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# **Unit: 2 – Android User Interface Design**

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## • <u>User Interface Screen elements</u>

## 1. Button:

In android, Button is a user interface control that is used to perform an action whenever the user CO clicks or tap on it

### Attributes:

COLLEGE OF I.T - PROBANDAR	COLLEGE OF LT - PROBANDAR
Attribute	Description
android:id	It is used to uniquely identify the control
epared By: Ass. Prof Zalak Thakr	COLLEGE OF I.T - PROBANDAR COLLEGE OF I.T - PROBANDAR
android:gravity	It is used to specify how to align the text like left, right, center, top, etc
android:text	It is used to set the text.
repared By: Ass. Prof Zalak Thal	rar Prepared By: Ass. Prof Zalak Thakrar Prepared By: Ass. Prof Zalak Thakr
android:textColor	It is used to change the color of text.
COLLEGE OF I.T - PROBANDAR	COLLEGE OF L.T - PROBANDAR
android:textSize	It is used to specify the size of the text.
android:textStyle	It is used to change the style (bold, italic, bolditalic) of text.
repared By: Ass. Prof Zalak Thak	COLLEGE OF I.T - PROBANDAR COLLEGE OF I.T - PROBANDAR
android:background	It is used to set the background color for button control.
android:padding	It is used to set the padding from left, right, top and bottom.
Prepared By: Ass. Prof Zalak Tha	krar Prepared By: Ass. Prof Zalak Thakrar Prepared By: Ass. Prof Zalak Thak
android:drawableBottom	It's drawable to be drawn to the below of text.
COLLEGE OF I.T - PROBANDAR	COLLEGE OF LT - PROBANDAR
android:drawableRight	It's drawable to be drawn to the right of text.
android:drawableLeft	It's drawable to be drawn to the left of the text.
Prepared By: Ass. Prof Zalak Tha	crar COLLEGE OF I.T - PROBANDAR COLLEGE OF I.T - PROBANDAR

## Example:

```
XML Code:
    android:id="@+id/addBtn"
        android:layout width="wrap content"
        android:layout_height="wrap_content"
        android:text="Add"
        android:onClick="addOperation"/>
COL
   Java Code:
    Button btnAdd = (Button)findViewById(R.id.addBtn);
                                                                                                 ar
    btnAdd.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
    // Do something in response to button click
```

```
});
```

For Full Code: <a href="https://www.tutlane.com/tutorial/android/android-button-with-examples">https://www.tutlane.com/tutorial/android/android-button-with-examples</a> SHF

## 2. EditText:

In android, EditText is a user interface control which is used to allow the user to enter or modify the SHR text. COL

Pre - Attributes:

Attribute	Description	
COLLEGE OF I.T - PROBANDAR	COLLEGE OF I.T - PROBANDAR	COLLEGE OF I.T - PROBANDAR
android:id	It is used to uniquely identify the control	
SHRI V J MODHA	SHRI V J MODHA	A Company of the Comp
android:gravity	It is used to specify how to align the text I	ike left, right, center, top, etc. Ass. Prof Zalak Thakrar
android:text	It is used to set the text.	
COLLEGE OF I.T - PROBANDAR	SHRIVJ MODHA	SHRI V J MODHA
android:hint	It is used to display the hint text when tex	t is empty
android:textColor	It is used to change the color of the text.	
COLLEGE OF I.T - PROBANDAR	COLLEGE OF I.T - PROBANDAR	COLLEGE OF I.T - PROBANDAR
android:textColorHint	It is used to change the text color of hint t	text.
SHRI V J MODHA	SHRI V J MODH	IA
android:textSize	It is used to specify the size of the text.  Prepared By	: Ass. Prof Zalak Thakrar
android:textStyle	It is used to change the style (bold, italic, bolditalic) of text.	
COLLEGE OF I.T - PROBANDAR	SHRI V J MODHA	SHRI V J MODHA
android:background	It is used to set the background color for edit text control	
android:ems	It is used to make the textview be exactly	this many ems wide.
SHRI V J MODHA	SHRI V J MODHA	SHRI V J MODHA
android:textAllCaps Prepared by: Ass. Prof Zaiak	It is used to present the text in all CAPS	rrepared by: Ass. rrot Zalak I nakrar
android:typeface COLLEGE OF I.T - PROBANDA	It is used to specify the Typeface (normal, sans, serif, monospace) for the text.  COLLEGE OF I.T PROBANDAR	
android:inputType	It is used to specify the type of text being placed in text fields.	
HRI V J MODHA		
android:fontFamily	It is used to specify the fontFamily for the	
repared by: Ass. Prof Zalak	Inakrar Prepared By: Ass. Prof Zalak Thakra	ar Prepared By: Ass. Prof Zalak Thakrar
android:editable	If we set false, EditText won't allow us to	enter or modify the text

Example:

```
XML Code:
     <EditText
COL
         android:id="@+id/txtName"
Pre
         android:ems="10"
         android:hint="Name"
         android:inputType="text | Password | Email | Date | Pone"
         android:selectAllOnFocus="true"/>
SHRI
COLL
    Java Code
     EditText et = (EditText)findViewById(R.id.editText1);
 et.setText("Welcome to Tutlane");
```

For Full Code: <a href="https://www.tutlane.com/tutorial/android/android-edittext-with-examples">https://www.tutlane.com/tutorial/android/android-edittext-with-examples</a>

## 3. TextView:

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- In android, TextView is a user interface control that is used to set and display the text to the user CO based on our requirements.
  - Attributes:

CURLYLINGRUA	SHRIVIMODHA	CURINGENERAL
Attribute	Description	
Prepared By: Ass. Prof Zalak	Thakrar Prepared By: Ass. Prof Zalak Thakr	ar Prepared By: Ass. Prof Zalak Thakrar
android: id	It is used to uniquely identify the contro	ol
COLLEGE OF I.T - PROBANDAR	COLLEGE OF I.T	Γ- PROBANDAR
android:text	It is used to display the text.	
android:textColor	It is used to shappe the solar of the toy	+
Prepared By: Ass. Prof Zalak T	It is used to change the color of the tex	COLLEGE OF I.T - PROBANDAR
android:gravity	It is used to specify how to align the tex	kt by the view's x and y-axis.
android:textSize	It is used to specify the size of the text.	
COLLEGE OF I.T - PROBANDAR	COLLEGE OF I.T - PROBANDAR	COLLEGE OF I.T - PROBANDAR
android:textStyle	It is used to change the style (bold, itali	c, bolditalic) of text.
SHRI V J MODHA	SHRLV I MODHA	
android:typeface Prepared By: ASS, Prof Zala	It is used to specify the Typeface (norm k inakrar Prepared By: A	al, sans, serif, monospace) for the text. Ass. Prof Zalak Thakrar
android:textColor	It is used to change the color of the tex	t.
COLLEGE OF I.T - PROBANDAR	SHRI V J MODHA	SHRI V J MODHA
android:textColorHighlight	It is used to change the color of text sel	lection highlight. — Prepared by: ASS, Prof Zaiak Thakrar
android:textColorLink	It is used to change the text color of lin	ks.

```
android:fontFamily
                            It is used to specify the fontFamily for the text.
      Example:
 CO
     XML Code:
     <TextView
         android:id="@+id/textView1"
         android:text="Welcome to Tutlane"
SHRI
         android:textColor="#86AD33"
COLL
         android:textSize="20dp"
Pre
         android:textStyle="bold" />
     Java Code
     TextView tv = (TextView)findViewById(R.id.textView2);
```

For Full Code: https://www.tutlane.com/tutorial/android/android-textview-with-examples COLLEG

## 4. DatePicker:

tv.setText("Welcome to Tutlane");

In android, DatePicker is a control that will allow users to select the date by a day, month and year in our application user interface.

Attributes:

SHRI V J MODHA

Attribute	Description	T A A THE ANDRONEST A SERVICE THE
android:id COLLEGE OF I.T - PROBANDAR	It is used to uniquely identify the control	SHRI V J MODHA
android:datePickerMode	It is used to specify datepicker mode eithe	r spinner or calendar
android:background SHRIVJ MODHA	It is used to set the background color for the SHRIVJ MODHA	ne date picker. SHRIVJ MODHA
android:padding	It is used to set the padding for left, right,	top or bottom of the date picker.

```
Example:
```

```
XML Code:
COL
   <DatePicker
                                                                                               ar
        android:id="@+id/datePicker1"
        android:layout_width="wrap_content"
        android:layout height="wrap content"
```

```
android:layout centerHorizontal="true"
         android:layout_marginTop="20dp" />
    Java Code
COL
     picker=(DatePicker)findViewById(R.id.datePicker1);
    btnGet.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
             tvw.setText("Selected Date: "+ picker.getDayOfMonth()+"/"+ (picker.getMonth()
SHRI
    + 1)+"/"+picker.getYear());
          }
         });
```

SHRIV COLLEGE OF I.T - PROBANDAR

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For Full Code: https://www.tutlane.com/tutorial/android/android-datepicker-with-examples

## 5. TimePicker:

- In android, TimePicker is a widget for selecting the time of day, in either 24-hour or AM/PM mode.
- SH Attributes: CO

Prepared By: Ass. Prof Zalak Th	akrar COLLEGE OF I.T - PROBANDAR	COLLEGE OF I.T - PROBANDAR
Attribute	Description	
android:id	It is used to uniquely identify the control	
Prepared By: Ass. Prof Zalak T	hakrar Prepared By: Ass. Prof Zalak Thakrar	Prepared By: Ass. Prof Zalak Thakrar
android:timePickerMode SHRIVJMODHA COLLEGE OF LT-PROBANDAR	SHRI V J MODHA	
android:background	alt is used to set the background color for t	he date picker.
android:padding COLLEGE OF I. I - PKOBANDAK Prepared By: Ass. Prof Zalak Tl	It is used to set the padding for left, right,  COLLEGE OF I.T - PROBANDAR	top or bottom of the date picker. SHKI V J MODHA COLLEGE OF I.T - PROBANDAR

### Example:

```
XML Code:
COL
   <TimePicker
      android:id="@+id/datePicker1"
      android:layout_width="wrap_content"
      android:layout height="wrap content"
      android:timePickerMode="spinner"/>
COL
   Java Code
    TimePicker picker=(TimePicker)findViewById(R.id.timePicker1);
    picker.setIs24HourView(true);
```

For Full Code: https://www.tutlane.com/tutorial/android/android-timepicker-with-examples

SHRIVJ 6. ProgressBar:

- In android, ProgressBar is a user interface control that is used to indicate the progress of an operation. For example, downloading a file, uploading a file.
- Attributes:

