1. **What are the various types of mobile applications that exit and their differences**

Types of Mobile Apps by Technology

There are three basic types of mobile apps:

Native apps are created for one specific platform or operating system.

Web apps are responsive versions of websites that can work on any mobile device or OS because they’re delivered using a mobile browser.

Hybrid apps are combinations of both native and web apps, but wrapped within a native app, giving it the ability to have its own icon or be downloaded from an app store.

1. **Review mobile app programming languages (good Comparisms)**
2. **What is mobile app developement framwork?**

A mobile development framework is a software framework that is designed to support mobile app development. It is a software library that provides a fundamental structure to support the development of applications for a specific environment.

1. **Review mobile app development frameworks by comparing them using key features.**

There are several mobile app development frameworks available in the market today. When comparing these frameworks, we can use the following key features:

* 1. Programming Language: The programming language used by the framework can have a significant impact on the app’s performance, features, and flexibility. Some of the popular programming languages used by mobile app development frameworks include Java, JavaScript, Swift, Kotlin, and React Native.
  2. User Interface: A mobile app’s user interface is crucial to its success. A well-designed user interface can improve user engagement, retention, and conversions. A framework that can create a beautiful user interface with ease is more likely to be preferred.
  3. Platform Support: Different mobile app development frameworks offer different support when it comes to the platforms they can work on. Some frameworks are limited to a single platform, while others are compatible with multiple platforms.
  4. Developer Productivity: Developers will also want to consider how easy it is to build, test, and deploy applications using a framework. This feature helps measure a developer’s efficiency in building an app.
  5. Community Support: Community support is essential for mobile app development frameworks. Having a thriving community of developers can provide additional resources, help, and valuable third-party plugins and libraries to the application development process.

Based on these key features, we can compare different mobile app development frameworks as follows:

* 1. **React Native:** React Native is a mobile app development framework that uses JavaScript. It is popular for its flexibility, productivity, and cross-platform compatibility, making it suitable for building high-performance mobile apps across multiple platforms.
  2. **Flutter**: Flutter uses the Dart programming language and is known for its exceptionally beautiful UI elements. Flutter does not use native components, uses widgets instead, which makes it easy to build and manage different platforms at once.
  3. **Ionic**: Ionic is a free and open-source mobile app development framework that uses HTML, CSS, and JavaScript. Its platform compatibility includes iOS and Android, and it has a supportive community.
  4. **Xamarin**: Xamarin is an open-source mobile app development platform that uses C# and .NET for building apps. It can deploy on platforms such as iOS and Android, and the Xamarin community is actively updating the different libraries it provides.
  5. **NativeScript**: NativeScript, unlike some other frameworks, is entirely based on using native components, increasing the compatibility of apps. NativeScript uses JavaScript, TypeScript or Angular programming language, providing developers the flexibility to use the language of their choice.

Overall, the choice of a mobile app development framework depends on the developer’s specific requirements, platform compatibility, and overall project goals. Nevertheless, considering the listed key features can help developers in narrowing choices down.

1. **How do you collect and analyze requirements for a mobile application to be developed (functional requirements and non-functional requirements)**

**Collecting Requirements**:

1. Understand the business goals of the mobile application.

2. Identify the target audience and their preferences.

3. Conduct market research and understand customer needs.

4. Gather information about the competitors and their applications.

5. Brainstorm with the team and list down all the requirements.

6. Prioritize the requirements based on their importance and feasibility.

**Analyzing Requirements:**

1. Define functional requirements that specify what the application should do.

2. Define non-functional requirements that specify how the application should perform.

3. Analyze the feasibility of the requirements and see if they can be implemented.

4. Ensure that the requirements are clear, concise, and unambiguous.

5. Define acceptance criteria for each requirement.

6. Create prototypes and mock-ups to test the requirements.

7. Get feedback from the stakeholders and make necessary changes.

8. Finalize the requirements and document them in a detailed manner.

1. **How to estimate the mobile app developement cost**

**User experience (UX)**. The mobile app development price will vary depending on the level of user engagement and sophisticated design: button placement, color psychology, and users’ eye patterns.

**User Interface.** The different kinds of apps require individual design solutions. Thus, the mobile app cost will fluctuate depending on the specific visual elements, such as layout, screen, color, shapes, items, and typography.

**Icon branding**. It requires more time to build a unique app design that will stand out and grab customer’s attention. That’s why the final cost to make an app will depend on branding.