**Comparison between Android and iOS**

**Security:** In terms of security both Android and iOS provide support for numerous encryption and hashing algorithms. While developers are provided with a very elementary set of practices and guidelines to develop *Secured Android apps*, Apple has explained every procedure in depth along with *Secure coding guide* to create *Security critical apps*.

**Platform Openness:** Apple is in a strong disagreement on offering an open license for iOS and does not even provides access to some of its system functionalities in contrast with Android offering a free license where developers can even tweak the core functionalities of the *Operating System*. However, both Apple and Google offer open licenses for the Apps. Android apps can even run on other platforms through emulators, unlike iOS apps which are intended to run on single *Operating System*. The code level support provided by Google for Android through several documents and portals is better (but not always timely) than the limited support for iOS by Apple. Apart from that, iOS updates are released through iTunes and are same across all the iPhone models (except very old ones). On the flip side, Android updates are only released for the latest phones and rarely reach to the masses due to a very high overhead of merging them with the vendor specific versions. Additionally, Fragmentation is significantly high in Android than iOS as it runs on a variety of hardware configurations including different screen sizes, processors, and RAM.

**Technology:** A free SDK is provided by both Google and Apple to develop the apps. In the case of Android, the *User Interface* is handled by XML and the *Core logic* is written in JAVA, whereas uses Objective-C to build native apps and charge around $299/ year for its *Apple Developer Enterprise Program* to create proprietary apps that can be distributed amongst the organization’s employees. Both Android and iOS are also backed by a huge set of libraries which assist the developers in making complex apps with ease. Since iOS uses a closed ecosystem and hence provides no interface support, Android supports many third-party libraries leading to exceptionally good interface support. In terms of innovation both Google and Apple are constantly working hard on the novel concepts to make their *Operating System* be future ready. In addition, pushing updates for apps is very easy through the respective app stores.

**Testing:** To review the code both competitors provide several mechanisms (with an exception of numerous third party tools in case of Android) and tools through their respective SDK’s. Developing apps is quite laborious in the case of Android since every vendor molds the *Operating System* per his own specifications, which should be taken care by the developers while creating generic apps. But iOS has a set of predefined hardware configuration and all apps are being built with respect to those, which makes the development a bit easy. Furthermore, both Android and iOS provides a debugger though their SDK’s, whereas iOS provides a better emulator.

**Distribution:** Android can also utilize the third-party app stores and websites in addition to its own app store for the distribution of business apps. Also, the process of publishing apps is quite fast due to the deployment of an automated app verification system. On the other hand, the deployment of iOS apps can take up to a week. Apple also provides distribution services for business apps to the designated users regulated by *iTunes Connect*. Moreover, both Google and Apple keeps 30% of the app generated revenues and provide an additional support for third-party MDM solutions through API’s. While Apple provides the option to use their proprietary MDM Solutions, Android developers have the choice to write their own MDM services.

**Miscellaneous:** Apple and google have got a large developer community which assists the new developers through a plethora of forums with detailed tutorials. Besides, free comprehensive documentation with various examples is also provided on the respective official websites. Unlike Google, Apple has enforced stringent guidelines for the *User interface* design and distribution of apps to the compatible hardware is also being directly monitored. Moreover, Android has the highest market share in terms of smartphones since it is *open source*, but Apple does have a strong reputation in the smartphone market. Furthermore, it has been widely accepted that apple is not prioritizing on the security of enterprise-level apps, even Android is experiencing several security related issues due to the recently escalated malicious apps. Lastly, Apple does have IBM as an enterprise partner, while google has none.