SHRI Attribute COLLEGE OF I. I - PRI Prenared Rv: Ass	Descri UBANUAK Prof Zalak Thakrar	ption COLLEGE OF I.T - PROBANDAR	SHKI V J MODHA COLLEGE OF I.T - PROBANDAR
android:id	It is us	ed to uniquely identify the con	trol
SHandroid:ma	It is use	ed to specify the maximum val	COLLEGE OF I. I - PROBANDAR
android:pro	ogress It is us	ed to specify default progress v	
android:ba	ckground lalt is us	ed to set the background color	for a progress bar.
COLLEGE OF 1.1 - FI	leterminate It is us	ed to enable the indeterminate COLLEGE OF I.T-PROBANDAR	e progress mode. SHRI V J MODHA COLLEGE OF I.T - PROBANDAR
android:pa	dding It is us	ed to set the padding for left, r	ight, top or bottom of a progress bar.

```
Example:
```

```
XML Code:
    <ProgressBar
      android:id="@+id/pBar3"
 SH
      style="?android:attr/progressBarStyleHorizontal"
 CO
      android:layout_width="wrap_content"
      android:layout height="wrap content"
      android:minHeight="50dp"
      android:minWidth="250dp"
SHR
      android:max="100"
COL
      android:indeterminate="true"
      android:progress="1"/>
    Java Code:
    pgsBar = (ProgressBar) findViewById(R.id.pBar);
COL
        txtView = (TextView) findViewById(R.id.tView);
        Button btn = (Button)findViewById(R.id.btnShow);
        btn.setOnClickListener(new View.OnClickListener() {
          @Override
          public void onClick(View v) {
```

```
i = pgsBar.getProgress();
              new Thread(new Runnable() {
                 public void run() {
                   while (i < 100) {
SHR
COL
                     i += 1;
                     // Update the progress bar and display the current value in text view
                     hdlr.post(new Runnable() {
                        public void run() {
                          pgsBar.setProgress(i);
                          txtView.setText(i+"/"+pgsBar.getMax());
SHRI
COLL
                       }
Pre
                     });
                     try {
                        // Sleep for 100 milliseconds to show the progress slowly.
 SH
 CO
                        Thread.sleep(100);
                     } catch (InterruptedException e) {
                        e.printStackTrace();
 SHE
              }).start();
 COL
          });
```

For Full Code: <a href="https://www.tutlane.com/tutorial/android/android-progressbar-with-examples">https://www.tutlane.com/tutorial/android/android-progressbar-with-examples</a> Prep

### 7. ListView:

In android, ListView is a ViewGroup that is used to display the list of scrollable of items in multiple rows and the list items are automatically inserted to the list using an adapter.

### Attributes

COLLEGE OF I.T - PROBANDAR	SHRI V J MODHA SHRI V J MODHA
Attribute	Attribute & Description Prepared By: Ass. Prof Zalak Thakrar
android:id	This is the ID which uniquely identifies the layout.
android:divider	This is drawable or color to draw between list items.
android:dividerHeight COLLEGE OF I.T - PROBANDAR Prepared By: Ass. Prof Zalak Thak	This specifies height of the divider. This could be in px, dp, sp, in, or mm.
android:entries  COLLEGE OF I.T - PROBANDAR  Prepared By: Ass. Prof Zalak Thakrar  android:footerDividersEnabled	Specifies the reference to an array resource that will populate the ListView.  COLLEGE OF LI-PROBANDAR  Prenared Ru. Acc Prof Zalak Thakrar  When set to false, the ListView will not draw the divider before each footer view. The default value is true.

android:headerDividersEnabled

When set to false, the ListView will not draw the divider after each header view. The default value is true.

#### SH -Example:

```
XML Code:
<ListView
   android:id="@+id/mobile list"
   android:layout_width="match_parent"
   android:layout height="wrap content" >
</ListView>
Java Code:
ListView listView = (ListView) findViewById(R.id.mobile_list);
listView.setAdapter(adapter);
```

For Full Code: https://www.tutlane.com/tutorial/android/android-listview-with-examples

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## 8. GridView:

- In android, Grid View is a ViewGroup that is used to display items in a two dimensional, scrollable grid and grid items are automatically inserted to the gridview layout using a list adapter.
- Android Adapter
- In android, Adapter will act as an intermediate between the data sources and adapter views such as ListView. Gridview to fill the data into adapter views.

Adapter	Description	Prepared by: Ass. Prof Zalak I nakrar
•	v	roparoa syrraon rior salat riatear
ArrayAdapter COLLEGE OF I.T - P	It will expect an Array or List as in	
CurosrAdapter <sup>6</sup>	It will accept an instance of a curs	or as an input.
SimpleAdapter	It will accept a static data defined	in the resources.
SHRI V J MODHA	SHRI V J MODHA	SHRI V J MODHA
	It is a generic implementation for all three adapter types and it can be used	
rrepared by: AS	for ListView, Gridview or Spinners based on our requirements	
SHRI V J MODE	A	SHRI V J MODHA

Example:

```
SHRIVJMIXML Code:
COLLEGE
       <GridView xmlns:android="http://schemas.android.com/apk/res/android"
                                                                                           hakrar
         android:id="@+id/gridview"
         android:layout width="match parent"
         android:layout height="match parent"
```

```
android:columnWidth="110dp"
          android:numColumns="auto_fit"
          android:verticalSpacing="10dp"
          android:horizontalSpacing="10dp"
SHRIVJM
COLLEGE
          android:stretchMode="columnWidth"
Prepare
                                                                                                 krar
          android:gravity="center" />
    SHRI
    COL
        Java Code:
SHRIVJMC GridView gv = (GridView) findViewById(R.id.gvDetails);
COLLEGE
             gv.setAdapter(new ImageAdapter(this));
Prepare
             gv.setOnItemClickListener(new AdapterView.OnItemClickListener() {
                                                                                                 ıakrar
               public void onItemClick(AdapterView<?> parent, View v, int position, long id) {
                 Toast.makeText(MainActivity.this, "Image Position: " + position,
 SHRIVJ
 COLLEGE Toast.LENGTH_SHORT).show();
 Prepai
               }
             });
    SHF
    CC
```

For Full Code: https://www.tutlane.com/tutorial/android/android-gridview-with-examples

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## <sup>∞</sup>9. RadioGroup:

In android, Radio Group is used to group one or more <u>radio buttons</u> into separate groups based on our requirements.

Attributes:

Attribute	Description
android:checkedButton	This is the id of child radio button that should be checked by default within this
Prepared By: Ass. Pro	radio group.

Inherited from android.view.View Class -

n	COLLEGE OF LT - PROBANDAR	COLLEGE OF LT. PROPANDAR
Sr.No.	Attribute & Description	
1 SHRI V J MODE	android:background	
COLLEGE OF I. Prepared By	This is a drawable to use as the background.	ггерагеα by: Ass. ггот дагак тпакгаг
	candroid:contentDescription	
Prepare	This defines text that briefly describes content of the viev	v.
HRI 3	A android:id	
	This supplies an identifier name for this view	Prepared By: Ass. Prof Zalak Thakr.
4	android:onClick	

		This is the name of the method in this View's context to invoke when the view is clicked.	
	5	android:visibility	
COL	LEGE OF I.T	This controls the initial visibility of the view.	

Example:

```
Java Code:
radioSexGroup=(RadioGroup)findViewById(R.id.radioGroup);
   btnDisplay=(Button)findViewById(R.id.button);
   btnDisplay.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
      int selectedId=radioSexGroup.getCheckedRadioButtonId();
      radioSexButton=(RadioButton)findViewById(selectedId);
      Toast.makeText(MainActivity.this,radioSexButton.getText(),Toast.LENGTH_SHORT).show();
    }
   });
XML Code:
< Radio Button
    android:layout width="wrap content"
    android:layout height="55dp"
    android:text="Male"
    android:id="@+id/radioButton"
    android:layout_gravity="center_horizontal"
    android:checked="false"
    android:textSize="25dp" />
```

For Full Code: <a href="https://www.tutlane.com/tutorial/android/android-radiogroup-with-examples">https://www.tutlane.com/tutorial/android/android-radiogroup-with-examples</a>

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## <sup>™</sup> 10.ImageButton:

- In android, Image Button is a user interface control that is used to display a button with an image and to perform an action when a user clicks or taps on it.
- In android, we can add an image to the button by using <ImageButton> attribute android:src in XML layout file or by using the setImageResource() method.

Attrubutes:

COLLEGI

Sr.No		Attribute & Description
1	android:adjustViewBounds	

	Set this to true if you want the ImageView to adjust its bounds to preserve the aspect ratio of its drawable.
2 COLLEG	ı android:baseline
	This is the offset of the baseline within this view.
3 H	RIVINGBIA Liandroid: baseline Align Bottom
Pr	If true, the image view will be baseline aligned with based on its bottom edge.
	MODHA E(android:cropToPadding
Prepar	If true, the image will be cropped to fit within its padding.
5\	u android:src
Prepa	This sets a drawable as the content of this ImageView.

## Inherited from android.view.View Class -

Sr.No	Attribute & Des	cription
IRI V J MODHA	SHRIV I MODHA	
	android:background	SUBIO IMABUA
1	This is a drawable to use as the background.	ks
H2 DD''	android:contentDescription	CUBIVITAGENA
Prepared By	This defines text that briefly describes content o	f the view.
3 GE Prepare	android:id	V J MODRA
HRIVIMODH	This supplies an identifier name for this view	
repared By	android:onClick	
1	This is the name of the method in this View's cor	ntext to invoke when the view is clicked.
5 HRI V J MODH, <sup>2</sup>	android:visibility	
OLLEGE OF I.T - repared By: 2	This controls the initial visibility of the view.	i roparou sy, montroi saian inanidi

- Example:

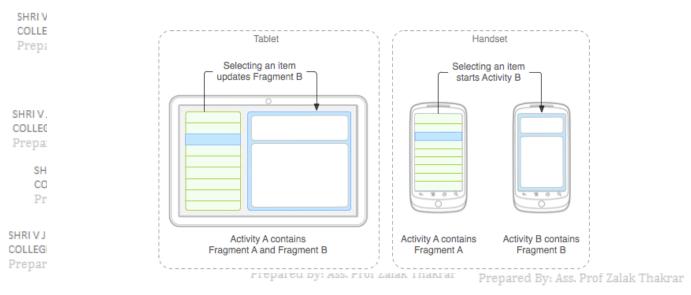
```
XML Code:
SHI CO < ImageButton</p>
    android:id="@+id/addBtn"
    android:layout_width="wrap_content"
    and roid: layout\_height="wrap\_content"
    android:src="@drawable/add_icon"
```

```
android:onClick="addOperation"/>
   Java Code:
   final EditText firstNum = (EditText)findViewById(R.id.firstNum);
       final EditText secNum = (EditText)findViewById(R.id.secondNum);
       ImageButton btnAdd = (ImageButton)findViewById(R.id.addBtn);
       btnAdd.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
SH
CO
            if(firstNum.getText().toString().isEmpty() || secNum.getText().toString().isEmpty())
              Toast.makeText(getApplicationContext(), "Please fill all the fields",
  Toast.LENGTH_SHORT).show();
            }
            else {
              int num1 = Integer.parseInt(firstNum.getText().toString());
              int num2 = Integer.parseInt(secNum.getText().toString());
              Toast.makeText(getApplicationContext(), "SUM = " + (num1 + num2),
   Toast.LENGTH SHORT).show();
         }
       });
```

For Full Code: <a href="https://www.tutlane.com/tutorial/android/android-imagebutton-with-examples">https://www.tutlane.com/tutorial/android/android-imagebutton-with-examples</a>
Prep

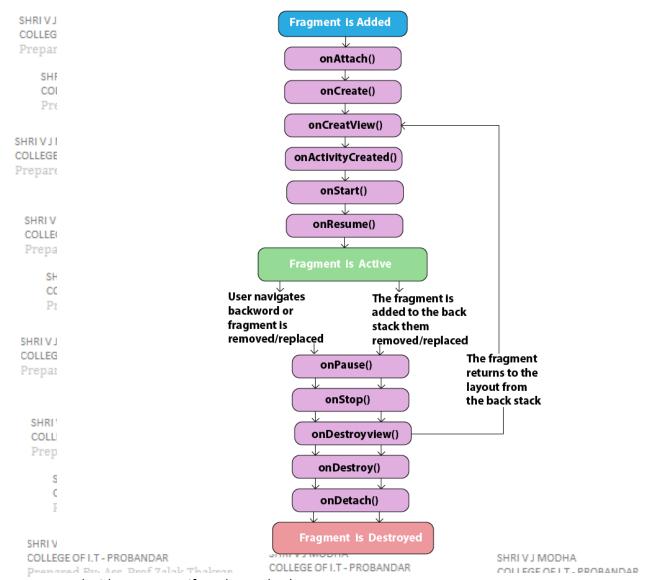
## 11. Fragement:

- Android Fragment is the part of activity, it is also known as sub-activity. There can be more than one fragment in an activity. Fragments represent multiple screen inside one activity.



