What is User Interface ?

- **The user interface is simply known as what you see on the application screen**
- The basic unit of android application is the activity. A UI is defined in an xml file

Type Of Layout

- Linear Layout
- Absolute Layout
- Table Layout
- Frame Layout
- Relative Layout

Linear Layout

- Linear layout is further divided into horizontal and vertical layout. It means it can arrange views in a single column or in a single row
- Linear Layout either vertical or horizontal

Absolute Layout

- The Absolute Layout enables you to specify the exact location of its children
- It’s Rarely uses now. It’s not best practice for UI

Table Layout

- The Table Layout designed to organize child View controls into rows and columns. Individual View controls are added within each row of the table using a Table Row layout View (which is basically a horizontally oriented Linear Layout) for each row of the table.

Frame Layout

- The Frame Layout designed to display a stack of child View controls. Multiple view controls can be added to this layout. This can be used to show multiple controls within the same screen space.

Relative Layout

- The Relative Layout - designed to display child View controls in relation to each other. For instance, you can set a control to be positioned “above” or “below” or “to the left of” or “to the right of” another control, referred to by its unique identifier. You can also align child View controls relative to the parent edges.

Constraint Layout

- Constraint Layout is a ViewGroup (i.e. a view that holds other views) which allows you to create large and complex layouts with a flat view hierarchy, and also allows you to position and size widgets in a very flexible way. It was created to help reduce the nesting of views and also improve the performance of layout files.

View Widgets

- TextView
- EditText
- Button
- ImageView
- Checkbox
- Spinner
- RadioButton

TextView

TextView in Android is one of the basic and important UI elements. This plays a very important role in the UI experience and depends on how the information is displayed to the user.We can create a TextView instance by declaring it inside a layout(XML file) or by instantiating it programmatically(Java Class).

EditText

In Android, EditText is a standard entry widget in android apps. It is an overlay over TextView that configures itself to be editable. EditText is a subclass of TextView with text editing operations. We often use EditText in our applications in order to provide an input or text field, especially in forms.

Button

In android, Button is a user interface control that is used to perform an action whenever the user clicks or tap on it. Generally, Buttons in android will contain a text or an icon or both and perform an action when the user touches it

ImageView

ImageView is used in Android application to place an image in the view. Typically, images are displayed using the built-in image view. This view takes care of the loading and optimizing of the image, freeing you to focus on app-specific details like the layout and content.

CheckBox

CheckBox belongs to android.widget.CheckBox class. Android CheckBox class is the subclass of CompoundButton class. It is generally used in a place where user can select one or more than choices from a given list of choices

RadioButton

Android Radio Button is bi-state button which can either be checked or unchecked. Also, it’s working is same as Checkbox except that radio button cannot allow to be unchecked once it was selected.Generally, we use RadioButton controls to allow users to select one option from multiple options.

buttons which belong to same radio group. The most common use of radio button is in Quiz Android App code.

Spinner

Android Spinner is a view similar to the dropdown list which is used to select one option from the list of options. It provides an easy way to select one item from the list of items and it shows a dropdown list of all values when we click on it. The default value of the android spinner will be the currently selected value and by using **Adapter** we can easily bind the items to the spinner Objects

What is Adapter

In Android, Adapter is a bridge between UI component and data source that helps us to fill data in UI component. It holds the data and send the data to an Adapter view then view can takes the data from the adapter view and shows the data on different views like as ListView, RecyclerView GridView, Spinner etc. For more customization in Views we uses the base adapter or custom adapters.

Thanks!

Any questions?