**3.1**

**Android View and ViewGroup with Examples**

In android, **Layout** is used to define the user interface for an app or [activity](https://www.tutlane.com/tutorial/android/android-activity-lifecycle) and it will hold the UI elements that will appear to the user.

The user interface in android app is made with a collection of View and ViewGroup objects. Generally, the android apps contain one or more activities and each activity is a one screen of app. The activities contain a multiple UI components and those UI components are the instances of View and ViewGroup subclasses.

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**Android View**

The View is a base class for all UI components in android. For example, the **EditText** class is used to accept the input from users in android apps, which is a sub class of View.

Following are the some of common View subclasses which will be used in android applications.

* [TextView](https://www.tutlane.com/tutorial/android/android-textview-with-examples)
* [EditText](https://www.tutlane.com/tutorial/android/android-edittext-with-examples)
* [Button](https://www.tutlane.com/tutorial/android/android-button-with-examples)
* [CheckBox](https://www.tutlane.com/tutorial/android/android-checkbox-with-examples)
* [RadioButton](https://www.tutlane.com/tutorial/android/android-radiobutton-with-examples)
* [ImageButton](https://www.tutlane.com/tutorial/android/android-imagebutton-with-examples)
* [Progress Bar](https://www.tutlane.com/tutorial/android/android-progressbar-with-examples)
* [Spinner](https://www.tutlane.com/tutorial/android/android-spinner-dropdown-list-with-examples)

Like these we have many View subclasses available in android.

**Android ViewGroup**

The ViewGroup is a subclass of View and it acts as a base class for **layouts** and **layouts parameters**. The ViewGroup provides an invisible containers to hold other **Views** or **ViewGroups** and to define the layout properties.

For example, [Linear Layout](https://www.tutlane.com/tutorial/android/android-linearlayout-with-examples) is the ViewGroup that contains a UI controls like button, textview, etc. and other layouts also.

Following are the commonly used ViewGroup subclasses in android applications.

* [Linear Layout](https://www.tutlane.com/tutorial/android/android-linearlayout-with-examples)
* [Relative Layout](https://www.tutlane.com/tutorial/android/android-relativelayout-with-examples)
* [Table Layout](https://www.tutlane.com/tutorial/android/android-tablelayout-with-examples)
* [Frame Layout](https://www.tutlane.com/tutorial/android/android-framelayout-with-examples)
* [Web View](https://www.tutlane.com/tutorial/android/android-webview-with-examples)
* [List View](https://www.tutlane.com/tutorial/android/android-listview-with-examples)
* [Grid View](https://www.tutlane.com/tutorial/android/android-gridview-with-examples)

Both View and ViewGroup subclasses together will play a key role to create a layouts in android applications.

**Questions**

1. What are the Android View and ViewGroup?
2. How many types of Android Layout?