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PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number: 10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title: 1. Demonstrate different Layouts with different views in android Layouts- ConstraintLayout, RelativeLayout, TableLayout Views- Button, TextView, EditText, WebView, CheckBox, RadioButton, ToggleButton, ImageButton, RatingBar, ProgressBar, SeekBar, VideoView, DatePicker, CalendarView, Spinner		

Android LinearLayout

layout_linear.xml

```
<LinearLayout xmlns:android="https://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent" android:layout_height="fill_parent"
    android:layout_margin="@dimen/activity_horizontal_margin">
    <Button
        android:id="@+id/backbutton" android:text="Back"
        android:layout_width="wrap_content" android:layout_height="wrap_content" />
    <TextView android:text="Row 2"
        android:layout_width="wrap_content" android:textSize="18sp"
        android:layout_margin="10dp" android:layout_height="wrap_content" />
    <TextView android:text="Row 3" android:textSize="18sp"
        android:layout_margin="10dp" android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
    <TextView android:text="Row 4" android:textSize="18sp"
        android:layout_margin="10dp" android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
    <TextView android:text="Row 5" android:textSize="18sp"
        android:layout_margin="10dp" android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
```

Android RelativeLayout

The following xml layout uses RelativeLayout: layout_relative.xml

```
android:text="Back" android:layout_width="wrap_content"
android:layout_height="wrap_content" />
<TextView android:id="@+id/firstName" android:text="First Name"
```

```

android:textSize="18sp" android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@id/backbutton" />
<TextView android:id="@+id/editFirstName" android:text="JournalDev"
android:textSize="18sp" android:layout_width="wrap_content"
android:layout_marginLeft="10dp" android:layout_height="wrap_content"
android:layout_toRightOf="@id/firstName" android:layout_below="@id/backbutton"/>
<TextView android:id="@+id/editLastName" android:text="Layout Tutorial Example"
android:textSize="18sp" android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignTop="@+id/lastName" android:layout_toRightOf="@+id/lastName"
android:layout_toEndOf="@+id/lastName" />
<TextView android:id="@+id/lastName" android:text="Last Name"
android:textSize="18sp" android:layout_width="wrap_content"
android:layout_height="wrap_content" android:layout_marginTop="48dp"
android:layout_below="@+id/firstName" android:layout_alignParentLeft="true"
android:layout_alignParentStart="true" android:layout_marginRight="10dp"
android:layout_marginLeft="40dp" android:layout_marginStart="40dp" />

<Button
android:id="@+id/next" android:text="Next" android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@+id/editLastName"
android:layout_alignLeft="@+id/editLastName"
android:layout_alignStart="@+id/editLastName" android:layout_marginTop="37dp" />
</RelativeLayout>

```

As you can see we can rearrange elements based on their relative positions.

The following xml layout represents a custom layout having nested linear and relative layouts.

layout_mixed.xml

```

android:textSize="18sp" android:layout_margin="10dp" android:layout_gravity="center"
android:layout_width="wrap_content" android:layout_height="wrap_content" />
<TextView android:text="Vertical" android:textSize="18sp"
android:layout_margin="10dp" android:layout_gravity="center"
android:layout_width="wrap_content" android:layout_height="wrap_content" />
<TextView android:text="LL" android:textSize="18sp"
android:layout_margin="10dp" android:layout_gravity="center"
android:layout_width="wrap_content" android:layout_height="wrap_content" />

```

```

        </LinearLayout>

    </LinearLayout>
    <RelativeLayout android:layout_width="match_parent"
        android:layout_height="match_parent" android:layout_below="@id/linearLayout">

        <TextView
            android:layout_width="wrap_content" android:layout_height="wrap_content"
            android:textAppearance="?android:attr/textAppearanceMedium" android:text="Nested
            Relative Layout" android:id="@+id/textView" android:layout_alignParentTop="true"
            android:layout_centerHorizontal="true" />

        <Button
            android:id="@+id/back_button_pressed" android:text="back"
            android:layout_width="wrap_content" android:layout_height="wrap_content"
            android:layout_below="@+id/textView" android:layout_centerHorizontal="true"
            android:layout_marginTop="66dp" />

    </RelativeLayout>

</RelativeLayout>

```

Android Layout Code

layout_linear.xml :

