1.Create an Android application that shows “Welcome to Android” and run it on the emulator.

*Activity-main.xml*

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout 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"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity"**>  
  
 <**TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Hello World!"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

**MainActivity.java**

**package** com.example.helloworld;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
 }  
}

2.Create an application that displays a dialog window using an activity

*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"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<Button

android:id="@+id/button"

android:layout\_width="132dp"

android:layout\_height="72dp"

android:text="Close app"

tools:layout\_editor\_absoluteX="167dp"

tools:layout\_editor\_absoluteY="339dp" />

</LinearLayout>

MainActivity.java

package com.example.activity;

import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.app.AlertDialog;

import android.widget.Toast;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

Button closeButton;

AlertDialog.Builder builder;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

closeButton = (Button) findViewById(R.id.button);

builder = new AlertDialog.Builder(this);

closeButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

//Uncomment the below code to Set the message and title from the strings.xml file

//builder.setMessage(R.string.dialog\_message) .setTitle(R.string.dialog\_title);

//Setting message manually and performing action on button click

builder.setMessage("Do you want to close this application ?")

.setCancelable(false)

.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();

}

})

.setNegativeButton("No", new DialogInterface.OnClickListener() {

public void onClick(DialogInterface dialog, int id) {

// Action for 'NO' Button

dialog.cancel();

Toast.makeText(getApplicationContext(),"you choose no action for alertbox",

Toast.LENGTH\_SHORT).show();

}

});

//Creating dialog box

AlertDialog alert = builder.create();

//Setting the title manually

alert.setTitle("AlertDialogExample");

alert.show();

}

});

}

}

3.Create an application that displays the progress of an operation

activity\_main.xml

<RelativeLayout xmlns:android="https://schemas.android.com/apk/res/android"

xmlns:tools="https://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity" >

<ProgressBar

android:id="@+id/progressBar"

style="?android:attr/progressBarStyleHorizontal"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentLeft="true"

android:layout\_alignParentTop="true"

android:layout\_marginLeft="23dp"

android:layout\_marginTop="20dp"

android:indeterminate="false"

android:max="100"

android:minHeight="50dp"

android:minWidth="200dp"

android:progress="1" />

<ProgressBar

android:id="@+id/progressBar\_cyclic"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:minHeight="50dp"

android:minWidth="50dp"

android:layout\_centerVertical="true"

android:layout\_centerHorizontal="true" />

<TextView

android:id="@+id/textView"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignLeft="@+id/progressBar"

android:layout\_below="@+id/progressBar"/>

</RelativeLayout>

package com.journaldev.progressbar;

import android.os.Handler;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.widget.ProgressBar;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

private ProgressBar progressBar;

private int progressStatus = 0;

private TextView textView;

private Handler handler = new Handler();

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

progressBar = (ProgressBar) findViewById(R.id.progressBar);

textView = (TextView) findViewById(R.id.textView);

// Start long running operation in a background thread

new Thread(new Runnable() {

public void run() {

while (progressStatus < 100) {

progressStatus += 1;

// Update the progress bar and display the

//current value in the text view

handler.post(new Runnable() {

public void run() {

progressBar.setProgress(progressStatus);

textView.setText(progressStatus+"/"+progressBar.getMax());

}

});

try {

// Sleep for 200 milliseconds.

Thread.sleep(200);

} catch (InterruptedException e) {

e.printStackTrace();

}

}

}

}).start();

}

}

4.Create an application that obtains result from an activity

**activity-main.xml**

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

<RelativeLayout

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"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".Main\_activity">

<EditText

android:id="@+id/send\_text\_id"

android:layout\_width="300dp"

android:layout\_height="wrap\_content"

android:textSize="25dp"

android:hint="Input"

android:textStyle="bold"

android:layout\_marginTop="20dp"

android:layout\_marginLeft="40dp"/>

<Button

android:id="@+id/send\_button\_id"

android:layout\_width="wrap\_content"

android:layout\_height="40dp"

android:text="send"

android:textStyle="bold"

android:layout\_marginTop="150dp"

android:layout\_marginLeft="150dp"/>

</RelativeLayout>

**activity-main2.xml**

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

<RelativeLayout 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"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context="Mainactivity2">

