

**ASSIGNMENT NO 1**

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**SUBJECT: MOBILE APP DEVELOPMENT**

**Q1: Explore different frameworks available for cross mobile app development?**

**Ans:** Cross-platform is referred to as the type of software compatible with multiple computing platforms, for example: Android, Blackberry Windows, iOS, etc. The present-day digital sphere has compelled developers to look for better results with minimal cost and effort. The one of a kind technology embedded in cross-platform allows the developers to code.Developers use programming languages to develop cross platform applications. The most common toolkit includes JavaScript, HTML, CSS and Java.

**Some platforms for mobile app are given below:**

**1. Flutter:**

Flutter reactive framework eliminates the need to update the UI contents manual. Flutter app developers need to do update the variables, and the UI changes will appear Developers may quickly and easily recreate a widget tree and understand the code changes. . Flutter encourage using a portable GPU. The GPU renders UI power and allows it to function with in the minute interfaces.

**2. React Native:**

A JavaScript framework enables users to create actual code and associate a native feel with the app. React native is not only liked by developers but also by businesses that believe in productive solutions. It is fortunate that React Native like Ionic is an open source cross-platform app framework. As a result, it has a vast community to help it grow and improve by solving issues, and adding new features. React Native combines the advantages of JavaScript and React.JS and the ability for developers to write modules in Objective-C. Developers can perform complex operations like image editing, video processing, and other activities that are not part of the framework APIs by using native modules and libraries in React Native cross-platform projects.

**3. Cordova:**

Cordova is an open source platform used for making mobile applications using JavaScript, HTML, and CSS. It gives connection between mobile devices and web applications.

**4. ionic:**

Ionic is a cross platform app framework based on AngularJS. Ionic is one of the most popular options available in the space. It gives access to developers native platform controllers using a combination of languages, including HTML5, JavaScript, CSS, and a Cordova wrapper. Ionic allows users to create a beautiful user interface while also including user friendly features and functionality in their app.

**5. Xamarine:**

Xamarine is used for developing Windows, Android, and iOS with the help of .Net and C#. Developers can use 90% of the code for creating new platforms while using Xamarine

**6. Native Script:**

Native Script is an ideal choice for developers exploring WORA functionality. Native Scripts also preffers all native. Native Script creates stunning and accessible platform native UI without using Web Views. Developers have to check this once, and Native Script will to run anywhere.

**7. Phone Gap:**

Phone Gap is the next significant phenomenon for cross platform app development using HTML5, CSS, and JavaScript. Developers also gain access to cloud solutions to share the app development process within the community for feedback. Another advantage of Phone Gap is that it supports in built device features such as cameras, GPS, and so on.

**8. kivy:**

Kivy is a multi-platform python GUI development library on iOS, Android, Windows, OS X, and GNU/Linux. in developing apps that make use of cutting edge multi touch user interfaces. Kivy core concept allows developers to create an app once and deploy it across all devices, making code reusable and deployable and enable it quick and easy interaction design.

**Q2:**

**Ans:** The native app development means to building a mobile app for a single platform. The app is made with programming languages and tools that are specific to a single platform. For example, you can develop a native Android app with Java and choose Swift and Objective-C for iOS apps.

Native apps are known in users to deliver user experience as they are generally high performance. User experience is also enhanced as the visuals are tailored to the platform UX. However, startups are concerned about the high cost of native app development as they need to run concurrent development for both platforms.

**Benefits Of Native App Development**

1. Broad Functionality
2. Better Store Support
3. Increased Scalability

**Cross Mobile app development:**

Cross-platform development is the process of creating an app that works on several platforms. This is done by using tools like React Native, Xamarine, and Flutter, where the apps created can be deployed on both Android and iOS.

While cross-platform development saves time and cost, you risk sacrificing quality in the process. It is difficult to tailor an app that runs optimally on various platforms, and the app will need an additional abstraction layer when running, thus resulting in lower performance. Startups will favor the reduction in time and cost with cross-platform development. However, you’ll need to bear in mind that it might be more difficult to customize the app beyond what’s allowed in the framework.

**Benefits of cross mobile app development**

#### ‍**Less Costly**

#### ‍**Single Code Base**‍

#### Faster Development

#### Q3:

#### Ans:

#### Native App Development: A native app is software that is created for a particular operating system, meets its requirements completely as well as hardware of a device. For example: objective-c are utilized for the IOS platform and Apple devices. Java and Kotlin are used for a project that operates on android OS.

#### Native mobile apps are preferred for various reasons, Mostly for superior user experience and good app performance. Native app technologies provides more control over the UI\UX of the app, in making them more desirable when it comes to crafting mobile application.

#### Cross Platform Mobile App development:

#### Cross mobile app maintenance is much easier because updates made to your single code base can be deployed across all platforms and mobile devices.

#### An app is a great way to help the user experience and provide a way for users to prepare an application to suit their needs

#### Q4:

#### Ans: Cross platform app development is one of the most popular ways to build mobile applications. A cross platform or multiplatform, approach allows developers to create apps that run on different mobile app platforms.

#### Some important frameworks of cross platform mobile app development are:

#### 1. Flutter

#### 2. React Native

#### 3. Cordova

#### 4. Xamarine

#### 5. Ionic

#### 6. Native Script

#### 7. Phone Gap

#### 8. Kivy