**Assignment #1**

**Mobile Application Development**

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1. **A comparison of Native and Cross Platform mobile app development.**

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| **Native app development** | **Cross platform app development** |
| It is development of a mobile app that works on single platform. | It is development of an app that works on several platforms. |
| It has broad functionalities as we will have access to every API and tool provided by the platform that we works on. | It has limited functionalities as developers may have issues accessing smartphone functionalities like microphone, camera etc. |
| It is easier to publish. It usually ranked higher on the platforms because it has better performance and speed. | It needs for an additional layer and rendering process that makes the app slower in speed and performance. |
| These apps are more scalable. | There is only one code base is created. |
| It provides high performance And great UX. These apps have a better UX that is similar with the platform. | It has limited UX. It can’t deliver the same UX that is opposite to the platform. |
| It can be costly, we need two teams for different platforms. | It is less costly we need only one to create an app. |
| It is time-consuming. | It saves time and cost. |
| Security risks of native apps are lower. | It’s security risk is higher. |

1. **Different scenarios where each native and cross platform mobile app development is preferred.**

To create a successful and well performance mobile app, we need to understand which operating system we want our app to be compatible with. Both Native and cross-platform application development methods can be used for Android and iOS operating systems.

There are few areas in which these development method can be used.

* **Reduce risk and increase security**

If we are building an app for a business we must consider the reputation of the business. There is a very high risk in these types of mobile applications. In this situation, native mobile development would be a better option. It provides many built-in security features.

* **High speed and performance**

Native mobile app development is suitable for applications that require high performance. Using cross-platform frameworks in this scenario would require additional effort.

* **Reduce cost and time**

There are different companies which have higher budgets for mobile app development. For lower budgets, cross-platform apps need a small team. Cross-platform development allows us to keep costs under control by reusing code and projects.

1. **List of frameworks/Tech Stack for cross platform mobile Application development.**

The best frameworks for cross platform mobile app development are as follows:

* Ionic
* React Native
* Flutter
* Xamarin
* NativeScript
* Node.js
* Appcelerator Titanium
* PhoneGap
* Sencha Touch
* Corona SDK