<TextView

android:id="@+id/received\_value\_id"

android:layout\_width="300dp"

android:layout\_height="50dp"

android:textStyle="bold"

android:textSize="40dp"

android:layout\_marginTop="20dp"

android:layout\_marginLeft="40dp"/>

</RelativeLayout>

**Main-activity.java**

import android.content.Intent;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

Button send\_button;

EditText send\_text;

@Override

protected void onCreate(Bundle savedInstanceState)

{

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

send\_button = (Button)findViewById(R.id.send\_button\_id);

send\_text = (EditText)findViewById(R.id.send\_text\_id);

send\_button.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v)

{

String str = send\_text.getText().toString();

Intent intent = new Intent(getApplicationContext(), Mainactivity2.class);

intent.putExtra("message\_key", str);

startActivity(intent);

}

});

}

}

MainActivity2.java

**package** com.example.myapplication6;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.content.Intent;  
**import** android.os.Bundle;  
**import** android.widget.TextView;  
  
**public class** MainActivity2 **extends** AppCompatActivity {  
  
 TextView **receiver\_msg**;  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main2***);  
 **receiver\_msg** = (TextView)findViewById(R.id.***received\_value\_id***);  
  
 *// create the get Intent object* Intent intent = getIntent();  
  
 *// receive the value by getStringExtra() method  
 // and key must be same which is send by first activity* String str = intent.getStringExtra(**"message\_key"**);  
  
 *// display the string into textView* **receiver\_msg**.setText(str);  
 }  
}

5.Create an application that dynamically adds a fragment.

Creating and Using Fragments in Android :

In this example, we are using 2 Fragments in Activity and changing it on Click button.

 Add following Strings in ***app>res>values> strings.xml,*** Always recommend to use the standard way of development. It will be easy to change in the future.

strings.xml

## strings.xml

<resources>

<string name="app\_name">Fragment</string>

<string name="frgone">Fragment One</string>

<string name="frgtwo">Fragment Two</string>

</resources>

Add following Strings in **app>res>values>colors.xml**

Added new colors **bluegray**, **teal** and **white**.

**colors.xml**

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

<resources>

<color name="colorPrimary">#3F51B5</color>

<color name="colorPrimaryDark">#303F9F</color>

<color name="colorAccent">#FF4081</color>

<color name="bluegray">#607d8b</color>

<color name="teal">#009688</color>

<color name="white">#ffffff</color>

</resources>

Create new fragment layout **app>res>layout>”fragment\_own.xml”**

with <TextView> Widget.

**fragment\_own.xml**

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

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:background="@color/teal"

android:gravity="center"

android:orientation="vertical">

<TextView

android:id="@+id/textView"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="@string/frgone"

android:textAppearance="?android:attr/textAppearanceLarge"

android:textColor="@color/white" />

</LinearLayout>

Create new fragment layout **app>res>layout>”fragment\_two.xml”**

## **fragment\_two.xml**

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

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:background="@color/bluegray"

android:gravity="center"

android:orientation="vertical">

<TextView

android:id="@+id/textView2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="@string/frgtwo"

android:textAppearance="?android:attr/textAppearanceLarge"

android:textColor="@color/white" />

</LinearLayout>

Add following line in **app>res>layout> activity\_main.xml**

added <FrameLayout> to show fragment dynamically and 2 button for android fragments transaction.

**activity\_main.xml**

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

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

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:paddingBottom="@dimen/activity\_vertical\_margin"

android:paddingLeft="@dimen/activity\_horizontal\_margin"

android:paddingRight="@dimen/activity\_horizontal\_margin"

android:paddingTop="@dimen/activity\_vertical\_margin"

tools:context="eyehunt.in.fragment.MainActivity">

<LinearLayout

android:id="@+id/ll\_btn"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:weightSum="2">

<Button

android:id="@+id/btn\_frg\_one"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="@string/frgone"/>

<Button

android:id="@+id/btn\_frg\_two"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="@string/frgtwo"/>

</LinearLayout>

<FrameLayout

android:id="@+id/fragment\_container"

android:layout\_below="@id/ll\_btn"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"/>

