Types of Mobile Applications

Key Points	Notes

	1. Mobile Web
	
	   a. Responsive design, which it adapts to the screen size of the device for display.
	
	   b. It requires an Internet connection to work and connect to the web server where it is hosted.
	
	   c. You cannot upload mobile web to the app store because it is always available like a normal website and you do not need any installation to use it.
	
	   d. It does not have the same physical format as native application because it is still in web format.
	
	 2. Hybrid Mobile Application
	
	   a. It uses next generation JavaScript framework such as React, Angular, Vue.js, node.js, etc. However, flutter is using its own framework that uses Dart programming language (alternative to JavaScript).
	
	   b. The unified programming language used (react native and flutter) in hybrid mobile application will reduce the development time. In other words, one code for all platforms (iOS, Android, macOS, Windows & Linux).
	
	   c. The code from unified programming language will be converted automatically into any mobile platform's native code. Thus, will allow you to upload your hybrid mobile application to any mobile app stores.
	
	 3. Native Mobile Application
	
	   a. To develop native mobile application you need to learn and master each platform programming language. Each mobile platform uses its own programming language:
	     i. Java – Android
	     ii. Objective-C or Swift – iOS
	     iii. C# or ASP.Net – Windows

	Summary

Types of Mobile Applications

| Key Points	Notes

	b. The same native application needs to be recoded and developed separately because of different programming language used. Thus, different skill sets are needed for cross platforms development (iOS, Android, Windows, macOS & Linux).
	
	c. The native format allows developer to upload native mobile application to each mobile platform's app store.
	
	d. Native mobile application performs better than mobile web and hybrid mobile application except flutter. Flutter is using its own architecture which perform faster than native mobile application.
	
	4. Flutter Mobile Architecture.
	    a. To understand how flutter works, read a good article written by Scott Stoll (2018) on Flutter Architecture.
	
	    b. Compare among the architectures used in cross and native platforms in the article:
	        i. OEM SDKs (Native)
	        ii. Reactive Views (Hybrid)
	        iii. Cross-Platform Approach (Hybrid)
	        iv. Flutter Approach (Neither Hybrid nor Native)

Summary

Key Points	Notes

	5. Types of Mobile Application Summary
	
	   a. Below is the summary for Mobile Web, Hybrid and Native application.
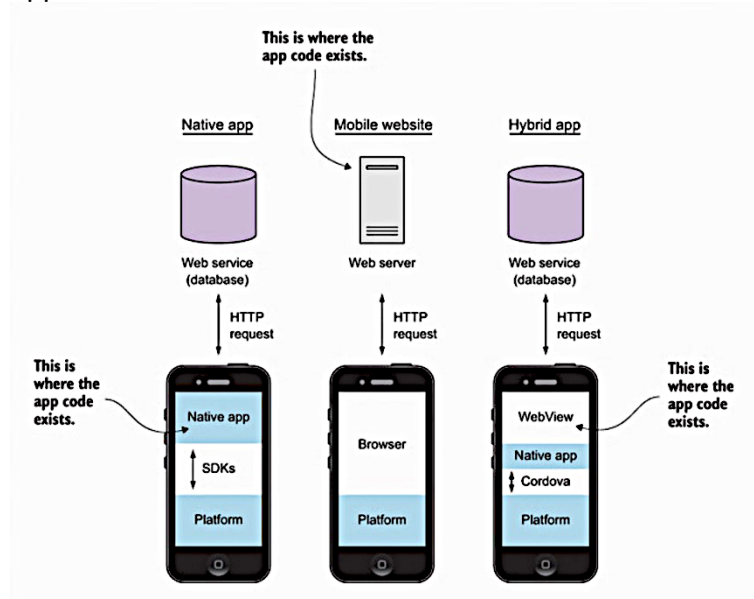	
	Native, Mobile Website and Hybrid Application architectures (Wilken, 2016, p. 4)
	
	   b. Flutter is not part of native or hybrid architecture, thus it will be considered as its own type.
	
	6. References
	
	   a. Wilken, Jeremy. (2016). *Ionic in action: Hybrid mobile apps with ionic and angularjs.* Shelter Island, NY: Manning Publications Co.
	
	   b. Saleh, Hazem. (2014). *Javascript mobile application development*. Birmingham, UK: Packt Publishing.

Summary	

Types of Mobile Applications

Key Points	Notes
	c. Ye, Linton. (2018). React Native vs. Cordova, Phonegap, Ionic, etc. Retrieved from https://learnreact.design/2018/02/14/react-native-vs-cordova-phone-gap-ionic-etc/ d. Interaction Design Foundation (2018). Native vs Hybrid vs Responsive: What app flavour is best for you? Retrieved from https://www.interaction-design.org/literature/article/native-vs-hybrid-vs-responsive-what-app-flavour-is-best-for-you e. In plain English: So what the heck is Flutter and why is it a big deal? (Stoll, 2018). Retrieved from https://medium.com/flutter-community/in-plain-english-so-what-the-heck-is-flutter-and-why-is-it-a-big-deal-7a6dc926b34a
Summary	