Flutter - the Future of Mobile App?

So far, the development of mobile applications is divided into several ways of development:

Native: using programming languages and frameworks provided by operating system vendors, where Android uses Kotlin, Java and c ++, while iOS uses Swift and Objective C. The advantages of native development method are the performance of the application itself, which is very fast, and the ability to access camera, microphone, GPS, and Bluetooth more easily. While the disadvantages include expensive development costs and time-consuming, because each platform must be developed by developers who master different programming languages.

Hybrid: using web programming languages (HTML and JavaScript) that run in the Native App, using the WebView Wrapper. Applications that use this method of development can also access cameras, microphones, GPS and some other devices, but not as easily as Native. The advantage of this development method are faster process and cheaper because developers only develop one web application and then 'wrap' it in one WebView in the Native App. While the disadvantages include the performance that tends to be less responsive and consuming too much memory, which ultimately results in a decreasing user experience. There are several frameworks that play in this area, one of which is Apache Cordova.

Native Core: using a language that is not Native but the results of compilation that is translated into Native Core, so that performance is similar to Native. Examples of the framework used are: React Native from Facebook, Ionic, Xamarin from Microsoft, and Flutter from Google. The advantages of using this method include saving time and development costs, ability to access most of the Native API (Application Programming Interface) features, and near Native performance. The disadvantage is that not all portions of the code can be translated into each platform so that developers must make bridging (in Native) which sometimes takes more time (for more detail) and larger application sizes.

In this short article, we will briefly discuss about Flutter, an open source Core Native framework developed by Google since 2015 based on the Dart programming language that was also developed by Google. At the end of 2018, after going through a development for 3 years, Flutter finally reached the stable stage of version 1.0. One of the reasons Flutter is more attractive than other Core Native frameworks is that Google is behind this framework, and the applications developed using Flutter can also run on Google's operating system, Fuchsia.

Adapting to Flutter (dart) is not so difficult if you are familiar with the Java, Kotlin, Swift or other object-oriented programming languages that are derivatives of C. What makes it less convenient for developers who are accustomed to using layout tools such as storyboards on XCode or XML Markup languages on Android is that they have to get used to making layouts with code. In terms of speed in some online benchmarks, Flutter is considered faster and more responsive than React Native, but not faster than Native. The Hot Reload feature is very useful for developers to develop applications. Just like React Native, the application does not need to be rebuilt every time the developer makes changes to the code. Even though XCode and Android studio already have the Incremental Build feature, Hot Reload is still faster.

The advantages of Flutter are "single codebase run anywhere", faster application development and lower costs, application performance is close to native. While the disadvantages are that the third party supporting library is still very minimal, the framework is still very new so it is very vulnerable to major changes in the next version (such as Swift 1 to Swift 2) and there is no convention design pattern that can be used as a reference because the community is so new the best practice "has not been clearly defined. Until now there are several big names that have adopted Flutter as their main framework, one of which is Alibaba with Xianyu app.

Flutter is not a substitute for the main language that is currently commonly used for the development of mobile applications, but does not rule out the possibility in the following years as many big names take part, Flutter will become a framework that will become the standard in developing mobile applications . For now, Trimegah has not used Flutter as a framework to build mobile applications, but it is possible that Flutter will become the main framework in the future.

Announcement

Reference :

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