</RelativeLayout>

 Create new Fragment class**app>src>java>”FragmentOne.java”**

## ****FragmentOne.java****

|  |
| --- |
| ppackage eyehunt.in.fragment; |
|  |  |
|  | import android.app.Fragment; |
|  | import android.os.Bundle; |
|  | import android.view.LayoutInflater; |
|  | import android.view.View; |
|  | import android.view.ViewGroup; |
|  |  |
|  | public class FragmentOne extends Fragment { |
|  |  |
|  | @Override |
|  | public View onCreateView(LayoutInflater inflater, ViewGroup container, |
|  | Bundle savedInstanceState) { |
|  | View view=inflater.inflate(R.layout.fragment\_one,container,false); |
|  | return view; |
|  | } |
|  | } |
| FragmentTwo.java |
|  | import android.app.Fragment; |
|  | import android.os.Bundle; |
|  | import android.view.LayoutInflater; |
|  | import android.view.View; |
|  | import android.view.ViewGroup; |
|  |  |
|  | public class FragmentTwo extends Fragment { |
|  | @Override |
|  | public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) { |
|  | View view=inflater.inflate(R.layout.fragment\_two,container,false); |
|  | return view; |
|  | } |
|  | } |

MainActivity.java

|  |
| --- |
| import android.app.FragmentManager; |
|  | import android.app.FragmentTransaction; |
|  | import android.support.v7.app.AppCompatActivity; |
|  | import android.os.Bundle; |
|  | import android.view.View; |
|  | import android.widget.Button; |
|  |  |
|  | public class MainActivity extends AppCompatActivity { |
|  |  |
|  | Button btn\_frg\_one,btn\_frg\_tow; |
|  |  |
|  | @Override |
|  | protected void onCreate(Bundle savedInstanceState) { |
|  | super.onCreate(savedInstanceState); |
|  | setContentView(R.layout.activity\_main); |
|  |  |
|  | FragmentOne fragmentOne = new FragmentOne(); |
|  | FragmentManager fragmentManager = getFragmentManager(); |
|  | FragmentTransaction transaction = fragmentManager.beginTransaction(); |
|  | transaction.add(R.id.fragment\_container, fragmentOne); |
|  | transaction.commit(); |
|  |  |
|  | btn\_frg\_one=(Button)findViewById(R.id.btn\_frg\_one); |
|  | btn\_frg\_one.setOnClickListener(new View.OnClickListener() { |
|  | @Override |
|  | public void onClick(View view) { |
|  | FragmentOne fragmentOne = new FragmentOne(); |
|  | FragmentManager fragmentManager = getFragmentManager(); |
|  | FragmentTransaction transaction = fragmentManager.beginTransaction(); |
|  | transaction.replace(R.id.fragment\_container, fragmentOne); |
|  | transaction.commit(); |
|  | } |
|  | }); |
|  |  |
|  | btn\_frg\_tow=(Button)findViewById(R.id.btn\_frg\_two); |
|  | btn\_frg\_tow.setOnClickListener(new View.OnClickListener() { |
|  | @Override |
|  | public void onClick(View view) { |
|  | FragmentTwo fragmentTwo = new FragmentTwo(); |
|  | FragmentManager fragmentManager = getFragmentManager(); |
|  | FragmentTransaction transaction = fragmentManager.beginTransaction(); |
|  | transaction.replace(R.id.fragment\_container, fragmentTwo); |
|  | transaction.commit(); |
|  | } |
|  | }); |
|  | } Android Fragments dynamically Output Screen shot :   android fragments example |
|  | } |

6. Create a screen that has input boxes for Name, Address, Gender (radio buttons for male and female), Age (numeric), Date of Birth (Date Picket), State (Spinner) and a Submit button. On clicking the submit button, print all the data below the Submit Button.

Activity\_main.xml:

*<?***xml version="1.0" encoding="utf-8"***?>*<**layout  
 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"  
 tools:context=".MainActivity"** >  
 <**LinearLayout  
 android:orientation="vertical"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"** >  
  
  
 <**TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Registration From !"  
 android:textSize="20dp"  
 android:textColor="@color/colorPrimary"  
 android:gravity="center"** />  
  
 <**EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter the User name"  
 android:layout\_margin="1dp"  
 android:id="@+id/et\_name"**/>  
 <**EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter the Roll number"  
 android:layout\_margin="1dp"  
 android:id="@+id/et\_roll"**/>  
 <**EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="10dp"  
 android:inputType="textEmailAddress"  
 android:hint="Enter the User email"  
 android:id="@+id/email"**/>  
  
