**ANDROID APPLICATION**

**ASSIGNMENT NO.1**

Explain Different types of Android Applications

[Android applications can be classified into three types:](https://www.geeksforgeeks.org/android-applications-and-their-categories/" \t "_blank)

**[Native Apps](https://www.geeksforgeeks.org/android-applications-and-their-categories/" \t "_blank)**[,](https://www.geeksforgeeks.org/android-applications-and-their-categories/" \t "_blank) **[Web Apps](https://www.geeksforgeeks.org/android-applications-and-their-categories/" \t "_blank)**[, and](https://www.geeksforgeeks.org/android-applications-and-their-categories/" \t "_blank) **[Hybrid Apps](https://www.geeksforgeeks.org/android-applications-and-their-categories/" \t "_blank)**[1](https://www.geeksforgeeks.org/android-applications-and-their-categories/). Native apps are built for specific operating systems, such as Android and iOS, and are available for download on Google Play Store and Apple App Store. They are designed to make the most of all the features and tools of the phones such as contacts, cameras, sensors, etc. [Examples of native apps include WhatsApp, Spotify, Pokemon GO, etc](https://www.geeksforgeeks.org/android-applications-and-their-categories/)[1](https://www.geeksforgeeks.org/android-applications-and-their-categories/). Web applications are built only to run on browsers. They are mainly the integrations of HTML, CSS, and Javascript. They run on Chrome, Firefox, and other browsers. [Examples of web apps include Gmail, Canva, and Google Docs 1](https://www.geeksforgeeks.org/android-applications-and-their-categories/). Hybrid applications are also called Cross Platform Applications. Hybrid applications run on multiple platforms like Android and iOS. They are made from the integration of web and native applications. [Because hybrid apps use a single codebase, they can be deployed across devices](https://www.geeksforgeeks.org/android-applications-and-their-categories/) [1](https://www.geeksforgeeks.org/android-applications-and-their-categories/). [Some categories of Android applications include E-Commerce Apps, Educational Apps, Social Media Apps, etc](https://www.geeksforgeeks.org/android-applications-and-their-categories/)[1](https://www.geeksforgeeks.org/android-applications-and-their-categories/).

Android is an open-source operating system, based on the Linux kernel and used in mobile devices like smartphones, tablets, etc. Further, it was developed for smartwatches and Android TV. Each of them has a specialized interface. Android has been one of the best-selling OS for smartphones. Android OS was developed by Android Inc. which Google bought in 2005. In this article, we will discuss android application types and categories as well as their advantages and disadvantages. Firstly let’s see the types of applications, there are mainly 3 types of Android Applications.

**Types of Android Applications**

**1. Native Apps**

Native apps are built for particular operating systems, which are mostly Android and IOS. Also, there are more OS for mobile applications: Blackberry and Windows. This is available for download on Google Play Store and for IOS Apple App Store. Native apps are generally built to make the most of all the features and tools of the phones such as contacts, cameras, sensors, etc. Native apps ensure high performance and stylish user experience as the developers use the native device UI to build apps. WhatsApp, Spotify, Pokemon GO, etc. are examples of Natives apps. Android apps are built using **Java**, **Kotlin,** and **Flutter**, for the frontend, it uses the **XML** scripting language. And IOS apps built using **Swift**, **Flutter**/ **Dart,** and **C#**.

**Advantages:**

* Native apps are designed for the particular operating system and it gives the best user experience.
* Native apps are built with separate gestures it gives a good experience to users and it is very useful for all users.

**Disadvantages:**

* Native apps are costly in comparison to others because they want separate maintenance.
* Requires a separate codebase to add new features.

**2. Web Apps**

Web applications are built only the run on browsers. They are mainly the integrations of **HTML**, **CSS,** and **Javascript**. It runs on Chrome, Firefox, and other browsers. The responsiveness and functionality of the web apps could easily be confused with a native app since both the Native and web apps have almost the same features and responsive nature. And one of the major differences between the two is that native mobile apps can function both in the offline mode without an active internet connection and the online mode, whereas the web apps require an active internet connection for them to work. Gmail, Canva, and Google Docs are the best examples of web apps.

**Advantages:**

* Easy to build
* Web apps are used less storage than other applications.
* Web Apps are preinstalled on all devices.
* Web applications are easily accessible in any type of application.

**Disadvantages:**

* Local resources are not available in web apps.
* Depends on internet networks/ connections.

**3. Hybrid Apps**

Hybrid applications are also called Cross Platform Applications. Hybrid applications are runs on multiple platforms like Android and IOS. Also, these are made from the integration of web and native applications. Because hybrid apps use a single codebase, they can be deployed across devices. For example, when we build the android application, we can also launch it on IOS. As a cross-platform development option, developers have more freedom when designing their applications as they do not need to stick to specific design guidelines from either apple or google. Instagram, Uber, and Crypto change are examples of Hybrid apps. For Hybrid application development, we use **Flutter/Dart**, **React Native**, etc.

**Advantages:**

* Users can use it on more than one platform.
* It is integrated with browsers.
* Maintained by many versions.
* Shareable code makes it cheaper than a native app.

**Disadvantages:**

* Slower compared to native apps.
* There might be some user interface issues.
* In hybrid apps have limitations in using all the Hardware and Operating Systems features.

Now let’s see about some categories of Android applications.

**Categories of Android Applications**

Some Categories of the Android Applications:

1. **E-Commerce Apps:**E-commerce apps are an example of a B2B model. It helps to people to sell and borrow different items and it saves time and money. In e-commerce applications, we can do trading of commercial goods on online marketplaces. To buy specific items and goods, you simply need to make electronic transactions like UPI, Phonepe, etc. through your smartphone or computer. Flipkart, Amazon, OLX, and, Quiker are examples of e-commerce applications.
2. **Educational Apps:**Educational apps are too much used to improve knowledge and peoples get productivity. Apps for education can make people more interactive, more engaged, and perform better. Keeping teaching methods good is integral to getting students engaged in their studies and learning apps are a fantastic way of achieving this. For example, Google Classroom, SoloLearn, edX, Duolingo, etc.
3. **Social Media Apps:**Social media apps give the opportunity to the peoples connect and communicate together. These apps are mainly used for sharing purposes and making fun. Many peoples use social media applications for influence, marketing/ business, entrepreneurship, etc. Instagram, Facebook, WhatsApp, YouTube, LinkedIn, etc. are examples of social media applications.
4. **Productivity Apps:**Productivity apps typically organize and complete complex tasks for you, anything from sending an email to figuring out a tip. The easy-to-use Google Drive app gives users access to all of the files saved to the cloud-based storage service across multiple devices. Productivity applications arise in many different forms and they often take a different approach to improving your workflow. For example, Hive, Todoist, Google Docs, etc.
5. **Entertainment Apps:**Entertainment apps are widely used apps worldwide. It contains OTT platforms and novels and other content. These platforms entertain people and give them much more knowledge about different things. Everyone is watching OTT platforms and those are trending these days, and their development is also in demand all over the world. Hotstar, Netflix, and Amazon prime video are the best examples of this entertainments applications.