Introduction to Mobile App Development

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What is Mobile Application Development?

Mobile Application Development

Mobile application development is the process to making software for smartphones and digital assistants, most commonly for Android and iOS. The software can be preinstalled on the device, downloaded from a mobile app store or accessed through a mobile web browser. The programming and markup languages used for this kind of software development include Java, Swift, C# and HTML5.

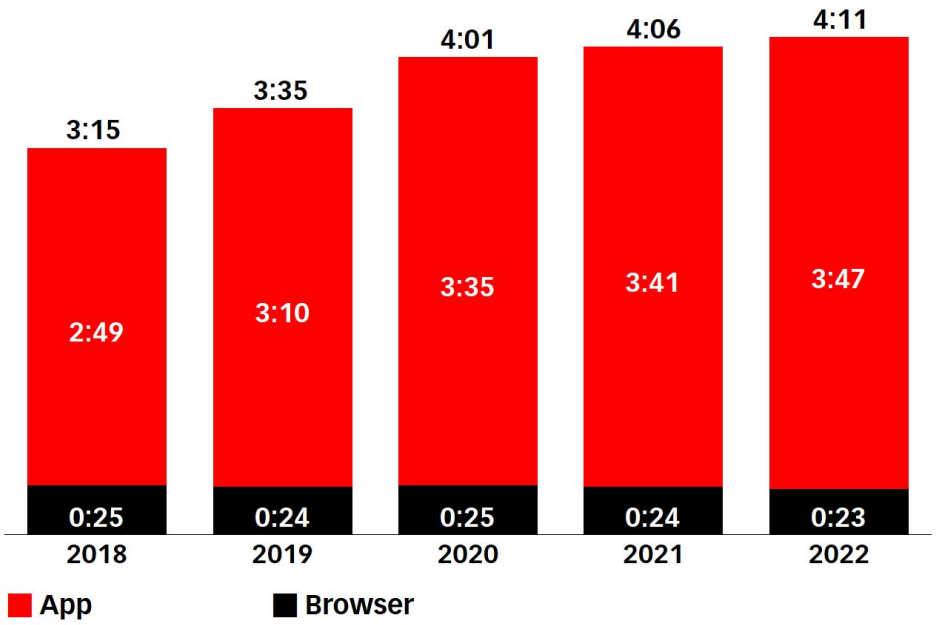
Why Mobile Applications?

Why Mobile Applications?

- Ease of Marketing using Notifications
- Making use of mobile device features like a camera, contact list, GPS, phone calls, accelerometer, compass, etc.
- Ability to work offline
- Freedom in modern designing with advanced gestures like tap, swipe, drag, pinch, hold, and more.
- App can work faster than website.
- Users spend more time on Apps

Mobile Internet: Average Daily Time Spent in the US, App vs. Browser, 2018-2022

hrs:mins per day among population



Note: ages 18+; includes all time spent with internet activities on mobile devices, regardless of multitasking; numbers may not add up to total due to rounding

Source: eMarketer, April 2020

Facebook Comparison

Facebook has **98.5% of its users accessing it with a mobile device**

Device Type	Percentage
Desktop Only	1.7%
Desktop & Mobile	17.3%
Mobile	81%

Sources: Hootsuite / WeAreSocial

Type of Mobile Applications

Types of Mobile Applications

- **Native Applications**
  Native apps are tailored to each platform's needs. They use technology that is specific to either Android or iOS. Platforms execute their operating systems using their languages. As a result, the coding for Android and iOS differs. Android mobile app development is done with Kotlin and Java. The iOS mobile app can be written in Swift or Objective C.

- **Cross Platform Applications**
  Cross-platform app development might resemble hybrid development, but they are not the same. But the only similarity between them is "code shareability". The cross-platform app approach allows developers to write code once and reuse it on different platforms.

- **Hybrid Applications**
  It is the blend of both native and web solutions. Developers embed the code written in web development language (HTML, CSS, and JavaScript) into a native app using plugins like Apache Cordova or Ionic Capacitor. The plugin system allows developers to access the native features of platforms.

Native App Development Tools

- **Android**

- **IOS**

Hybrid App Development Tools

Cross Platform App Development Frameworks

Flutter vs React Native

	Flutter	React Native
Initial Release	2017	2015
Created By	Google	Facebook
Documentation	Very Easy and Understandable	Unclear and Complex
Open Source	Yes	Yes
Popularity	142.5K Github Stars	104K Github Stars
App Performance	Higher at 60 fps animation standard	Less due to its dependency on third-party
Top apps	Google Ads, Alibaba, Google Pay etc.	Instagram, Facebook, Skype etc.

Thank You