The SecondActivity and ThirdActivity load the layout_relative.xml and layout_mixed.xml layouts respectively as shown below:

```
package com.journaldev.layouts;
```

```
import android.app.Activity; import android.content.Intent; import android.os.Bundle;
import android.view.View; import android.widget.Button;
```

```
public class SecondActivity extends Activity { Button back,next;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState); setContentView(R.layout.layout_relative);
        back=(Button)findViewById(R.id.backbutton); next=(Button)findViewById(R.id.next);

        next.setOnClickListener(new View.OnClickListener() { @Override
        public void onClick(View v) {
            Intent intent=new Intent(SecondActivity.this,ThirdActivity.class);
            intent.setFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP); startActivity(intent);

```

```

}
});
back.setOnClickListener(new View.OnClickListener() { @Override
public void onClick(View v) {
Intent intent=new Intent(SecondActivity.this,MainActivity.class);
intent.setFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP); startActivity(intent);
}
});
}
}

package com.journaldev.layouts;

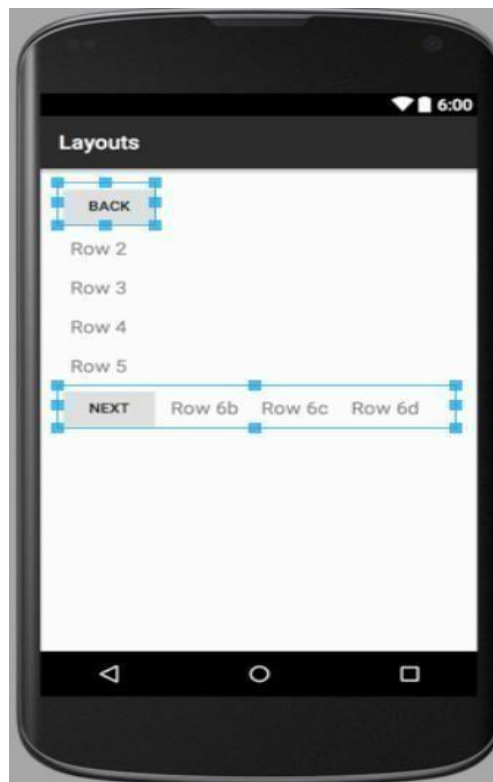
import android.app.Activity; import android.content.Intent; import android.os.Bundle;
import android.view.View; import android.widget.Button;

public class ThirdActivity extends Activity { Button back;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState); setContentView(R.layout.layout_mixed);
back=(Button)findViewById(R.id.back_button_pressed);

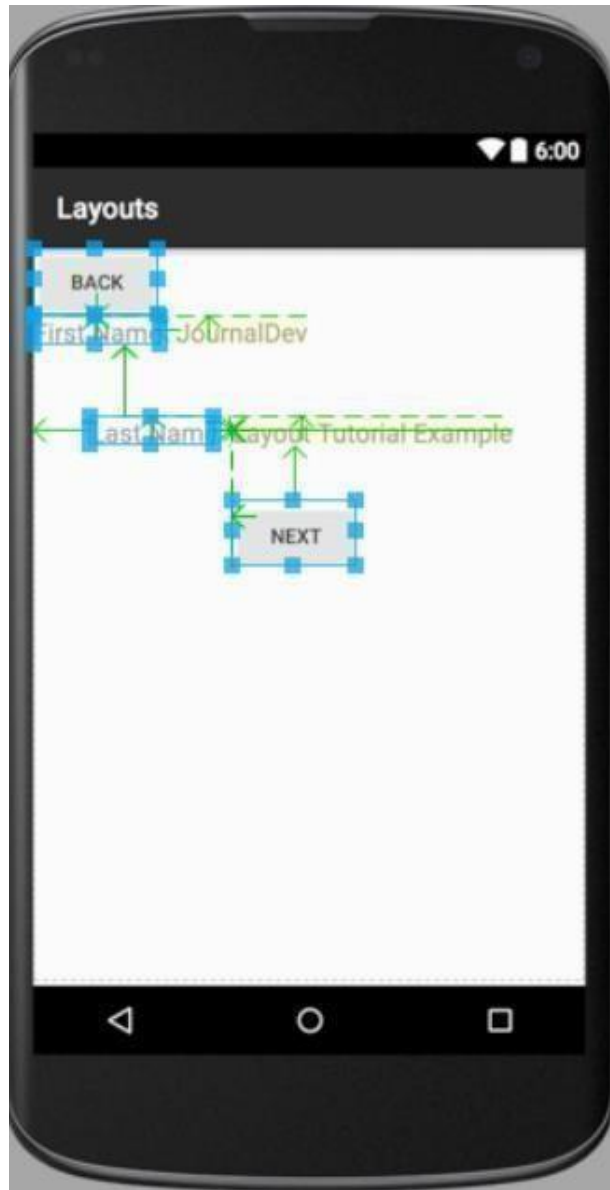
```