Android Fragment Lifecycle

- The lifecycle of android fragment is like the activity lifecycle. There are 12 lifecycle methods for fragment.



Android Fragment Lifecycle Methods

	No.	Method	Description
SHF	LEGE 1)	onAttach(Activity)	PROB. it is called only once when it is attached with
Pre	pared By:	Ass. Prof Zalak Thakrar Prepared By: A	ss. Pactivity.
	SHRI 2) I	<sub>DDHA</sub> onCreate(Bundle)	It is used to initialize the fragment.
	Prepared	onCreateView(LayoutInflater,	creates and returns view hierarchy.
	ricparcu	ViewGroup, Bundle)	rrepared by: Ass. Prof Zaiak I пактаг
SHRI	VJM4) A	onActivityCreated(Bundle)	It is invoked after the completion of onCreate()
Pre			-PRC method.
	5)	onViewStateRestored(Bundle)	It provides information to the fragment that all
			the saved state of fragment view hierarchy has
			been restored.

	6)	onStart()		makes the fragment visible.
	7)	onResume()		makes the fragment interactive.
SHRI	VIM8)	onPause()		is called when fragment is no longer
COLI	EGE OF I.T-	PROBANDAR	COLLEGE OF I.T - PI	interactive.
Prej	9)	onStop()	5.5	is called when fragment is no longer visible.
	SHRI' 10)	DHA on Destroy View ()		allows the fragment to clean up resources.
	Prep 11)	By: onDestroy()		allows the fragment to do final clean up of
				fragment state.
		PROB onDetach()	IA	It is called immediately prior to the fragment
	ared By: A	ss. Prof Zalak Thakrar	Prepared By:	Ass. no longer being associated with its activity.

#### Example: COLLEGE OF I.T - PROBANDAR COLLEGE OF I.T - PROBANDAR COLLEGE OF I.T - PROBANDAI Prepared By Listitems info.xml SHRI V J MO COLLEGE OF <?xml version="1.0" encoding="utf-8"?> Prepared <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p> android:orientation="vertical" android:layout\_width="match\_parent" SHRI V J MODHA android:layout height="match parent"> COLLEGE OF I.T -Prepared By: <ListView android:layout\_width="match\_parent" android:layout height="wrap content" SHRI V J MOD android:id="@android:id/list" /> COLLEGE OF I </LinearLayout> ılak Thakrar Prepared By Details info.xml: hakrar Prepared By: Ass. Prof Zalak Thakrar SHRIVJ MODHA<?xml version="1.0" encoding="utf-8"?> COLLEGE OF I.1 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" | DAR Prepared By android:orientation="vertical" android:layout width="match parent"Ass. Prof Zalak Thakrar android:layout\_height="match\_parent" android:background="#0079D6"> SHRI V J MODHA SHRI V J MODHA SHRI V J MODHA <TextView COLLEGE OF LT - PROBANDAR COLLEGE OF I.T. COLLEGE OF I.T - PROBANDAR android:layout\_width="wrap\_content"<sub>ilak Thakrar</sub> Prepared By: Ass. Prof Zalak Thakrar Prepared By: android:layout height="wrap content" SHRIVJMO SHRI V J MODHA android:textColor="#ffffff" android:layout\_marginTop="200px" COLLEGE OF I.T - PROBANDAR COLLEGE O Prepared Prepared By: Ass. Prof Zalak Thakrar android:layout\_marginLeft="200px" SHRI V J MODHA android:id="@+id/Name"/> COLLEGE OF I.T -SHRI V J MODHA <TextView COLLEGE OF I.T - PROBANDAR Prepared By: COLLEGE OF I.T - PROBANDAR android:layout\_width="wrap\_content"Zalak Thakrar Prepared By: Ass. Prof Zalak Thakrar android:layout height="wrap content" android:layout marginLeft="200px" android:textColor="#ffffff"

android:id="@+id/Location"/> </LinearLayout>

```
SHRI V J MODHA
                                                                          SHRI V J MODHA
   DetailFragment.java
                                     COLLEGE OF I.T - PROBANDAR
                                                                          COLLEGE OF I.T - PROBANDAR
                   of 7alak Thakrar
                                     Prepared By: Ass. Prof Zalak Thakrar
                                                                          Prepared By: Ass. Prof Zalak Thakrar
   package com.tutlane.fragmentsexample;
                                                         SHRI V J MODHA
                                                         COLLEGE OF I.T - PROBANDAR
   import android.app.Fragment;
                                                         Prepared By: Ass. Prof Zalak Thakrar
   import android.os.Bundle;
SHRimport android.view.LayoutInflater;
                                         RI V J MODHA
                                                                            SHRI V J MODHA
  Limport android.view.View;
                                       COLLEGE OF I.T - PROBANDAR
                                                                            COLLEGE OF I.T - PROBANDAR
   import android.view.ViewGroup; Prepared By: Ass. Prof Zalak Thakrar
                                                                           Prepared By: Ass. Prof Zalak Thakrar
   import android.widget.TextView;
  HRI V J MODHA
                                      SHRI V J MODHA
                                                                           SHRI V J MODHA
                                      COLLEGE OF I.T - PROBANDAR
   /**3E OF I.T - PROBANDAR
                                                                           COLLEGE OF I.T - PROBANDAR
   * Created by tutlane on 06-08-2017.
                                                                           Prepared By: Ass. Prof Zalak Thakrar
   * HRI V J MODHA
                                                          SHRI V J MODHA
     COLLEGE OF I.T - PROBANDAR
                                                          COLLEGE OF I.T - PROBANDAR
                                                          Prepared By: Ass. Prof Zalak Thakrar
   public class DetailsFragment extends Fragment {
     TextView name, location;
                                        SHRI V J MODHA
     @OverrideBANDAR
                                                                             SHRI V J MODHA
     public View on Create View (Layout Inflater inflater, View Group container, Bundle PROBANDAR
                                                                                       v: Ass. Prof Zalak Thakra
   savedInstanceState) {
       View view = inflater.inflate(R.layout.details_info, container, false);
       name = (TextView)view.findViewById(R.id.Name);AR
                                                                            COLLEGE OF I.T - PROBANDAR
       location = (TextView)view.findViewById(R.id.Location); Thakrar
                                                                            Prepared By: Ass. Prof Zalak Thakrar
       return view;
                                                           SHRI V J MODHA
     COLLEGE OF I.T - PROBANDAR
                                                            COLLEGE OF I.T - PROBANDAR
     public void change(String uname, String ulocation){Prepared By: Ass. Prof Zalak Thakrar
       name.setText(uname);
       location.setText(ulocation);
                                         SHRI V J MODHA
                                                                             SHRLV I MODHA
                                         COLLEGE OF I.T - PROBANDAR
     ared By: Ass. Prof Zalak Thakrar
                                                                             COLLEGE OF I.T - PROBANDAR
                                         Prepared By: Ass. Prof Zalak Thakrar
```

```
SHRI V J MODHA
ListMenuFragment.java:
                                   COLLEGE OF I.T - PROBANDAR
                                                                       COLLEGE OF I.T - PROBANDAR
                                   Prepared By: Ass. Prof Zalak Thakrar Prepared By: Ass. Prof Zalak Thakrar
repared By: Ass. Prof Zalak Thakrar
package com.tutlane.fragmentsexample;
                                                       SHRI V J MODHA
import android.app.ListFragment;
                                                       COLLEGE OF I.T - PROBANDAR
import android.os.Bundle; Thakrar
                                                       Prepared By: Ass. Prof Zalak Thakrar
import android.view.LayoutInflater;
fimport android.view.View;
                                    SHRI V J MODHA
                                                                         SHRI V J MODHA
import android.view.ViewGroup; college of I.T - PROBANDAR
                                                                         COLLEGE OF I.T - PROBANDAR
import android.widget.ArrayAdapter; pared By: Ass. Prof Zalak Thakrar
                                                                         Prepared By: Ass. Prof Zalak Thakrai
import android.widget.ListView;
```

```
* Created by tutlane on 06-08-2017.
  public class ListMenuFragment extends ListFragment {
    String[] users = new String[] { "Suresh", "Rohini", "Trishika", "Praveen", "Sateesh", "Madhav" };
                                                                         COLLEGE OF I.T - PROBANDAR
  String[] location = new String[]{"Hyderabad","Guntur","Hyderabad","Bangalore","Vizag","Nagpur"};
     public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle
  savedInstanceState) {
       View view =inflater.inflate(R.layout.listitems_info, container, false);
       ArrayAdapter<String> adapter = new ArrayAdapter<String>(getActivity(), DHA
                                                                                   FI.T - PROBANDAR
            android.R.layout.simple list item 1, users); zalak Thakrar
                                                                          Prepared By: Ass. Prof Zalak Thakrar
       setListAdapter(adapter);
       return view;
                                     SHRI V J MODHA
                                                                          SHRI V J MODHA
                                     COLLEGE OF I.T - PROBANDAR
    GE OF I.T - PROBANDAR
                                                                         COLLEGE OF I.T - PROBANDAR
    @Override Prof Zalak Thakrar
                                     Prepared By: Ass. Prof Zalak Thakrar
                                                                         Prepared By: Ass. Prof Zalak Thakrar
    public void onListItemClick(ListView I, View v, int position, long id) {
       DetailsFragment txt =
  (Details Fragment) get Fragment Manager (). find Fragment By Id (R. id. fragment 2); \\ {}^{Thal crar}
       txt.change("Name: "+ users[position],"Location : "+ location[position]);
       getListView().setSelector(android.R.color.holo blue dark);
                                                                           SHRLV I MODHA
    red By: Ass. Prof Zalak Thakrar
                                                                           COLLEGE OF I.T - PROBANDAR
                                                                           Prepared By: Ass. Prof Zalak Thakra
 SHRI'V J IVIOU
             Activity main.xml
                                      COLLEGE OF I.T - PROBANDAR
                                                                           COLLEGE OF I.T - PROBANDA
  COLLEGE OF I
                                      Prepared By: Ass. Prof Zalak Thakrar
  Prepared By
             : Ass. Prof Zalak Thakrar
                                                                           Prepared By: Ass. Prof Zalak Thakrar
             <?xml version="1.0" encoding="utf-8"?>
     SHRIVJN
             o<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
     COLLEGE
     Prepared
                xmlns:tools="http://schemas.android.com/tools"By: Ass. Prof Zalak Thakrar
                android:layout width="match parent"
 SHRI V J MODH
                android:layout_height="match_parent"
 COLLEGE OF 1.7
                                                                            SHRLV LMODHA
                android:orientation="horizontal"T-PROBANDAR
                                                                            COLLEGE OF I.T - PROBANDAR
 Prepared By
                tools:context="com.tutlane.fragmentsexample.MainActivity">ared By: Ass. Prof Zalak Thakrar
                <fragment
SHRI V J MODH
                                                                         SHRI V J MODHA
                  android:layout height="match parent"
COLLEGE OF I.T
                                                                         COLLEGE OF I.T - PROBANDAR
                  android:layout_width="350px"ss. Prof Zalak Thakrar
Prepared By:
                                                                         Prepared By: Ass. Prof Zalak Thakrar
                  class="com.tutlane.fragmentsexample.ListMenuFragment"
    SHRIVJMO
                                                         SHRI V J MODHA
                  android:id="@+id/fragment"/>
    COLLEGE O
                                                         COLLEGE OF I.T - PROBANDAR
                <fragmentak Thakrar
    Prepared
                  android:layout width="match parent"
SHRI V J MODHA
                  android:layout height="match parent"
                  class="com.tutlane.fragmentsexample.DetailsFragment"
COLLEGE OF I.T -
Prepared By:
                  android:id="@+id/fragment2"/>ss. Prof Zalak Thakrar
                                                                           Prepared By: Ass. Prof Zalak Thakrar
```

