android	versus	IOS
Java	**Platform**	(Objective C) Swift
87% OS Market Share	**Market Share**	13% OS Markey Share
More Time Required	**Development**	Less Time Required
Short Review Process	**Approval Process**	Long Review Process
More	**Development Cost**	Less
Lower Income Group	**Demographics**	Higher Income Group
Multiple Device Operator	**Design**	Single Device Operator

Type of Mobile Apps

Native Application Development

Native applications are programs created using software development kit (SDK) and distributed through app stores. SDKs exist for each mobile operating system and, unfortunately, differ from each other.

Web Applications

Web applications, downloaded to a mobile web browser, differ from native ones in their code - it is written using web technologies (HTML, JavaScript, and CSS) that are independent of the operating system.

Hybrid Applications

Hybrid apps try to combine the benefits of both types of mobile programs. Hybrid applications, like web apps, are programmed using web technologies, but are packaged as native ones.

Why native Programming?

- Native development has a solid list of considerable advantages, such as:

Speed

The compiled code is optimal for the native platform.

Support

Apple and Google set high requirements on the quality of apps in the stores.

Flexibility

Native development uses all the capabilities of the mobile operating system.

Testing

In native development, there are ample opportunities for automatic testing.

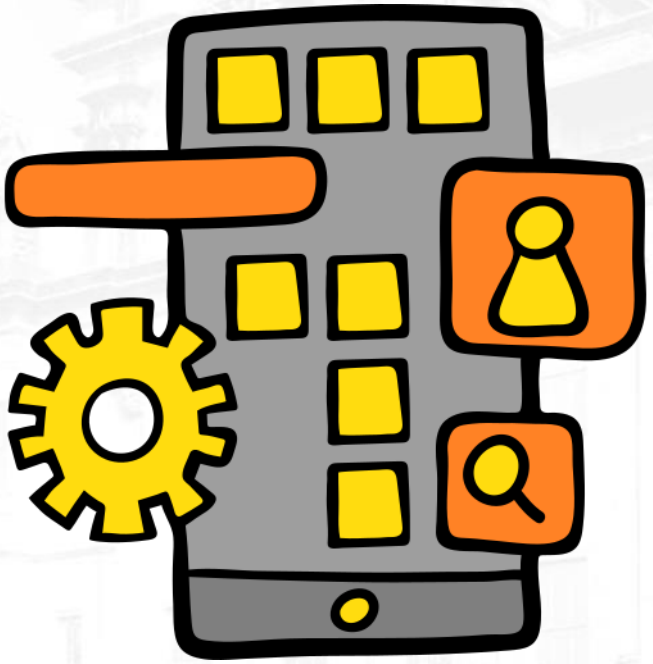
Mobile Development Process

Mobile App Development Lifecycle 9 Steps to Consider

CREDENCYS GO DIGITAL

Mobile Development Process

1. Planning and Research
2. Assessment of Technical Feasibility
3. Wireframe and Prototype
4. Designing the Application
5. Developing the Application
6. Testing the Mobile App
7. Deployment
8. App Launch
9. App Enhancement



Thank You!

Reference

- Mogara. (n.d). Your Guide to Mobile App Development. https://magora-systems.com/mobile-app-development-guide/
- Sendian Creations (n.d.) The best Introduction to Mobile Application Development. https://www.sendiancreations.com/mobile-app-development/
- Icons are from (https://www.flaticon.com/)

Enjoy you lunch! ☺