Outputs: of the three layout files are shown below:

a) layout_linear.xml

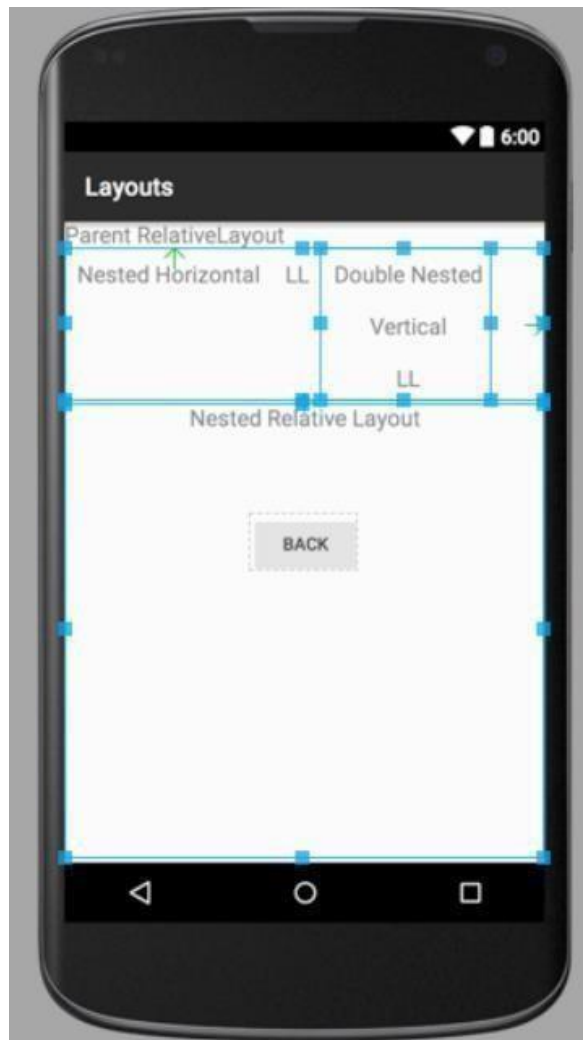


b) layout_relative.xml



The arrows pointing in the image above depict how siblings are positioned relative to each other and relative to the container.

c) layout_mixed.xml



This Relative Layout consists of a Vertical LinearLayout within a Nested Horizontal LinearLayout along with a Child RelativeLayout.

src/MainActivity.java.

```
package
com.example.saira_000.myapplication

on; import android.Manifest;
import android.content.Intent;
import
android.content.pm.PackageManage
r; import android.net.Uri;
import android.os.Bundle;
import
android.support.v4.app.ActivityCompat;
import
android.support.v7.app.AppCompatActivity; import android.view.View;
import android.widget.Button;

public class MainActivity extends
    AppCompatActivity { private Button button;

    @Override
    protected void onCreate(Bundle savedInstanceState)
    { super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      button = (Button) findViewById(R.id.buttonCall);

      button.setOnClickListener(new
        View.OnClickListener() { public void
        onClick(View arg0) {
          Intent callIntent = new Intent(Intent.ACTION_CALL);
          callIntent.setData(Uri.parse("tel:0377778888"));

          if
            (ActivityCompat.checkSelfPermission(Main
              Activity.this,
              Manifest.permission.CALL_PHONE) !=
              PackageManager.PERMISSION_G
                RANTED) { return;
            }
            startActivity(callIntent);
          }
        });
    }
```


res/layout/activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >

    <Button
        android:id="@+id/buttonCall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="call 0377778888" />

</LinearLayout>
```

res/values/strings.xml

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string name="app_name">My Application</string>
</resources>
```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.saira_000.myapplication" >