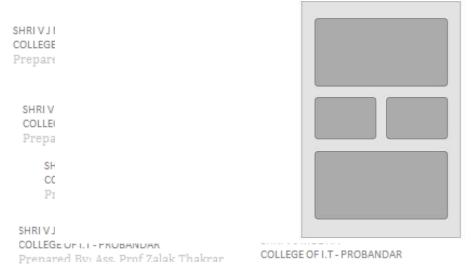
For Full Code: https://www.tutlane.com/tutorial/android/android-fragments-with-examples

</LinearLayout>

## **Designing User Interfaces with Layouts:**

## 1. Relative Layout:

Android RelativeLayout enables you to specify how child views are positioned relative to each other. The position of each view can be specified as relative to sibling elements or relative to the parent.



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- RelativeLayout Attributes:
- Following are the important attributes specific to RelativeLayout -

SHRI	VJMODHA	SHRI V J MODHA	SHRI V J MODHA
Sr.No.	ared By: Ass. Prof Zalak Thakrar	Attribute & Description Prepared by: Ass. Prot Zalak Thakrar	Prepared By: Ass. Prof Zalak Thakrar
1 s	H android:id		
2	This is the ID which uniquely	identifies the layout.	
COLLE	android:gravity	should nosition its content, on bo	th the V and V aves Dessible values
	1	center, center_vertical, center_hor	oth the X and Y axes. Possible values rizontal etc.
3 SHKI V.	nandroid:ignoreGravity		
Prepa		ould not be affected by gravity.	-

Other Important Attribute:

Sr.No.	Attribute & Description
SHRIVJ 1 H	MODHA  CCLT BRODANDAR SHRIVI MODHA  Strivi Modha  Candroid:layout_above
	Positions the bottom edge of this view above the given anchor view ID and must be a reference to another resource, in the form "@[+][package:]type:name"

android:layout_alignBottom
Makes the bottom edge of this view match the bottom edge of the given anchor view ID and SHRIV IN MUST be a reference to another resource, in the form "@[+][package:]type:name".  COLLEGE OF LT - PROBANDAR  COLLEGE OF LT - PROBANDAR
3 android:layout_alignLeft
Makes the left edge of this view match the left edge of the given anchor view ID and must be a Prepreference to another resource, in the form "@[+][package:]type:name".
4 android:layout_alignParentBottom
Prepared If true, makes the bottom edge of this view match the bottom edge of the parent. Must be a boolean value, either "true" or "false".
5 COLLEGE android: layout_alignParentEnd
Prepart If true, makes the end edge of this view match the end edge of the parent. Must be a boolean shr value, either "true" or "false".
6 android:layout_alignParentLeft
SHRIVJ NIf true, makes the left edge of this view match the left edge of the parent. Must be a boolean college value, either "true" or "false".
7 android:layout_alignParentRight
SHRIV: COLLEGIF true, makes the right edge of this view match the right edge of the parent. Must be a boolean Preparvalue, either "true" or "false".
8 android:layout_alignParentStart
If true, makes the start edge of this view match the start edge of the parent. Must be a boolean value, either "true" or "false".
9 android:layout_alignParentTop
If true, makes the top edge of this view match the top edge of the parent. Must be a boolean value, either "true" or "false".
10 GE android:layout_alignRight
Makes the right edge of this view match the right edge of the given anchor view ID and must be a coureference to another resource, in the form "@[+][package:]type:name".
android:layout_alignStart
COLLEGE (Makes the start edge of this view match the start edge of the given anchor view ID and must be a reference to another resource, in the form "@[+][package:]type:name".
12 android:layout_alignTop
Makes the top edge of this view match the top edge of the given anchor view ID and must be a

	reference to another resource, in the form "@[+][package:]type:name".
13	android:layout_below
COLLI Prep	Positions the top edge of this view below the given anchor view ID and must be a reference to
14	android:layout_centerHorizontal
SHRIV	If true, centers this child horizontally within its parent. Must be a boolean value, either "true" or ""false".
15	android:layout_centerInParent
l l	If true, centers this child horizontally and vertically within its parent. Must be a boolean value, Vileither "true" or "false".
16	android:layout_centerVertical Prenared Ru: Ass Prof 7alak Thakrar December Ass December 7alak Thakrar
	SHR COLIf true, centers this child vertically within its parent. Must be a boolean value, either "true" or "false".
17 COLL	android:layout_toEndOf
Prep	Positions the start edge of this view to the end of the given anchor view ID and must be a reference to another resource, in the form "@[+][package:]type:name".
18 00	SHRIVIMODHA CUBIVIMODHA  LLEGandroid:layout_toLeftOf
Pro	Positions the right edge of this view to the left of the given anchor view ID and must be a shifteness to another resource, in the form "@[+][package:]type:name".
19	android:layout_toRightOf
SHR COL Pre	restrictions the left edge of this view to the right of the given anchor view in and must be a
20	android:layout_toStartOf
SHRI COLL Pres	

## Example:

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
 android:layout_width="fill_parent"
 android:layout_height="fill_parent"
 android:paddingLeft="16dp"
 android:paddingRight="16dp" >
 <EditText
  android:id="@+id/name"
   android:layout_width="fill_parent"
```

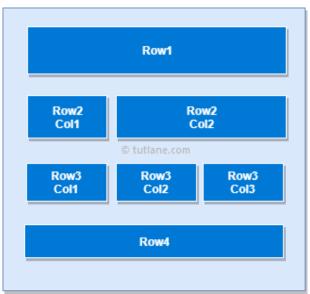
```
android:layout_height="wrap_content"
      android:hint="@string/reminder" />
    <LinearLayout
CO
      android:orientation="vertical"
      android:layout_width="fill_parent"
      android:layout_height="fill_parent"
      android:layout alignParentStart="true"
      android:layout below="@+id/name">
SH
CO
      <Button
       android:layout width="wrap content"
       android:layout_height="wrap_content"
       android:text="New Button"
       android:id="@+id/button" />
      <Button
       android:layout width="wrap content"
       android:layout_height="wrap_content"
       android:text="New Button"
 O(
       android:id="@+id/button2"/>
    </LinearLayout>
   </RelativeLayout>
  Prep
```

For Full Code: https://www.tutlane.com/tutorial/android/android-relativelayout-with-examples

## 2. Table Layout:

In android, TableLayout is a ViewGroup subclass that is used to display the child View elements in rows and columns.





```
Example:
              <?xml version="1.0" encoding="utf-8"?>
              <TableLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
                android:layout width="match parent"
SHRI V J MODHA
COLLEGE OF I.T - P
                android:layout height="match parent"
Prepared By: A
                                                                                            lak Thakrar
                android:layout marginTop="100dp"
    SHRI V J MOD
                android:paddingLeft="10dp"
    COLLEGE OF
                android:paddingRight="10dp" >
    Prepared
                <TableRow android:background="#0079D6" android:padding="5dp">
                  <TextView
SHRI V J MODHA
COLLEGE OF I.T - PF
                     android:layout_width="wrap_content"
Prepared By: As
                     android:layout height="wrap content"
                                                                                             alak Thakrar
                     android:layout weight="1"
                     android:text="UserId" />
 SHRI V J MODHA
 COLLEGE OF I.T
                  <TextView
                     android:layout width="wrap content"
                     android:layout height="wrap content"
    SHRI V J MOI
    COLLEGE OF
                     android:layout weight="1"
     Prepared I
                     android:text="User Name" />
                  <TextView
SHRI V J MODHA
                     android:layout width="wrap content"
 COLLEGE OF I.T -
 Prepared By: A
                     android:layout height="wrap content"
                     android:layout weight="1"
                     android:text="Location" />
  SHRI V J MODH
                </TableRow>
  COLLEGE OF I.
                <TableRow android:background="#DAE8FC" android:padding="5dp">
                                                                                             alak Thakrar
  Prepared By
                  <TextView
     SHRIVJMO
                     android:layout width="wrap content"
     COLLEGE O
                     android:layout height="wrap content"
     Prepared
                     android:layout weight="1"
 SHRI V J MODHA
                     android:text="1"/>
 COLLEGE OF I.T
                  <TextView
                                                                                            NDAR
 Prepared By:
                     android:layout_width="wrap_content"
                                                                                             Zalak Thakrar
                     android:layout height="wrap content"
                     android:layout weight="1"
 SHRI V J MODHA
                     android:text="Suresh Dasari" />
 COLLEGE OF I.T-
                  <TextView
 Prepared By:
                                                                                             ak Thakrar
                     android:layout width="wrap content"
    SHRI V J MO
                     android:layout height="wrap content"
    COLLEGE OF
                     android:layout weight="1"
    Prepared
                     android:text="Hyderabad" />
SHRI V J MODHA
                </TableRow>
COLLEGE OF I.T - F
                <TableRow android:background="#DAE8FC" android:padding="5dp">
Prepared By: A
                  <TextView
                                                                                             alak Thakrar
                     android:layout width="wrap content"
                     android:layout_height="wrap_content"
                     android:layout weight="1"
```