 <**EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="1dp"  
 android:inputType="number"  
 android:hint="Enter the User mobile number"  
 android:id="@+id/et\_mobilenumber"**/>  
 <**Button  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/date"  
 android:text="Select Date of birth"**/>  
 <**EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="1dp"  
 android:inputType="number"  
 android:hint="Enter Your Age"  
 android:id="@+id/age"**/>  
 <**EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="1dp"  
 android:inputType="text"  
 android:hint="Enter Your Address"  
 android:id="@+id/address"**/>  
  
 <**LinearLayout  
 android:layout\_width="match\_parent"  
 android:orientation="vertical"  
 android:layout\_height="wrap\_content"**>  
 <**RadioGroup  
 android:layout\_width="wrap\_content"  
 android:orientation="horizontal"  
 android:layout\_margin="2dp"  
 android:layout\_height="wrap\_content"**>  
 <**RadioButton  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="male"  
 android:layout\_margin="10dp"  
 android:id="@+id/male"**/>  
 <**RadioButton  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="female"  
 android:layout\_margin="10dp"  
 android:id="@+id/female"**/>  
 </**RadioGroup**>  
  
 </**LinearLayout**>  
  
 <**Spinner  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/spinner\_states"  
 android:entries="@array/states"**/>  
 <**Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="submit"  
 android:id="@+id/submit\_btn\_id"  
 android:layout\_gravity="center"**/>  
 <**ScrollView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"**>  
 <**TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/tv"  
 android:textSize="30sp"  
 android:autoLink="all"  
 android:layout\_margin="1dp"**/>  
 </**ScrollView**>  
  
 </**LinearLayout**>  
</**layout**>

MainActivity.java:

**package** com.example.registration\_form;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** androidx.databinding.DataBindingUtil;  
**import** android.app.DatePickerDialog;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.DatePicker;  
**import** android.widget.Toast;  
**import** java.util.Calendar;  
  
**import** com.example.registration\_form.databinding.ActivityMainBinding;  
  
**public class** MainActivity **extends** AppCompatActivity **implements** View.OnClickListener{  
 ActivityMainBinding **binding**;  
 String **gender**;  
 String **lang**;  
 Button **datepicker**;  
 **int c\_year**,**c\_month**,**c\_date**;  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);**binding**= DataBindingUtil.*setContentView*(**this** ,R.layout.***activity\_main***);  
 **datepicker**=findViewById(R.id.***date***);  
 **datepicker**.setOnClickListener(**this**);  
  
 **binding**.**submitBtnId**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
  
 **if** (**binding**.**male**.isChecked()){  
 **gender**=**"Male"**;  
 }**else** {  
 **gender**=**"Female"**;  
 }  
  
  
 **binding**.**tv**.setText(**"name :"**+**binding**.**etName**.getText().toString()+**"\n"**+  
 **"Number "**+**binding**.**etMobilenumber**.getText().toString()+**"\n"**+  
 **binding**.**email**.getText().toString()+**"\n"**+  
 **binding**.**age**.getText().toString()+**"\n"**+**binding**.**address**.getText().toString()+**"\n"**+  
 **gender**+**"\n"**+**binding**.**date**.getText().toString()+**"\n"**+  
 **binding**.**spinnerStates**.getSelectedItem().toString()+**"\n"**+**lang**);  
 }  
 });  
  
 }  
  
 @Override  
 **public void** onClick(View view) {  
 **switch** (view.getId()){  
 **case** R.id.***date***:  
 openDatepicker();  
 **break**;  
  
 }  
}  
 **private void** openDatepicker() {  
 Calendar c = Calendar.*getInstance*();  
 **c\_year** = c.get(Calendar.***YEAR***);  
 **c\_month** = c.get(Calendar.***MONTH***);  
 **c\_date** = c.get(Calendar.***DAY\_OF\_MONTH***);  
 *//DatePickerDialog is a class predefined* DatePickerDialog datePickerDialog = **new** DatePickerDialog(**this**, **new** DatePickerDialog.OnDateSetListener() {  
 @Override  
 **public void** onDateSet(DatePicker datePicker, **int** i, **int** i1, **int** i2) {  
 String mydate = i + **"-"** + (i1 + 1) + **"-"** + i2;  
 Toast.*makeText*(MainActivity.**this**, mydate, Toast.***LENGTH\_SHORT***).show();  
 }  
 }, **c\_year**, **c\_month**, **c\_date**);  
 datePickerDialog.show();  
 }  
}

strings.xml:

<**resources**>  
   
 <**string-array name="states"**>  
  
 <**item**>Andhra Pradesh</**item**>  
 <**item**>Arunachal Pradesh</**item**>  
 <**item**>Assam</**item**>  
 <**item**>Bihar</**item**>  
 <**item**>Chhattisgarh</**item**>  
 <**item**>Goa</**item**>  
 <**item**>Gujarat</**item**>  
 <**item**>Haryana</**item**>  
 <**item**>Telangana</**item**>  
  
 </**string-array**>  
</**resources**>

Build.gradle(:app):

apply **plugin**: **'com.android.application'**android **{** compileSdkVersion 30  
 buildToolsVersion **"30.0.2"** defaultConfig **{** applicationId **"com.example.registration\_form"** minSdkVersion 14  
 targetSdkVersion 30  
 versionCode 1  
 versionName **"1.0"** testInstrumentationRunner **"androidx.test.runner.AndroidJUnitRunner"  
 }** buildTypes **{** release **{** minifyEnabled **false** proguardFiles getDefaultProguardFile(**'proguard-android-optimize.txt'**), **'proguard-rules.pro'  
 }  
 }** dataBinding**{** enabled=**true  
 }  
}**dependencies **{** implementation fileTree(**dir**: **"libs"**, **include**: [**"\*.jar"**])  
 implementation **'androidx.appcompat:appcompat:1.2.0'** implementation **'androidx.constraintlayout:constraintlayout:2.0.1'** testImplementation **'junit:junit:4.12'** androidTestImplementation **'androidx.test.ext:junit:1.1.2'** androidTestImplementation **'androidx.test.espresso:espresso-core:3.3.0'  
  
}**

8. Create an application that uses the basic views of Android

**activity\_main.xml (or) main.xml** and add following code :

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

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent" >

<TextView

android:id="@+id/textView1"

android:textSize="20dp"

android:textColor="#FF0000"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="110dp"

android:text="Static ImageView" />

<ImageView

android:id="@+id/imageView1"

android:layout\_width="60dp"

android:layout\_height="60dp"

android:layout\_centerVertical="true"

android:layout\_centerHorizontal="true"

android:src="@drawable/gkbs\_logo" />

<Button

android:id="@+id/button1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentBottom="true"

android:layout\_centerHorizontal="true"

android:layout\_marginBottom="80dp"

android:text="Change" />

<EditText

android:id="@+id/editText1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="105dp"

android:ems="10" >

<ImageButton

android:id="@+id/imageButton1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerHorizontal="true"

android:layout\_centerVertical="true"

android:src="@drawable/gkbs\_logo" />

<requestFocus />

</EditText>

<Button

android:id="@+id/button1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerHorizontal="true"

android:layout\_centerVertical="true"

android:text="Proceed" />

</RelativeLayout>

Open src -> package -> **MainActivity.java** and add following code :

package balaji.edittext\_static;

import android.os.Bundle;

import android.app.Activity;

import android.view.Menu;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.ImageButton;

import android.widget.Toast;

public class MainActivity extends Activity {

Button b; ImageButton imgbutton;

EditText et1;

@Override

public void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

b = (Button) findViewById(R.id.button1);

et1 = (EditText) findViewById(R.id.editText1);

b.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

// TODO Auto-generated method stub

Toast.makeText(getBaseContext(), et1.getText().toString(),

Toast.LENGTH\_SHORT).show();

}

});

}

@Override

public boolean onCreateOptionsMenu(Menu menu) {

getMenuInflater().inflate(R.menu.activity\_main, menu);

return true;

}

imgbutton = (ImageButton) findViewById(R.id.imageButton1);

imgbutton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

// TODO Auto-generated method stub

imgbutton.setImageResource(R.drawable.gkbs\_logo\_red);

Toast.makeText(getBaseContext(), "ImageButton Clicked",

Toast.LENGTH\_SHORT).show();

}

});

imgbutton.setOnLongClickListener(new View.OnLongClickListener() {

@Override

public boolean onLongClick(View v) {

// TODO Auto-generated method stub

imgbutton.setImageResource(R.drawable.gkbs\_logo\_megenta);