    <uses-permission android:name="android.permission.CALL_PHONE" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >

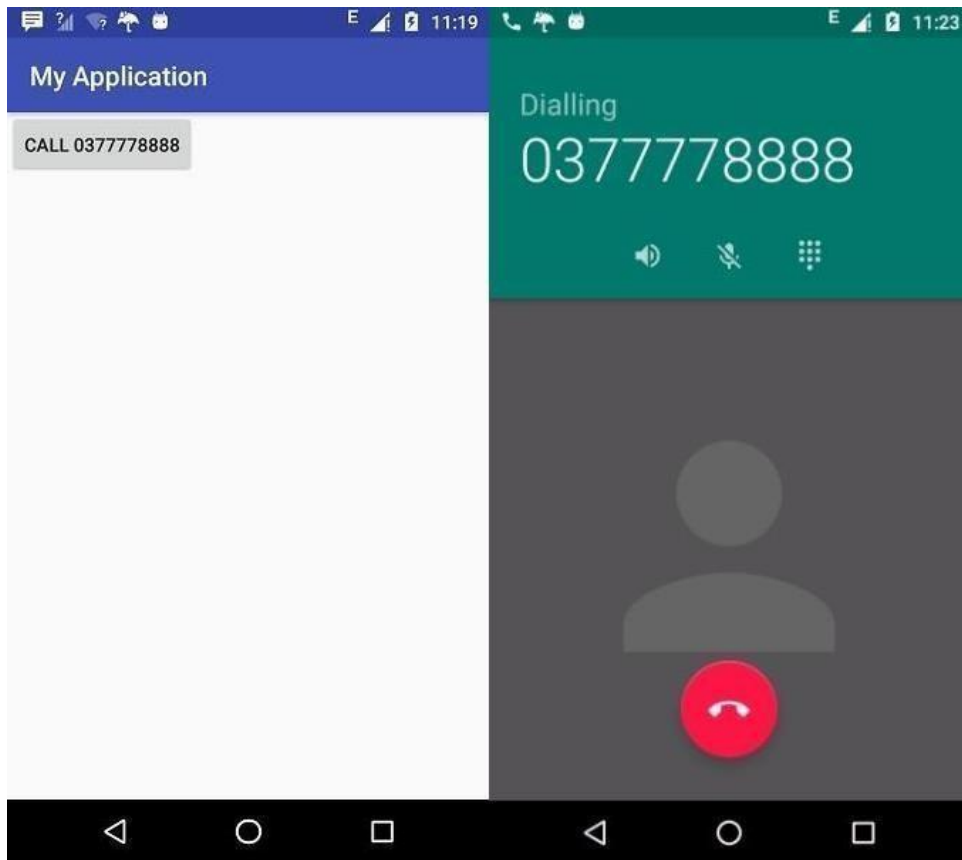
        <activity
            android:name="com.example.saira_000.myapplication.MainActivity"
            android:label="@string/app_name" >

            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>

        </activity>
```

```
</application>  
</manifest>
```

Output-



PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number:10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title: Q3. Write an android code to turn ON/OFF Bluetooth.		

activity_main.xml

```

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"
    >

    <Switch
        android:id="@+id/switch1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true"
        />

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_above="@+id/switch1"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="62dp"
        android:gravity="center"
        android:text="Bluetooth status show here"
        android:textAppearance="?android:attr/textAppearanceLarge" />

</RelativeLayout>

```

MainActivity.java

```

import android.bluetooth.BluetoothAdapter;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.CompoundButton;
import android.widget.Switch;
import android.widget.TextView;

```

```

public class EnableDisableBluetooth extends AppCompatActivity {
    Switch sw;
    TextView textview;
    BluetoothAdapter bt;
    int i = 1;
    Intent bluetoothIntent;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_enable_disable_bluetooth);

        sw = (Switch)findViewById(R.id.switch1);
        textview = (TextView)findViewById(R.id.textView1);

        bt = BluetoothAdapter.getDefaultAdapter();
        sw.setOnCheckedChangeListener(new
        CompoundButton.OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(CompoundButton buttonView, boolean
            isChecked) {

                if(isChecked)
                {
                    BluetoothEnable();
                }
                else {
                    BluetoothDisable();
                }
            }
        });
    }
    public void BluetoothEnable(){

        bluetoothIntent = new Intent(BluetoothAdapter.ACTION_REQUEST_ENABLE);
        startActivityForResult(bluetoothIntent, i);
        textview.setText("Bluetooth ON");
    }
    public void BluetoothDisable(){
        bt.disable();
        textview.setText("Bluetooth OFF");
    }
}

