**ASSIGNMENT NO: 1**

**NAME: MUHAMMAD BILAL BUKHARI**

**REG NO: SP20-BCS-046**

**DATE: 2-10-2022**

**SUBMITTED TO: SIR KAMRAN**

* **Native Mobile App Development**:

Native mobile apps are applications developed to target either Android or iOS. Depending on which operating system you are developing for, your applications are usually coded in a specific programming language.

A native iOS app would never work on Android and vice versa. This is because different platforms require different development technologies and programming languages. For example, developers would use AppCode, [Xcode](https://developer.apple.com/xcode/) or [Atom](https://atom.io/) to build an iOS app, but would need to use [Android Studio](https://developer.android.com/studio) to create an Android app.

* **Native App Tool & Languages:**
* **For Android:**
* Android Studio (Java, Kotlin)
* **For iOS:**
* Objective-C
* Swift (AppCode, Xcode, Atom)
* **Cross Platform App Development:**

Cross-platform apps are those that are developed to operate on multiple platforms. With cross-platform apps, the same code will run both for Android and iOS, so your developer will only need to build one version for it to work across everything. Examples are as follows.

* Instagram
* Skype
* Fox sport
* The New York Times & many more.
* **Cross Platform App Tools:**
* React native (Javascript)
* Flutter (Dart)
* Xamarin (C #)
* **Comparison Between Native & Cross Platform:**

|  |  |  |
| --- | --- | --- |
| Comparison | Native App Development | Cross Platform Development |
| Code | For single platform | sharable |
| Device capability | full | limited |
| Performance | High performing apps that are fast, responsive, and less likely to crash. | In reality, cross-platform apps are comparatively slower than the native ones. |
| Cost | High cost of development since it requires building more than one app | Relatively cheaper in terms of both development and maintenance. |
| Development Time | High, as codes have to be written from scratch for each platform. | Low, as single code can be used on multiple platforms. |
| Tools | Java, Kotlin | React Native, Flutter, Xamarin |
| Examples | Pinterest | Bloomberg |

* **Scenario Native VS Cross Platform App Development:**

Here is a list of scenario whether to choose native app or cross platform depending upon one’s need.

* **Choose Native App Development If You want an App:**
* that is highly responsive and fully-functional
* that has no budget constraints
* that works without internet connectivity
* that is expected to require regular updates and improvements by introducing new features and functionalities
* for business purposes native app is best choice

### Choose Cross-platform App Development If You Want an App:

* that is developed quickly and in the most cost-effective way.
* that won’t require complex animation or performing excessive calculations
* that requires uninterrupted internet connectivity to download content
* that is developed purely for information or content distribution
* Cross-platform apps are easy on the pocket.

### CONCLUSION:

* If you want a reliable app with fantastic performance, no budget and time constraint, and targeted to only Android or iOS user base, choosing native over cross-platform development.
* On the other hand, if you want to develop apps which focus on a broader user base and are developed in the most cost & time effective way, cross-platform apps would be best bet.