Toast.makeText(getBaseContext(), "ImageButton Long Clicked",

Toast.LENGTH\_SHORT).show();

return true;

}

});

}

@Override

public boolean onCreateOptionsMenu(Menu menu) {

getMenuInflater().inflate(R.menu.activity\_main, menu);

return true;

}

}

}

Open res ->values ->**strings.xml** and add following code :

<resources>

<string name="app\_name">EditText\_Static</string>

<string name="hello\_world">Hello world!</string>

<string name="menu\_settings">Settings</string>

<string name="title\_activity\_main">MainActivity</string>

</resources

9.Develop an application that uses a menu with 3 options for dialing a number, opening a website and to send an SMS. On selecting an option, the appropriate action should be invoked using intents.

*File: activity\_main.xml*

1. **<RelativeLayout** xmlns:androclass="http://schemas.android.com/apk/res/android"
2. xmlns:tools="http://schemas.android.com/tools"
3. android:layout\_width="match\_parent"
4. android:layout\_height="match\_parent"
5. tools:context=".MainActivity" **>**

  <EditText

        android:id="@+id/editText"

        android:layout\_width="wrap\_content"

                android:layout\_height="wrap\_content"

                android:layout\_marginLeft="8dp"

        android:layout\_marginRight="8dp"

        android:layout\_marginTop="65dp"

        android:hint="Phone No."

        android:inputType="phone"

        app:layout\_constraintHorizontal\_bias="0.503"

        app:layout\_constraintLeft\_toLeftOf="parent"

        app:layout\_constraintRight\_toRightOf="parent"

        app:layout\_constraintTop\_toTopOf="parent" />

    <Button

        android:id="@+id/button"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_marginLeft="8dp"

        android:layout\_marginRight="8dp"

        android:layout\_marginTop="67dp"

        android:onClick="Call"

        android:text="DIAL"

        app:layout\_constraintLeft\_toLeftOf="parent"

        app:layout\_constraintRight\_toRightOf="parent"

        app:layout\_constraintTop\_toBottomOf="@+id/editText"

    />

1. **<EditText**
2. android:id="@+id/editText1"
3. android:layout\_width="wrap\_content"
4. android:layout\_height="wrap\_content"
5. android:layout\_alignParentRight="true"
6. android:layout\_alignParentTop="true"
7. android:layout\_marginRight="20dp"
8. android:ems="10" **/>**
10. **<EditText**
11. android:id="@+id/editText2"
12. android:layout\_width="wrap\_content"
13. android:layout\_height="wrap\_content"
14. android:layout\_alignLeft="@+id/editText1"
15. android:layout\_below="@+id/editText1"
16. android:layout\_marginTop="26dp"
17. android:ems="10"
18. android:inputType="textMultiLine" **/>**

|  |
| --- |
| <EditText |
|  | android:layout\_width="match\_parent" |
|  | android:layout\_height="wrap\_content" |
|  | android:id="@+id/et\_url\_input" |
|  | android:hint="Enter the Url" |
|  | android:layout\_margin="10dp"/> |

2. **<TextView**
3. android:id="@+id/textView1"
4. android:layout\_width="wrap\_content"
5. android:layout\_height="wrap\_content"
6. android:layout\_alignBaseline="@+id/editText1"
7. android:layout\_alignBottom="@+id/editText1"
8. android:layout\_toLeftOf="@+id/editText1"
9. android:text="Mobile No:" **/>**
11. **<TextView**
12. android:id="@+id/textView2"
13. android:layout\_width="wrap\_content"
14. android:layout\_height="wrap\_content"
15. android:layout\_alignBaseline="@+id/editText2"
16. android:layout\_alignBottom="@+id/editText2"
17. android:layout\_alignLeft="@+id/textView1"
18. android:text="Message:" **/>**
20. **<Button**
21. android:id="@+id/button1"
22. android:layout\_width="wrap\_content"
23. android:layout\_height="wrap\_content"
24. android:layout\_alignLeft="@+id/editText2"
25. android:layout\_below="@+id/editText2"
26. android:layout\_marginLeft="34dp"
27. android:layout\_marginTop="48dp"
28. android:text="Send SMS" **/>**

|  |
| --- |
| <Button |
|  | android:layout\_width="match\_parent" |
|  | android:layout\_height="wrap\_content" |
|  | android:text="Open Web" |
|  | android:layout\_margin="10dp" |
|  | android:onClick="showWebPage"/> |