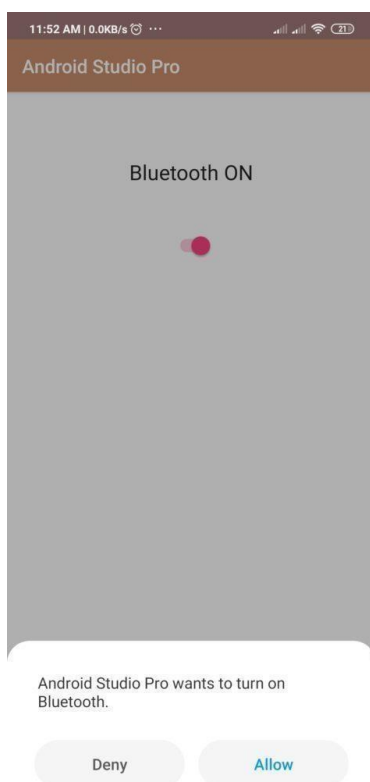
```

Output

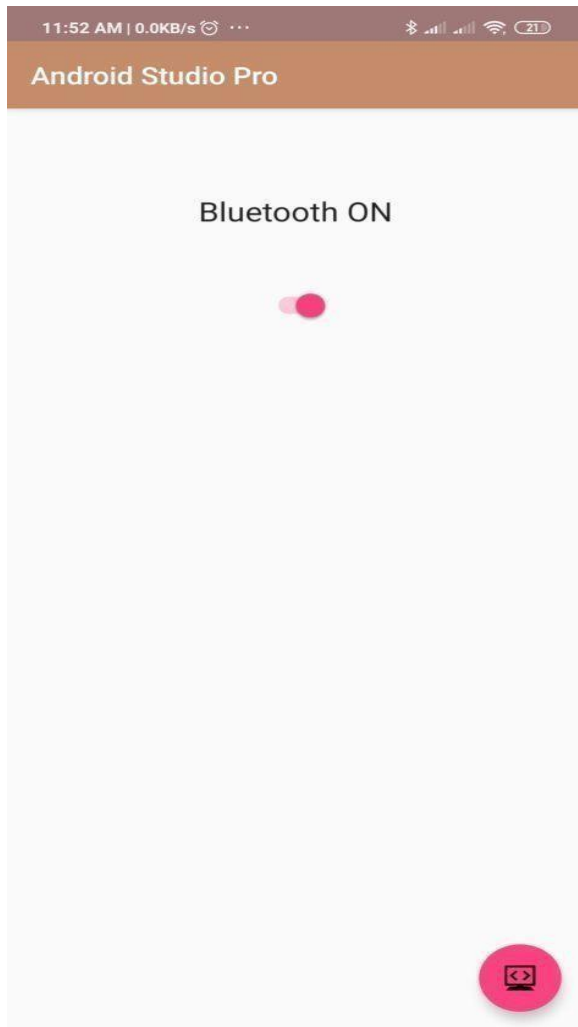
1.



2.



3.



PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number:10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title:Q4. Write an android code to turn ON/OFF the Wi-Fi.		

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
package="com.java2blog.enabledisablewifiapp">
<uses-permission android:name="android.permission.ACCESS_WIFI_STATE"/>
<uses-permission android:name="android.permission.CHANGE_WIFI_STATE"/>
<application
android:allowBackup="true"
android:icon="@mipmap/ic_launcher"
android:label="@string/app_name"
android:supportRtl="true"
android:theme="@style/AppTheme">
<activity android:name=".MainActivity">
<intent-filter>
<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />
</intent-filter>
</activity>
</application>

</manifest>

```

activity_main.xml

MainActivity.java

```

package com.java2blog.enabledisablewifiapp;

import android.content.Context;
import android.net.wifi.WifiManager;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.widget.CompoundButton;
import android.widget.TextView;
import android.widget.ToggleButton;

import com.java2blog.enabledisablewifiapp.R;

public class MainActivity extends AppCompatActivity {