```
android:text="2"/>
                   <TextView
                     android:layout width="wrap content"
                     android:layout height="wrap content"
SHRI V J MODHA
COLLEGE OF I.T -
                     android:layout weight="1"
Prepared By: A
                                                                                             lak Thakrar
                     android:text="Rohini Alavala" />
    SHRI V J MOD
                  <TextView
    COLLEGE OF
                     android:layout_width="wrap_content"
    Prepared
                     android:layout height="wrap content"
                     android:layout weight="1"
SHRI V J MODHA
COLLEGE OF I.T - PR
                     android:text="Guntur" />
Prepared By: As
                </TableRow>
                                                                                              alak Thakrar
                <TableRow android:background="#DAE8FC" android:padding="5dp">
                  <TextView
 SHRI V J MODHA
 COLLEGE OF I.T.
                     android:layout width="wrap content"
                     android:layout height="wrap content"
                     android:layout weight="1"
    SHRI V J MOI
    COLLEGE OF
                     android:text="3" />
     Prepared I
                  <TextView
                     android:layout width="wrap content"
SHRI V J MODHA
                     android:layout height="wrap content"
 COLLEGE OF I.T -
 Prepared By: A
                     android:layout weight="1"
                     android:text="Trishika Dasari" />
                  <TextView
  SHRI V J MODH
                     android:layout width="wrap content"
  COLLEGE OF I.
                     android:layout height="wrap content"
  Prepared By
                     android:layout weight="1"
     SHRIVJMO
                     android:text="Guntur" />
      COLLEGE O
      Prepared
                </TableRow>
              </TableLayout>
  SHRIV
```

For Full Code: <a href="https://www.tutlane.com/tutorial/android/android-tablelayout-with-examples">https://www.tutlane.com/tutorial/android/android-tablelayout-with-examples</a>

## 3. Linear Layout:

one by one either in Horizontal direction or Vertical direction based on the orientation property.

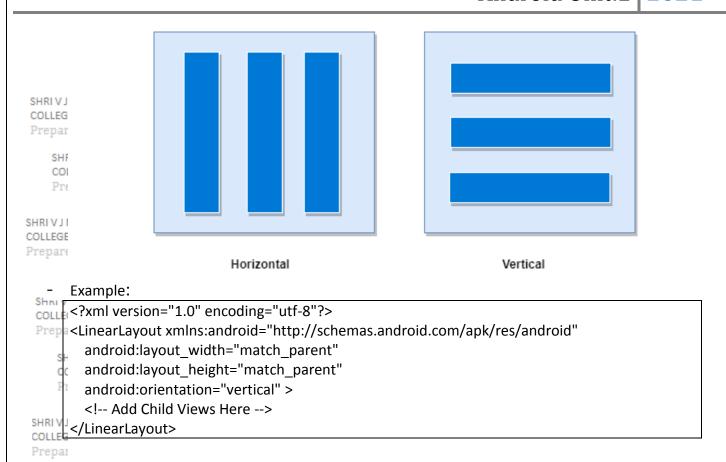
SHRIVJ MODHA COLLEGE OF I.T - PROBANDAR Prepared By: Ass. Prof Zalak Thakrar

SHRIVJ MODHA COLLEGE OF I.T - PROBANDAR Prepared By: Ass. Prof Zalak Thakrar

SHRIVJ MODHA
COLLEGE OF I.T - PROBANDAR
Prenared By: Ass. Prof Zalak Thakrar

SHRIVJ MODHA COLLEGE OF I.T - PROBANDAR Prepared By: Ass. Prof Zalak Thakrar

SHRIVJ MODHA COLLEGE OF I.T - PROBANDAR Prepared By: Ass. Prof Zalak Thakrar

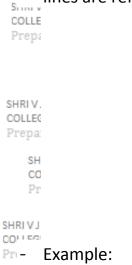


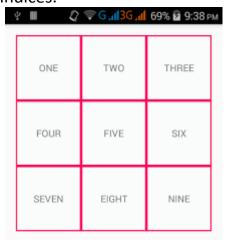
- **For Full Code:** <a href="https://www.tutlane.com/tutorial/android/android-linearlayout-with-examples">https://www.tutlane.com/tutorial/android/android-linearlayout-with-examples</a>

COLL

## 4. **GridLayout:**

- It is a layout that places its children in a rectangle grid. The grid is composed of a set of infinitely thin lines that separate the viewing area into cells. Through the API, grid lines are referenced by grid indices.





<GridLayout Pared By: Ass. Prof Zalak Thakrar

#### android:id="@+id/grid layout" android:layout\_width="match\_parent" SHRI V J MODHA J MODHA 3E OF I.T - PROBANDAR COLLEGE OF I.T - PROBANDAR Prepared By: Ass. Prof Zalak Thak android:layout height="match parent" red By: Ass. Prof Zalak Thakrar SHRI V J MODHA COLLEGE OF I.T - PROBANDAR android:columnCount="2" Prepared By: Ass. Prof Zalak T ak Thakrar android:layout\_margin="80dp"> SHRI V J MODHA COLLEGE OF I.T - PROBANDAR V J MODHA Prepared By: Ass. Prof Zalak Thakr EGE OF I.T - PROBANDAR <TextView ared By: Ass. Prof Zalak Thakrar android:id="@+id/textView" android:layout width="wrap content" SHRI V J MODHA / J MODHA android:layout height="wrap content" COLLEGE OF I.T - PROBANDAR GE OF I.T - PROBANDAR Prepared By: Ass. Prof Zalak Thas android:text="User Name:" /> SHRI V J MODHA <EditText COLLEGE OF I.T - PROBANDAR Prepared By: Ass. Prof Zalak I android:id="@+id/textview\_user\_name" alak Thakrar android:layout width="wrap content" SHRI V J MODHA android:layout\_height="wrap\_content" COLLEGE OF I.T - PROBANDAR N V J MODHA android:ems="10" Prepared By: Ass. Prof Zalak Thak LEGE OF I.T - PROBANDAR android:inputType="textPersonName" ared By: Ass. Prof Zalak Thakrar android:hint="Input user name " /> SHRI V J MODHA V J MODHA LEGE OF I.T - PROBANDAR COLLEGE OF I.T - PROBANDAR <TextView oared By: Ass. Prof Zalak Thakrar Prepared By: Ass. Prof Zalak Tha android:id="@+id/textView2" android:layout\_width="wrap\_content" SHRI V J MODHA COLLEGE OF I.T - PROBANDAR android:layout height="wrap content" Prepared By: Ass. Prof Zalak android:text="Password:" /> SHRI V J MODHA <EditText COLLEGE OF I.T - PROBANDAR IRI V J MODHA android:id="@+id/edittext password" Prepared By: Ass. Prof Zalak Thal LEGE OF I.T - PROBANDAR android:layout width="wrap content" pared By: Ass. Prof Zalak Thakrar android:layout\_height="wrap\_content" android:ems="10" SHRI V J MODHA MODHA android:inputType="textPassword" /> COLLEGE OF I.T - PROBANDAR E OF I.T - PROBANDAR Prepared By: Ass. Prof Zalak Thal red By: Ass. Prof Zalak Thakrar <Button SHRI V J MODHA android:id="@+id/button add password" COLLEGE OF I.T - PROBANDAR android:layout\_width="match\_parent" Prepared By: Ass. Prof Zalak lak Thakrar android:layout\_height="wrap\_content" android:text="Add Password" SHRI V J MODHA android:layout columnSpan="2" COLLEGE OF I.T - PROBANDAR I V J MODHA LEGE OF I.T - PROBANDAR Prepared By: Ass. Prof Zalak Thak android:textAllCaps="false"/> pared By: Ass. Prof Zalak Thakrar <Button

android:id="@+id/button\_login"

```
android:layout_width="match_parent"
                                    android:layout_height="wrap_content"
                                    android:text="Login"
                                    android:layout columnSpan="2"
SHRI V J MODHA
                                                                                J MODHA
COLLEGE OF I.T - PROBANDAR
                                                                                3E OF I.T - PROBANDAR
                                    android:textAllCaps="false"/>
Prepared By: Ass. Prof Zalak Thak
                                                                                red By: Ass. Prof Zalak Thakrar
                                </GridLayout>
   SHRI V J MODHA
```

## Dialogs:

## SHR 1. Android AlertDialog:

COL Pre

- Android AlertDialog can be used to display the dialog message with OK and Cancel buttons. It can be used to interrupt and ask the user about his/her choice to continue or discontinue.
- Android AlertDialog is composed of three regions: title, content area and action buttons.
- Methods of AlertDialog class: P -

Method	Description
public AlertDialog.Builder setTitle(CharSequ	uence) Pr This method is used to set the title of
SHRI V J MODHA	AlertDialog.
public AlertDialog.Builder	DBAND This method is used to set the message for
setMessage(CharSequence)	Prof AlertDialog.
public AlertDialog.Builder setIcon(int)	This method is used to set the icon over
COLLEGE OF I.T - PROBANDAR COLLEGE O	FI.T-PROBAND AlertDialog.
Prepared By: Ass. Prof Zalak Thakrar Prepared	By: Ass. Prof Zaiak Thakrar Prepared By: Ass. Prof Zaiak Thakrar

Example:

```
COLLEGE OF I.T - PROBANDAR
                                                          COLLEGE OF I.T - PROBANDAR
               closeButton = (Button) findViewById(R.id.button);
 SHRIV J MODHA builder = new AlertDialog.Builder(this);
 Prepared By: A closeButton.setOnClickListener(new View.OnClickListener() {
               @Override
               public void onClick(View v) {
SHRIV
COLLEG
Prepared By: As //Uncomment the below code to Set the message and title from the strings.xml file are
    SHRIVI MODI builder.setMessage(R.string.dialog_message) .setTitle(R.string.dialog_title);
    COLLEGE OF I.
    Prepared By
               //Setting message manually and performing action on button click
SHRI V J MODHA
COLLEGE OF I.T-PR builder.setMessage("Do you want to close this application ?")
Prepared By: Ass.setCancelable(false)
                                                                                                      hakrar
               .setPositiveButton("Yes", new DialogInterface.OnClickListener() {
               public void onClick(DialogInterface dialog, int id) {
```

```
finish();
                Toast.makeText(getApplicationContext(), "you choose yes action for alertbox",
                Toast.LENGTH SHORT).show();
SHRI V J MODHA
COLLEG
Prepar
                                                                                                           trar
    SHR<sub>1</sub> v J IVIODIT
    COLLEGE OF I.1. setNegativeButton("No", new DialogInterface.OnClickListener() {
    Prepared By
                public void onClick(DialogInterface dialog, int id) {
SHRIVJIMODHA // Action for 'NO' Button
COLLEGE OF I.T - PRO
Prepared By: Ass. dialog.cancel();
                                                                                                           ıakrar
                Toast.makeText(getApplicationContext(),"you choose no action for alertbox",
 SHRIV MODHA TOAST.LENGTH_SHORT).show();
 COLLEGE OF I.T - P
 Prepared By: A:
                                                                                                           krar
     SHRIVJ MOD });
     COLLEGE OF I // Creating dialog box
                AlertDialog alert = builder.create();
SHRIVJ MODHA //Setting the title manually
 COLLEGE OF I.T - PR
 Prepared By: As alert.setTitle("AlertDialogExample");
                alert.show();
  SHRI V J MODHA
  COLLEGE OF I.T- });
```

- For Full Code: <a href="https://www.javatpoint.com/android-alert-dialog-example">https://www.javatpoint.com/android-alert-dialog-example</a>

## 2. Custom DialogBox:

- Custom\_Layout.xml:

```
Prepared By: Ass. Prof Zala <?xml version="1.0" encoding="utf-8"?>
                                                                                             FI.T-PROBANDAR
                            <LinearLayout
                              xmlns:android="http://schemas.android.com/apk/res/android"
                              android:orientation="vertical"
                              android:paddingLeft="20dp"
SHRI V J MODHA
                              android:paddingRight="20dp"
COLLEGE OF I.T - PROBANDAR
                                                                                             - PROBANDAR
                              android:layout width="match parent"
Prepared By: Ass. Prof Zalak
                                                                                             : Ass. Prof Zalak Thakrar
                              android:layout_height="match_parent">
    SHRI V J MODHA
    COLLEGE OF I.T - PROBANDA
                              <EditText
    Prepared By: Ass. Prof
                                android:id="@+id/editText"
                                 android:layout_width="match_parent"
SHRI V J MODHA
                                 android:layout_height="wrap_content"/>
COLLEGE OF I.T - PROBANDAR
                                                                                           DHA
                            </LinearLayout>
```

Activity\_Main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<LinearLayout
                                xmlns:android="http://schemas.android.com/apk/res/android"
                                xmlns:app="http://schemas.android.com/apk/res-auto"
                                xmlns:tools="http://schemas.android.com/tools"
SHRI V J MODHA
                                android:layout width="match parent"
                                                                                               - PROBANDAR
COLLEGE OF I.T - PROBANDAR
                                android:layout_height="match_parent"
Prepared By: Ass. Prof Zalak
                                android:gravity="center"
                                android:id="@+id/root"
    SHRI V J MODHA
    COLLEGE OF I.T - PROBANDAF
                                android:orientation="vertical"
    Prepared By: Ass. Prof Za
                               tools:context=".MainActivity">
                                                                                             hakrar
                                <Button
SHRI V J MODHA
COLLEGE OF I.T - PROBANDAR
                                  android:layout width="match parent"
                                                                                             DHA(
Prepared By: Ass. Prof Zalak 1
                                  android:layout_height="wrap_content"
                                                                                               I.T - PROBANDAR
                                                                                               ly: Ass. Prof Zalak Thakrar
                                  android:onClick="showAlertDialogButtonClicked"
                                  android:text="Show Dialog"
 SHRI V J MODHA
                                  />
 COLLEGE OF I.T - PROBANDAR
                                                                                               T-PROBANDAR
                             </LinearLayout>
```

```
MainActivity.java:
       package com.example.dialogdemo;
      import androidx.appcompat.app.AlertDialog;
SHRIV
      import androidx.appcompat.app.AppCompatActivity;
COLLE
Prep
       import android.content.DialogInterface;
       import android.os.Bundle;
      import android.view.View;
  SHR
      import android.widget.EditText;
      import android.widget.Toast;
                                                                                                                     krar
       public class MainActivity extends AppCompatActivity {
         @Override
         protected void onCreate(Bundle savedInstanceState) {
 SHRI
           super.onCreate(savedInstanceState);
 COLLE
           setContentView(R.layout.activity main);
         }
         public void showAlertDialogButtonClicked(View view) {
SHRI
           AlertDialog.Builder builder = new AlertDialog.Builder(this);
COLLEG
           builder.setTitle("Name");
Prep
                                                                                                                    rar
           final View customLayout = getLayoutInflater().inflate(R.layout.custom_layout, null);
           builder.setView(customLayout);
           builder.setPositiveButton("OK", new DialogInterface.OnClickListener() {
             @Override
             public void onClick(DialogInterface dialog, int which) {
               EditText editText = customLayout.findViewById(R.id.editText);
SHRIV
               Toast.makeText(getApplicationContext(), editText.getText().toString(), Toast.LENGTH_SHORT).show();
COLLEG
                                                                                                                    akrar
           });
           AlertDialog dialog = builder.create();
           dialog.show();
```

For Full Code: https://www.geeksforgeeks.org/how-to-create-a-custom-alertdialogin-android/

#### **Drawing and Working with Animation** CO

## col1. Frame By Frame Animation:

Prepar

```
Activity main.xml:
SHR<sub>I</sub> v.
      <?xml version="1.0" encoding="utf-8"?>
COLLEG
       <androidx.constraintlayout.widget.ConstraintLayout
Prepa
       xmlns:android="http://schemas.android.com/apk/res/android"
         xmlns:app="http://schemas.android.com/apk/res-auto"
         xmlns:tools="http://schemas.android.com/tools"
 SHRI
         android:layout_width="match_parent"
 COLL
          android:layout height="match parent"
          tools:context=".MainActivity">
          <ImageView
            android:id="@+id/imageview animation list filling"
            android:layout_width="wrap_content"
 SHRIV
            android:layout_height="wrap_content"
 COLLEG
            android:background="@drawable/animation list filling"
 Prep:
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout constraintEnd toEndOf="parent"
            app:layout constraintHorizontal bias="0.498"
  SHR
            app:layout_constraintStart_toStartOf="parent"
   COI
            app:layout_constraintTop_toTopOf="parent"
            app:layout_constraintVertical_bias="0.259" />
          <ImageView
            android:id="@+id/imageview_animation_list_emptying"
            android:layout_width="wrap_content"
            android:layout height="wrap content"
  SHRI
            android:background="@drawable/animation list emptying"
  COLL
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout constraintEnd toEndOf="parent"
            app:layout_constraintHorizontal_bias="0.498"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toTopOf="parent"
 SHRI
 COLL
            app:layout_constraintVertical_bias="0.706" />
 Prep
        </androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.Java:

```
package com.example.framebyframeanimationdemo;
SHRIV
COLLE
      import androidx.appcompat.app.AppCompatActivity;
      import android.graphics.drawable.AnimationDrawable;
      import android.os.Bundle;
      import android.widget.ImageView;
```

```
public class MainActivity extends AppCompatActivity {
         @Override
         protected void onCreate(Bundle savedInstanceState) {
SHRIV
           super.onCreate(savedInstanceState);
COLLEG
           setContentView(R.layout.activity_main);
                                                                                                       ıakrar
Prep:
           ImageView mImageViewFilling = (ImageView) findViewById(R.id.imageview_animation_list_filling);
           ((AnimationDrawable) mlmageViewFilling.getBackground()).start();
    C
           ImageView mlmageViewEmpty = (ImageView) findViewById(R.id.imageview_animation_list_emptying);
           ((AnimationDrawable) mlmageViewEmpty.getBackground()).start();
SHRIV.
COLLEGE
Prepa
       Animation_list_filling.xml:
      <?xml version="1.0" encoding="utf-8"?>
       <animation-list xmlns:android="http://schemas.android.com/apk/res/android"
         android:oneshot="false">
         <item
           android:duration="500"
           android:drawable="@drawable/ic_heart_0"/>
 SHRIV
 COLLE
         <item
 Prep:
           android:duration="500"
           android:drawable="@drawable/ic heart 25"/>
  SHR
         <item
  COL
           android:duration="500"
           android:drawable="@drawable/ic_heart_50"/>
         <item
           android:duration="500"
           android:drawable="@drawable/ic_heart_75"/>
  SHRI
         <item
  COLLE
           android:duration="500"
           android:drawable="@drawable/ic_heart_100"/>
       </animation-list>
 SHRIV.
 CC
       Animation_list_emptying.xml:
       <?xml version="1.0" encoding="utf-8"?>
      android:oneshot="false">
         <item
           android:duration="500"
SHRIV.
COLLEG
           android:drawable="@drawable/ic_heart_100"/>
Prepa
         <item
           android:duration="500"
           android:drawable="@drawable/ic_heart_75"/>
```

```
<item
           android:duration="500"
           android:drawable="@drawable/ic_heart_50"/>
SHRIVJ
COLLEG
           android:duration="500"
Prepa
           android:drawable="@drawable/ic heart 25"/>
    COL
         <item
           android:duration="500"
           android:drawable="@drawable/ic_heart_0"/>
SHRIVJ
COLLEGE </animation-list>
Prepare
```

For Full Code: https://www.bignerdranch.com/blog/frame-animations-in-android/

```
SHRIV 2. Twined Animation
```

COLLEGE OF Fade In

**Fade Out** 

**COLLEG** Cross Fading

Prepa Blink

SHRIVJ MOI Zoom In **COLLEGE OF Zoom Out** 

Prepared I Rotate

Move

SHRIVJM Slide Up

COLLEGE C Prepared Slide Down

## **Tween Animation**

- In android, Animations are used to change the appearance and behavior of the objects over a particular interval of time. The animations will provide a better look and feel high-quality user interface for our applications.
- We need to create an XML file that defines the type of animation to perform in a new folder anim under res directory (res 2 anim 2 animation.xml) with the required properties. In case, anim folder not exists in res directory, create a new one.
- Following is the example of creating XML files under anim folder to define slide up / down animation properties. COLLEG

Prepared By: Ass. Prof Zalak Thakrar Prepared by: Ass. Prof Zalak Thakrar Prepared By: Ass. Prof Zalak Thakrar

SHRI V J MODHA

COLLEGE OF I.T - PROBANDAR

Prepared By: Ass. Prof Zalak Thakrar

COLLEGE OF I.T - PROBANDAR

SHRI V J MODHA

Prepared By: Ass. Prof Zalak Thakrar

SHRI V J MODHA

COLLEGE OF I.T - PROBANDAR

Prepared By: Ass. Prof Zalak Thakrar

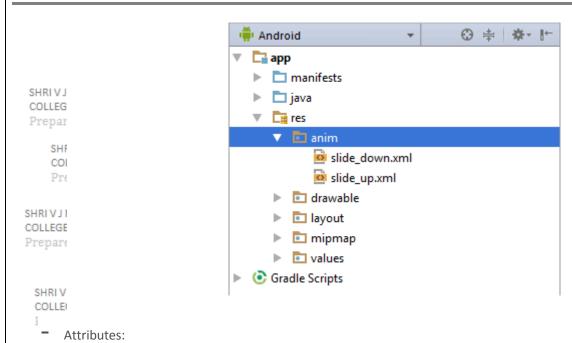
SHRI V J MODHA COLLEGE OF I.T - PROBANDAR

Prepared By: Ass. Prof Zalak Thakrar

SHRI V J MODHA

COLLEGE OF I.T - PROBANDAR

Prepared By: Ass. Prof Zalak Thakrar



Attributes Description android:duration

COLLEGE OF I.T - PROBANDAR

It is used to define the duration of the animation to complete.

SHRI V J MODHA

android:startOffset It is used to define the waiting time before the animation starts. COLLEGE OF I.T - PROBANDAR Prepared By: Ass. Pr

android:interpolator It is used to define the rate of change in animation.

SHRLV LMODHA

android:repeatMode la It is useful when we want to repeat our animation. of Zalak Thakrar Prepared By: Ass. Prof Zalak Thakrar Prepared By: Ass. Prof Zalak Thakrar Prepared By: Ass. I

android:repeatCount It is used to define the number of times the animation repeats. In case if we set infinite, the animation will repeat infinite times.

COLLEGE OF I.T - F Prepared By: A

COLLEGE OF I. I - PROBANDAR s. Prof Zalak Thakrar Prepared By: Ass. Prof Zalak Thakr It is used to define whether to apply animation transformation after the animation completes or

android:fillAfter SHRI V J MODHA

SHRI V J MODHA

COLLEGE OF I.T - PROBANDAR

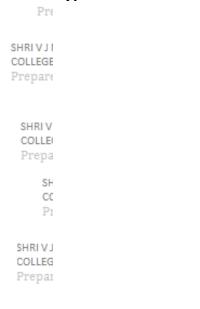
SHRI V J MODHA COLLEGE OF LT - PROBANDAR

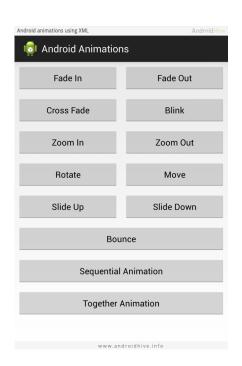
### Methods:

	Sr.No	Method & Description	]
SHRIVJ MODHA COLLEGE OF I.T - PROI Prepared By: Ass. I SHRIVJ MODHA	1 Prof Zalak	560.5()	NDAR of Zalak Thakrar
COLLEGE OF I.T - Prepared By: A	_	R	
SHRI V J MODHA		This method sets the duration of an animation.	
Prepared By: Ass. P		T getDuration()	BANDAR Prof Zalak Thakrar
		This method gets the duration which is set by above method	LINI THINK I HAVIAL
	4	end()	

		This method ends the animation.		
	5	cancel()		
SHRI V J MODHA COLLEGE OF I.T - PROB		This method cancels the animation.		IDAR

## - Types Of Animation:





# SHRIVIM Fade In:

For fade in animation you can use <alpha> tag which defines alpha value. Fade in animation is nothing but increasing alpha value from 0 to 1.