2. **</RelativeLayout>**

*Android-Manifest.xml*

1. <?xml version="1.0" encoding="utf-8"?>
2. <manifest
3. xmlns:androclass="http://schemas.android.com/apk/res/android"
4. **package**="com.example.sendsms"
5. android:versionCode="1"
6. android:versionName="1.0" >
8. <uses-sdk
9. android:minSdkVersion="8"
10. android:targetSdkVersion="16" />
12. <uses-permission android:name="android.permission.SEND\_SMS"/>
14. <uses-permission android:name="android.permission.RECEIVE\_SMS"/>

<uses-permission android:name="android.permission.CALL\_PHONE"/>

1. <application
2. android:allowBackup="true"
3. android:icon="@drawable/ic\_launcher"
4. android:label="@string/app\_name"
5. android:theme="@style/AppTheme" >
6. <activity
7. android:name="com.example.sendsms.MainActivity"
8. android:label="@string/app\_name" >
9. <intent-filter>
10. <action android:name="android.intent.action.MAIN" />
12. <category android:name="android.intent.category.LAUNCHER" />
13. </intent-filter>
14. </activity>
15. </application>
17. </manifest>

*MainActivity.java*

1. **package** com.example.sendsms;
3. **import** android.os.Bundle;
4. **import** android.app.Activity;
5. **import** android.app.PendingIntent;
6. **import** android.content.Intent;
7. **import** android.telephony.SmsManager;
8. **import** android.view.Menu;
9. **import** android.view.View;
10. **import** android.view.View.OnClickListener;
11. **import** android.widget.Button;
12. **import** android.widget.EditText;
13. **import** android.widget.Toast;
15. **public** **class** MainActivity **extends** Activity {
17. EditText mobileno,message;
18. Button sendsms;  EditText mEditText;
19. @Override
20. **protected** **void** onCreate(Bundle savedInstanceState) {
21. **super**.onCreate(savedInstanceState);
22. setContentView(R.layout.activity\_main);
24. mobileno=(EditText)findViewById(R.id.editText1);
25. message=(EditText)findViewById(R.id.editText2);
26. sendsms=(Button)findViewById(R.id.button1);
27. mEditText=findViewById(R.id.et\_url\_input);

30. //Performing action on button click

|  |
| --- |
| public void showWebPage(Viewview) { |
|  | String myUrl= mEditText.getText().toString(); |
|  | Uri uri=Uri.parse("https://www."+myUrl+".in"); |
|  | Intent i=new Intent(Intent.ACTION\_VIEW,uri); |
|  | startActivity(i); |
|  |  |
|  | } |

1. sendsms.setOnClickListener(**new** OnClickListener() {
3. @Override
4. **public** **void** onClick(View arg0) {
5. String no=mobileno.getText().toString();
6. String msg=message.getText().toString();
8. //Getting intent and PendingIntent instance
9. Intent intent=**new** Intent(getApplicationContext(),MainActivity.**class**);
10. PendingIntent pi=PendingIntent.getActivity(getApplicationContext(), 0, intent,0);
12. //Get the SmsManager instance and call the sendTextMessage method to send message
13. SmsManager sms=SmsManager.getDefault();
14. sms.sendTextMessage(no, **null**, msg, pi,**null**);
16. Toast.makeText(getApplicationContext(), "Message Sent successfully!",
17. Toast.LENGTH\_LONG).show();
18. }
19. });
20. }
22. @Override
23. **public** **boolean** onCreateOptionsMenu(Menu menu) {
24. // Inflate the menu; this adds items to the action bar if it is present.
25. getMenuInflater().inflate(R.menu.activity\_main, menu);
26. **return** **true**;
27. }
29. public  void Call(View v)
30. {
31. EditText e = (EditText)findViewById(R.id.editText);
33. Toast.makeText(this, "clicked", Toast.LENGTH\_LONG)
34. .show();
36. Uri u = Uri.parse("tel:" + e.getText().toString());
38. Intent i = new Intent(Intent.ACTION\_DIAL, u);
40. try
41. {
42. startActivity(i);
43. }
44. catch (SecurityException s)
45. {
47. Toast.makeText(this, "An error occurred", Toast.LENGTH\_LONG)
48. .show();
49. }
50. }
51. }