```

```

ToggleButton toggleButton;
TextView textView;

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    // Getting toggle button and textView from activity_main
    toggleButton = (ToggleButton) findViewById(R.id.toggleButton);
    textView = (TextView) findViewById(R.id.textView);

    // Put listener on toggle button
    toggleButton.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {
        @Override
        public void onCheckedChanged(CompoundButton compoundButton, boolean checked) {

CE);

```

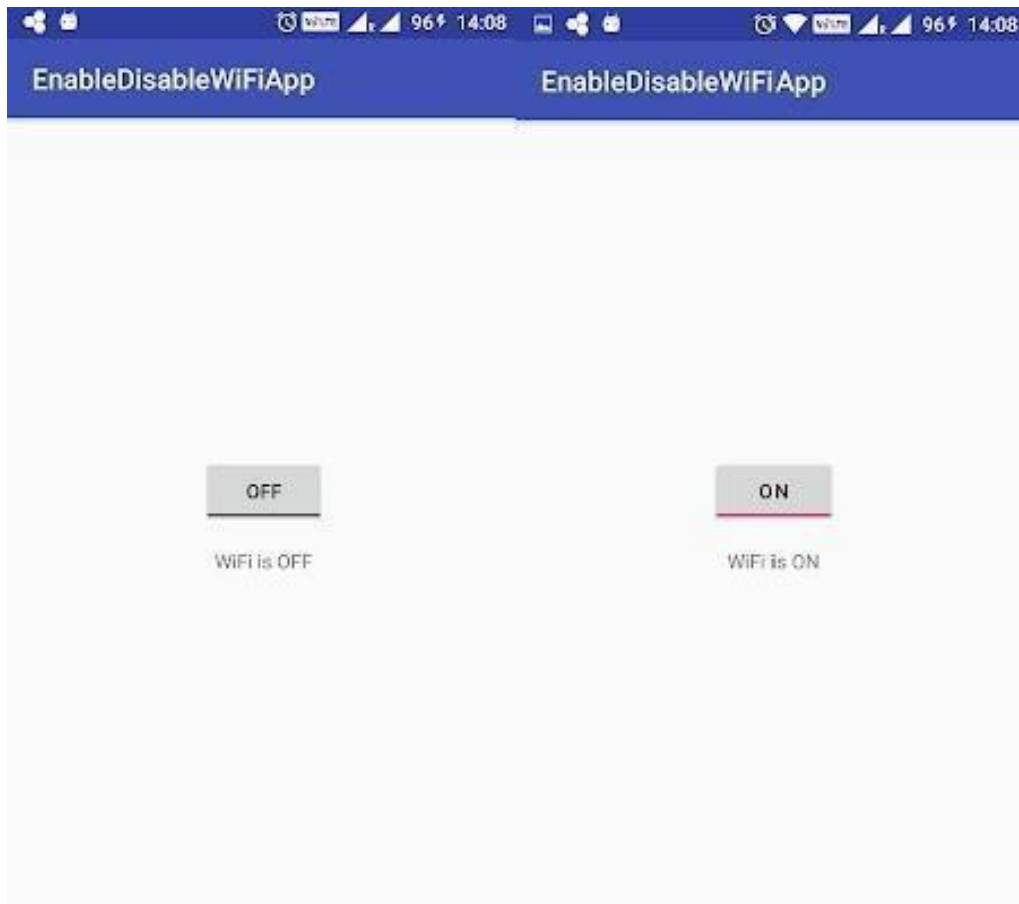


```

    } else {
        textView.setText("WiFi is OFF");
        WifiManager wifi = (WifiManager) getSystemService(Context.WIFI_SERVI
CE);
        wifi.setWifiEnabled(false);
    }
}
});
// For initial setting
if (toggleButton.isChecked()) {
    textView.setText("WiFi is ON");
    WifiManager wifi = (WifiManager) getSystemService(Context.WIFI_SERVICE);
    wifi.setWifiEnabled(true);
} else {
    textView.setText("WiFi is OFF");
    WifiManager wifi = (WifiManager) getSystemService(Context.WIFI_SERVICE);
    wifi.setWifiEnabled(false);
}
}
}

```

Output:-



PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number: 10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title: Q5. Design android application for login activity.		

activity_login.XML

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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"
xmlns:app="http://schemas.android.com/apk/res-auto"
android:background="#FFFFFF" tools:context=".LoginActivity">