```
COLLEGE OF I.T - I fade in.xml
     Prepared By: <?xml version="1.0" encoding="utf-8"?>
                   <set xmlns:android="http://schemas.android.com/apk/res/android"
SHRI V J MODHA
                      android:fillAfter="true" >
COLLEGE OF I.T - PROB/
Prepared By: Ass.
                                                                                               ROBANDAR
                                                                                                  Prof Zalak Thakrar
                      <alpha
                        android:duration="1000"
                        android:fromAlpha="0.0"
SHRI V J MODHA
                        and roid: interpolator = "@and roid: anim/accelerate\_interpolator" \downarrow_{\texttt{NDAR}}
COLLEGE OF I.T - PROBA
                        android:toAlpha="1.0" />
Prepared By: Ass. P
                                                                                                 of Zalak Thakrar
   SHRI V J MODHA
   COLLEGE OF I.T - PR </set>
```

### ii. Fade Out:

Fade out is exactly opposite to fade in, where we need to decrease the alpha value from 1 to 0

```
Prepared By: Ass. Prof Zalak Thakrar

COLLEGE OF I.T - PROBANDAR

Prepared Ry: Ass. Prof Zalak Thakrar

fade_out.xml

<?xml version="1.0" encoding="utf-8"?>

<set xmlns:android="http://schemas.android.com/apk/res/android"
```

```
android:fillAfter="true" >
                      <alpha
                        android:duration="1000"
SHRI V J MODHA
COLLEGE OF I.T - PROBA!
                                                                                             NDAR
                        android:fromAlpha="1.0"
Prepared By: Ass. Pro
                        android:interpolator="@android:anim/accelerate interpolator"
    SHRI V J MODHA
                        android:toAlpha="0.0" />
    COLLEGE OF I.T - PR
    Prepared By: As
                    </set>
SHRI V J MODHA
COLLEGE OF 1.
               Cross Fading:
       Cross fading is performing fade in animation while other element is fading out. For this you don't
       have to create separate animation file, you can just use fade in.xml and fade out.xml files.
       In the following code i loaded fade in and fade out, then performed them on two different UI
       elements.
     SHRI V J MODHA
     COLLEGE OF I.T. TextView txtView1, txtView2;
     Prepared By: Animation animFadeIn, animFadeOut;
SHRI V J MODHA
 COLLEGE OF I.T - PRO
                  // load animations
                                                                                             BANDAR
 Prepared By: Ass.
                  animFadeIn = AnimationUtils.loadAnimation(getApplicationContext(),
                           R.anim.fade in);
  SHRI V J MODHA
                  animFadeOut = AnimationUtils.loadAnimation(getApplicationContext(),
  COLLEGE OF I.T - PE
                           R.anim.fade out);
                                                                                               of Zalak Thakrar
  Prepared By: As
      SHRI V J MODE
      COLLEGE OF I
                  // set animation listeners
      Prepared By
                  animFadeIn.setAnimationListener(this);
                  animFadeOut.setAnimationListener(this);
  SHRI V J MODHA
  COLLEGE OF I.T - PRO
                                                                                             JBANDAR
  Prepared By: Ass
                  // Make fade in elements Visible first
                  txtMessage2.setVisibility(View.VISIBLE);
 SHRI V J MODHA
 COLLEGE OF I.T - PRO
                                                                                               DAR
 Prepared By: Ass
                                                                                               Zalak Thakrar
                  // start fade in animation
                  txtMessage2.startAnimation(animFadeIn);
    SHRI V J MODHA
    COLLEGE OF I.T
    Prepared By:
                  // start fade out animation
                  txtMessage1.startAnimation(animFadeOut);
SHRI V J MODHA
COLLEGE OF I.T - P
Prepared B
       Blink animation is animating fade out or fade in animation in repetitive fashion. For this you will
```

have to set android:repeatMode="reverse" and android:repeatCount attributes.

Prepared By: Ass. Prof. Zalak Thakrar

blink.xml

```
<?xml version="1.0" encoding="utf-8"?>
                 <set xmlns:android="http://schemas.android.com/apk/res/android">
                   <alpha android:fromAlpha="0.0"
                      android:toAlpha="1.0"
SHRI V J MODHA
COLLEGE OF I.T - PROBA
                     android:interpolator="@android:anim/accelerate_interpolator"
Prepared By: Ass. Pr
                      android:duration="600"
   SHRI V J MODHA
                      android:repeatMode="reverse"
   COLLEGE OF I.T - PR
                      android:repeatCount="infinite"/>
   Prepared By: As
                 </set>
```

#### SHRI V J MODHA

#### COLLEGE OF J. Zoom In:

For zoom use <scale> tag. Use pivotX="50%" and pivotY="50%" to perform zoom from the center of the element. Also you need to use from XScale, from YScale attributes which defines scaling of the object. Keep these value lesser than toXScale, toYScale

```
COLLEGE OF I.T-PROE ZOOM_in.xml
Prepared By: Ass.
                   <?xml version="1.0" encoding="utf-8"?>
    SHRI V J MODHA
                   <set xmlns:android="http://schemas.android.com/apk/res/android"
    COLLEGE OF I.T - P
                     android:fillAfter="true" >
    Prepared By: As
                     <scale
SHRI V J MODHA
COLLEGE OF I.T - PROBAL
                       xmlns:android="http://schemas.android.com/apk/res/android"
                                                                                             BANDAR
Prepared By: Ass. P
                        android:duration="1000"
                        android:fromXScale="1"
                        android:fromYScale="1"
 SHRI V J MODHA
                        android:pivotX="50%"
 COLLEGE OF I.T - PROB
                                                                                             BANDAR
                                                                                             rof Zalak Thakrar
 Prepared By: Ass.
                        android:pivotY="50%"
                        android:toXScale="3"
     SHRI V J MODHA
                        android:toYScale="3" >
     COLLEGE OF I.T - F
     Prepared By:
                     </scale>
 SHRI V J MODHA
 COLLEGE OF I.T - PROB. </set>
 Prepared By:
```

#### **Zoom Out:** vi.

Zoom out animation is same as zoom in but toXScale, toYScale values are lesser than fromXScale, fromYScale

```
COLLEGE OF I.T - PROBA ZOOM Out.xml
                                                                                           NDAR
Prepared By: Ass. P <?xml version="1.0" encoding="utf-8"?>
                                                                                           of Zalak Thakrar
                  <set xmlns:android="http://schemas.android.com/apk/res/android"
    SHRI V J MODHA
    COLLEGE OF I.T - PR
                     android:fillAfter="true" >
    Prepared By: As
                     <scale
SHRI V J MODHA
                       xmlns:android="http://schemas.android.com/apk/res/android"
COLLEGE OF I.T - PROBAN
                       android:duration="1000"
                                                                                         DBANDAR
Prepared By: Ass. Pr
                       android:fromXScale="1.0"
                       android:fromYScale="1.0"
                       android:pivotX="50%"
```

)BANDAR

ANDAR

```
android:pivotY="50%"
                        android:toXScale="0.5"
                        android:toYScale="0.5" >
                      </scale>
SHRI V J MODHA
COLLEGE OF I.T - PROBA
                                                                                           NDAR
Prepared By: Ass. P
                                                                                            of Zalak Thakrar
                    </set>
    SHRI V J MOD
    COLLEGE
    Previi.
              Rotate:
       Rotate animation uses <rotate> tag. For rotate animation required tags
       are android:fromDegrees and android:toDegrees which defines rotation angles.
SHR
COL
       Clock wise – use positive to Degrees value
Pre
       Anti clock wise – use negative to Degrees value
                   rotate.xml
 SHRI V J MODHA
                   <?xml version="1.0" encoding="utf-8"?>
 COLLEGE OF I.T - PRO
                  <set xmlns:android="http://schemas.android.com/apk/res/android">
                     <rotate android:fromDegrees="0"</pre>
     SHRI V J MODHA
                       android:toDegrees="360"
     COLLEGE OF I.T - P
                       android:pivotX="50%"
     Prepared By: 1
                       android:pivotY="50%"
                       android:duration="600"
SHRI V J MODHA
```

### sviii. Move:

COLLEGE OF I.T-PRO </set>

COLLEGE OF I.T - PROBA

Prepared By: Ass. F

SHRI V J MODHA

Prepared By:

- In order to change position of object use <translate> tag. It uses fromXDelta, fromYDelta for X-direction and toXDelta, toYDelta attributes for Y-direction.

android:interpolator="@android:anim/cycle\_interpolator"/>

```
move.xml
 SHRI V J MODHA
 COLLEGE OF I.T - PROBAN<?xml version="1.0" encoding="utf-8"?>
                                                                                           ROBANDAR
 Prepared By: Ass. Pr
                       xmlns:android="http://schemas.android.com/apk/res/android"
                       android:interpolator="@android:anim/linear_interpolator"
                       android:fillAfter="true">
SHRI V J MODHA
COLLEGE OF I.T - PROBAN
                                                                                           BANDAR
Prepared By: Ass. Pro
                                                                                            rof Zalak Thakrar
                      <translate
                         android:fromXDelta="0%p"
    SHRI V J MODHA
    COLLEGE OF I.T - PRO
                         android:toXDelta="75%p"
    Prepared By: Ass
                         android:duration="800" />
                    </set>
SHRI V J MODHA
COLLEGE OF I.T - P
```

### Preparedix. Slide Up:

 Sliding animation uses <scale> tag only. Slide up can be achieved by setting android:fromYScale="1.0" and android:toYScale="0.0"

android:repeatMode="restart"

android:repeatCount="infinite"

```
slide_up.xml
```

```
<?xml version="1.0" encoding="utf-8"?>
                    <set xmlns:android="http://schemas.android.com/apk/res/android"
                      android:fillAfter="true" >
SHRI V J MODHA
COLLEGE OF I.T - PROBAN
                                                                                             NDAR
                      <scale
Prepared By: Ass. Pro
                                                                                             of Zalak Thakrar
                        android:duration="500"
    SHRI V J MODHA
                        android:fromXScale="1.0"
    COLLEGE OF I.T - PR
                        android:fromYScale="1.0"
    Prepared By: As
                        android:interpolator="@android:anim/linear_interpolator"
                        android:toXScale="1.0"
SHRI V J MODHA
COLLEGE OF I.T - PROBAN
                        android:toYScale="0.0" />
Prepared By: Ass. Pr
                                                                                            BANDAR
                                                                                             rof Zalak Thakrar
                    </set>
 SHRI V J MODHA
 COLLEGE OF
              Slide Down:
       Slide down is exactly opposite to slide down animation. Just
       interchange android:fromYScale and android:toYScale values.
     COLLEGE OF I.T -
                   slide down.xml
     Prepared By:
                    <?xml version="1.0" encoding="utf-8"?>
                    <set xmlns:android="http://schemas.android.com/apk/res/android"
SHRI V J MODHA
 COLLEGE OF I.T - PROBAL
                      android:fillAfter="true">
                                                                                             BANDAR
 Prepared By: Ass. P.
                      <scale
                        android:duration="500"
  SHRI V J MODHA
                        android:fromXScale="1.0"
  COLLEGE OF I.T - PROE
                                                                                             BANDAR
                                                                                             rof Zalak Thakrar
  Prepared By: Ass.
                        android:fromYScale="0.0"
                        android:interpolator="@android:anim/linear interpolator"
      SHRI V J MODHA
                        android:toXScale="1.0"
      COLLEGE OF I.T - F
      Prepared By:
                        android:toYScale="1.0" />
  SHRI V J MODHA
  COLLEGE OF I.T - PROFU</set>
  Prepared By:
```

#### xi. **Bounce:**

Bounce is just an animation effect where animation ends in bouncing fashion. For this set android:interpolator value to @android:anim/bounce interpolator. This bounce can be used with any kind animation. Following slide down example uses bounce effect.