<TextView android:id="@+id/tv_heading"
android:layout_width="wrap_content"
android:layout_height="wrap_content" android:text="Account Login"
android:textStyle="bold" android:textSize="16sp" android:textColor="#000"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toTopOf="parent"
android:layout_marginTop="24dp"
/>

<ScrollView android:layout_width="match_parent"
android:layout_height="wrap_content"
app:layout_constraintTop_toBottomOf="@id/tv_heading"
>

<androidx.constraintlayout.widget.ConstraintLayout
android:layout_width="match_parent"
android:layout_height="match_parent" android:focusable="true"
android:focusableInTouchMode="true"
>

<com.google.android.material.textfield.TextInputLayout
android:id="@+id/layout_email" android:layout_width="0dp"
app:layout_constraintWidth_percent="0.7"
android:layout_height="wrap_content"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent"
android:layout_marginTop="50dp" android:textColorHint="#808080"
app:layout_constraintTop_toTopOf="parent"

```

```

>
<EditText android:id="@+id/et_email"
android:layout_width="match_parent"
android:layout_height="wrap_content" android:hint="Email"
android:gravity="center" android:padding="10dp"
android:textColor="#000000" android:textColorHint="#808080"
android:backgroundTint="#808080" android:textSize="15sp"
android:inputType="textEmailAddress"
/>
</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputLayout
android:id="@+id/layout_password" android:layout_width="0dp"
app:layout_constraintWidth_percent="0.7"
android:layout_height="wrap_content"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent"
android:layout_marginTop="10dp" android:textColorHint="#808080"
app:layout_constraintTop_toBottomOf="@+id/layout_email"
>

<EditText android:id="@+id/et_password"
android:layout_width="match_parent"
android:layout_height="wrap_content" android:hint="Password"
android:gravity="center" android:padding="10dp"
android:textColor="#000000" android:textColorHint="#808080"
android:backgroundTint="#808080" android:textSize="15sp"
android:inputType="textPassword"
/>

</com.google.android.material.textfield.TextInputLayout>

<Button
android:id="@+id/bt_login" android:layout_width="0dp"
android:layout_height="50dp"
app:layout_constraintTop_toBottomOf="@+id/layout_password"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent" android:text="Login"
android:textColor="#FFFFFF" android:textSize="15sp"
android:background="@color/colorPrimary" android:textAllCaps="false"
android:layout_marginTop="40dp"
app:layout_constraintWidth_percent="0.7"
style="?android:attr/borderlessButtonStyle" android:elevation="2dp"
android:onClick="performSignUp"
/>
<LinearLayout android:id="@+id/layout_already_have_account"
android:layout_width="0dp" app:layout_constraintWidth_percent="1.0"
android:layout_height="wrap_content"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent"
android:layout_marginTop="15dp"
app:layout_constraintTop_toBottomOf="@+id/bt_login"

```

```

android:orientation="horizontal" android:gravity="center"
>

<TextView android:id="@+id/tv_already_have_account"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent" android:textColor="#000"
android:textSize="18sp" android:text="Already have an account?"
/>

<Button
android:id="@+id/bt_signup" android:layout_width="wrap_content"
android:layout_height="wrap_content"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent"
android:textColor="@color/colorPrimary"

```

Login Activity.JAVA

```

// Checking if the input in form is valid boolean validateInput() {

if (etEmail.getText().toString().equals("")) { etEmail.setError("Please Enter
Email"); return false;
}
if (etPassword.getText().toString().equals("")) { etPassword.setError("Please
Enter Password"); return false;
}

// checking the proper email format
if (!isValidEmail(etEmail.getText().toString())) { etEmail.setError("Please
Enter Valid Email"); return false;
}
// checking minimum password Length
if (etPassword.getText().length() < MIN_PASSWORD_LENGTH) {
etPassword.setError("Password Length must be more than " +
MIN_PASSWORD_LENGTH + "characters"); return false;
}
return true;
}

boolean isValidEmail(String email) {
return Patterns.EMAIL_ADDRESS.matcher(email).matches();
}
// Hook Click Event
public void performSignUp (View v) { if (validateInput()) {
// Input is valid, here send data to your server String email =
etEmail.getText().toString();

```