```
Prepared By: Ass. Pr bounce.xml
                                                                                          of Zalak Thakrar
                  <?xml version="1.0" encoding="utf-8"?>
    SHRI V J MODHA
    COLLEGE OF I.T-PR < set xmlns:android="http://schemas.android.com/apk/res/android"
    Prepared By: As
                     android:fillAfter="true"
                     android:interpolator="@android:anim/bounce_interpolator">
SHRI V J MODHA
COLLEGE OF I.T - PROBAN
                                                                                         DBANDAR
Prepared By: Ass. Pro
                     <scale
                       android:duration="500"
                       android:fromXScale="1.0"
                       android:fromYScale="0.0"
```

```
android:toXScale="1.0"
android:toYScale="1.0" />
shrivj Modha
college Of I.T - P
Prepared Ext. A:
```

## xii. Sequential Animation:

If you want to perform multiple animation in a sequential manner you have to
use android:startOffset to give start delay time. The easy way to calculate this value is to add the
duration and startOffset values of previous animation. Following is a sequential animation where
set of move animations performs in sequential manner.

```
COLLEGE OF I.T - PROBAL
                   sequential.xml
Prepared By: Ass. Pr
                                                                                              ANDAR
                    <?xml version="1.0" encoding="utf-8"?>
                                                                                              rof Zalak Thakrar
                    <set xmlns:android="http://schemas.android.com/apk/res/android"
                      android:fillAfter="true"
 SHRI V J MODHA
 COLLEGE OF I.T - PROBA
                      android:interpolator="@android:anim/linear interpolator" >
     SHRI V J MODHA
                      <!-- Use startOffset to give delay between animations -->
     COLLEGE OF I.T - PF
     Prepared By: As
                      <!-- Move -->
SHRI V J MODHA
COLLEGE OF I.T - PROBAL
                      <translate
                                                                                             BANDAR
Prepared By: Ass. P
                        android:duration="800"
                        android:fillAfter="true"
                        android:fromXDelta="0%p"
  SHRI V J MODHA
                        android:startOffset="300"
                                                                                             BANDAR
  COLLEGE OF I.T - PROE
                                                                                              rof Zalak Thakrar
  Prepared By: Ass.
                        android:toXDelta="75%p" />
                      <translate
      SHRI V J MODHA
                        android:duration="800"
      COLLEGE OF I.T - F
      Prepared By:
                        android:fillAfter="true"
                        android:fromYDelta="0%p"
 SHRI V J MODHA
                        android:startOffset="1100"
 COLLEGE OF I.T - PROBA
                        android:toYDelta="70%p" />
                                                                                             ROBANDAR
 Prepared By: Ass.
                                                                                              . Prof Zalak Thakrar
                      <translate
                        android:duration="800"
                        android:fillAfter="true"
 SHRI V J MODHA
                        android:fromXDelta="0%p"
 COLLEGE OF I.T - PROBA
                                                                                              NDAR
                        android:startOffset="1900"
 Prepared By: Ass. P
                                                                                              of Zalak Thakrar
                        android:toXDelta="-75%p"/>
    SHRI V J MODHA
                      <translate
    COLLEGE OF I.T - PR
    Prepared By: As
                        android:duration="800"
                        android:fillAfter="true"
SHRI V J MODHA
                        android:fromYDelta="0%p"
COLLEGE OF I.T - PROBAN
                        android:startOffset="2700"
                                                                                             DBANDAR
Prepared By: Ass. Pr
                        android:toYDelta="-70%p" />
                      <!-- Rotate 360 degrees -->
                      <rotate
```

```
android:duration="1000"
                        android:fromDegrees="0"
                        android:interpolator="@android:anim/cycle_interpolator"
                        android:pivotX="50%"
SHRI V J MODHA
                                                                                            NDAR
COLLEGE OF I.T - PROBAN
                        android:pivotY="50%"
Prepared By: Ass. Pr
                                                                                            of Zalak Thakrar
                        android:startOffset="3800"
    SHRI V J MODHA
                        android:repeatCount="infinite"
    COLLEGE OF I.T - PR
                        android:repeatMode="restart"
    Prepared By: As
                        android:toDegrees="360" />
SHRI V J MODHA
COLLEGE OF I.T - PROBAN </set>
Prepared By: As
```

#### **Together Animation:** xiii.

Performing all animation together is just writing all animations one by one without using android:startOffset or zarak i nakrar together.xml SHRI V J MODHA <?xml version="1.0" encoding="utf-8"?> Prepared By: As <set xmlns:android="http://schemas.android.com/apk/res/android" android:fillAfter="true" android:interpolator="@android:anim/linear interpolator" > SHRI V J MODHA COLLEGE OF I.T - PROBAL BANDAR Prepared By: Ass. P xmlns:android="http://schemas.android.com/apk/res/android" android:duration="4000" SHRI V J MODHA android:fromXScale="1" COLLEGE OF I.T - PROB Prepared By: Ass. rof Zalak Thakrar android:fromYScale="1" android:pivotX="50%" SHRI V J MODHA COLLEGE OF I.T - F android:pivotY="50%" Prepared By: android:toXScale="4" android:toYScale="4" > SHRI V J MODHA </scale> COLLEGE OF I.T - PROB/ ROBANDAR Prepared By: Ass. . Prof Zalak Thakrar <!-- Rotate 180 degrees --> <rotate android:duration="500" SHRI V J MODHA android:fromDegrees="0" COLLEGE OF I.T - PROBA NDAR Prepared By: Ass. P android:pivotX="50%" of Zalak Thakrar android:pivotY="50%" SHRI V J MODHA android:repeatCount="infinite" COLLEGE OF I.T - PR Prepared By: As android:repeatMode="restart" android:toDegrees="360" /> SHRI V J MODHA COLLEGE OF I.T - PROBAI Prepared By: Ass. Pr </set>

## - Java Code:

package com.example.animationexample;

```
import androidx.appcompat.app.AppCompatActivity;
SHRIV import android.os.Bundle;
import android.view.View;
      import android.view.animation.Animation;
      import android.view.animation.AnimationUtils;
      import android.widget.Button;
      import android.widget.TextView;
COLLEGE public class MainActivity extends AppCompatActivity {
Prepa
        @Override
 SHRI
 COLL
        protected void onCreate(Bundle savedInstanceState) {
          super.onCreate(savedInstanceState);
          setContentView(R.layout.activity main);
          Button btnFadein = findViewById(R.id.btnFadeIn);
          btnFadein.setOnClickListener(new View.OnClickListener() {
             @Override
SHRIV
             public void onClick(View v) {
COLLE
Prep:
               TextView tvAnimation = findViewById(R.id.textView);
               Animation fadin = AnimationUtils.loadAnimation
                   (getApplicationContext(), R.anim.fade in);
  SHR
               tvAnimation.startAnimation(fadin);
  COL
            }
          });
          Button btnFadeout = findViewById(R.id.btnFadeOut);
          btnFadeout.setOnClickListener(new View.OnClickListener() {
             @Override
 SHRI
             public void onClick(View v) {
 COLL
               TextView tvAnimation = findViewById(R.id.textView);
               Animation fadout = AnimationUtils.loadAnimation
                   (getApplicationContext(), R.anim.fade_out);
               tvAnimation.startAnimation(fadout);
 SHRI
 COLLE
          });
 Prep
        }
```

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# **Important Questions**

SHRIVJ COLLEG Prepar

# 1Marks:

	Year	Questions		
	2015	1. List out the types of the Layouts.		
SH	<sub>R</sub> 2016	1.	In Linear Layout set the orientation,is used at runtime?	
CO	LLEGE OF I.T - PROBANI		is not the Layout in android.	
Pr	epared By: Ass. Prof	Zala 3.	Toast is in android.	
	2018	1.	When the user checks the checkbox, the checkbox object receives an	
	UDIVINODUA		event.	
0	2019	NDAR 1.	In which folder animation file is stored?	
	repared By: Ass. Pr	of Za 2.	Which layout is used to arrange control by horizontal or vertical way?	
		3.	What is the name of the textbox control in android?	
	SHRIVJ MODHA	OBAN 4.	What is the name of the label control in android?	
	Expected in	. Pro 1.	Which control is used to display the List of items?	
	2021	2.	Which attribute is used to specify how to align the text by the view's x and	
	HRI V J MODHA		y-axis?	
	DLLEGE OF I.T - PROBAN		is also known as Sub-Activity.	
P	repared By: Ass. Pro	<sup>f Zal</sup> 4.	What is used to display multiple screens inside single Activity?	
		5.	Which lay out allows to set the control as per its constraints?	
		6.	Which layout is used to set the control on the basis of row and column?	
SHRIVJ MODHA COLLEGE OF I.T - PROBANDA 7. What is used to take the confirmations from the users?		What is used to take the confirmations from the users?		
	Prepared By: Ass. P	rof z 8.	Which type of dialog box can be created as per the user's needs & requirements?	
		9.	Define Schemas.	

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# 3/5Marks:

SHRI V Year	Quest	ions	
Prepar 2015	k Th 1.	Explain types of resources in brief.	ar
	2.	List out various types of layouts and Define any one.	
SHRI V J MODHA	3.	Write a note on Spinner widget.	
2016	7 <sub>2</sub> ] <sub>2</sub> ] 1.	Explain progress dialog in android.	
Troparoa by Trost Tot	2.	Explain layouts in android.	
SHRIVJMODHA	3.	Explain date picker in detail.	
COLLEGE OF I.T - PROBANDAR	4.	Explain types of resources in brief.	
Prepared By: Ass. Prof Zalak	Th: 5.	Explain Listview in brief	
	6.	Explain how to notify with Status Bar.	crar
2018	1.	Explain onCreate().	
SHRI V J MODHA COLLEGE OF I.T - PROBANDAR	2.	What is textfield?	
Prepared By: Ass. Prof Zal	<sub>ak T</sub> 3.	Explain Linear layout in details.	car
110111111111111111111111111111111111111	4.	Explain the components available with notifications.	
SHRI V J MODHA	5.	Explain difference between ID & UI.	
2019	DAK 721: 1.	Explain Progressbar Element in android.	
ricparca by Assirio	2.	Explain RadioGroup Element in android.	
SHRI VJ MODHA	3.	Explain Relative layout.	
COLLEGE OF I.T - PROBANDAR	4.	Explain Table Layout.	
Prepared By: Ass. Prof Zala	k Th 5.	Explain Dialog in Android with suitable example.	
	6.	Explain twined animation with suitable example.	ıkrar
Expected in 2021	1.	Explain UI components available in the android & give brief about any 4.	
SHRI V J MODHA	2.	Explain Layouts with its types.	
COLLEGE OF I.T - PROBANDAI Prepared By: Ass. Prof Za	- ≺	Explain Linear Layout	2002
Fichated by: ASS, Prof Za	4.	Explain Grid Layout with its example	grar
SHRI V J MODHA	5.	What is animation? Explain any 4 animations.	

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