```
String password = etPassword.getText().toString();
```

```
Toast.makeText(this,"Login Success",Toast.LENGTH_SHORT).show();
```

```
// Here you can call you API
```

```
// Check this tutorial to call server api through Google Volley Library
```

```
https://handyopinion.com
```

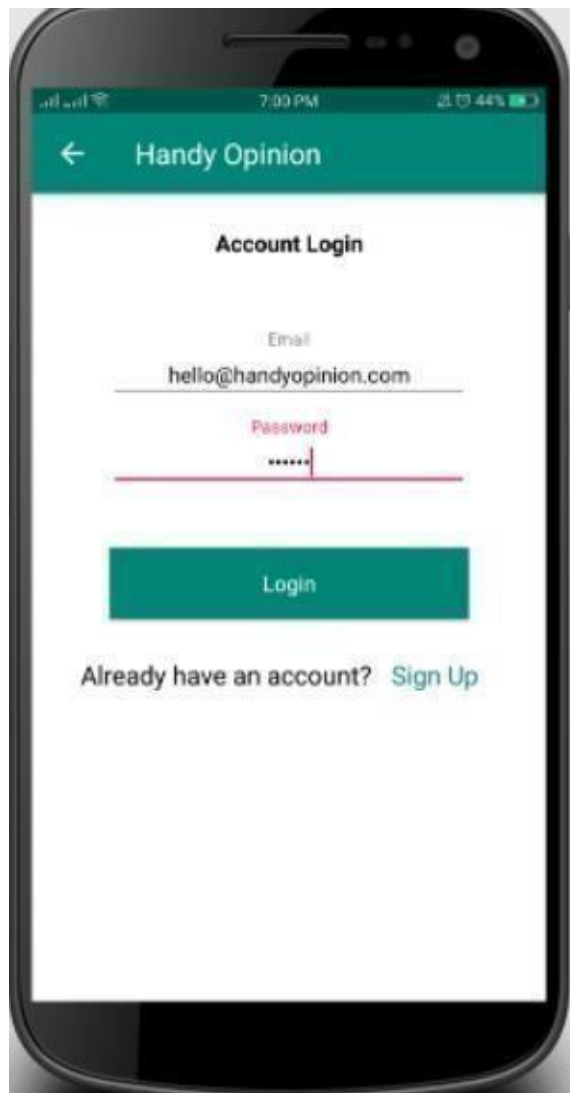
```
}
```

```
}
```

```
public void goToSignup(View v) {
```

```
// Open your SignUp Activity if the user wants to signup
```

Output :



PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number:10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title: Q6. Create a fragment that has its own UI and enable your activities to communicate with fragments.		

XML files: fragment1.xml file.

```
<?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" tools:context=".fragments.Fragment1">

    <!-- Text View for showing Fragment1 text -->
    <TextView android:layout_width="match_parent" android:layout_height="wrap_content"
        android:text="Fragment 1" android:textSize="40sp" android:layout_centerHorizontal="true"
        android:gravity="center" android:layout_marginTop="20dp" android:textColor="@color/black"/>

    <!-- Edit Text for taking user input -->
    <EditText android:id="@+id/messageInput" android:layout_width="match_parent"
        android:layout_height="wrap_content" android:text="Enter text to Pass"
        android:layout_marginTop="200dp" android:gravity="center" android:layout_marginLeft="30dp"
        android:layout_marginRight="30dp" android:textSize="30sp"/>

    <!-- Button for submit user response -->
    <Button android:id="@+id/sendBtn"
        android:layout_width="match_parent" android:layout_height="wrap_content"
        android:layout_below="@+id/etText" android:text="Submit" android:backgroundTint="#0F9D58"
        android:textSize="20sp" android:textAllCaps="false" android:layout_marginLeft="30dp"
        android:layout_marginRight="30dp" android:layout_marginTop="20dp" />

</RelativeLayout>
```

fragment2.xml file.

```
<?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" tools:context=".fragments.Fragment2">

    <!-- Text View for showing Fragment2 text -->
    <TextView android:layout_width="match_parent" android:layout_height="wrap_content"
        android:text="Fragment 2" android:textSize="40sp" android:layout_centerHorizontal="true"
        android:gravity="center" android:layout_marginTop="20dp" android:textColor="@color/black"/>

    <!-- Frame Layout which will replaced by data from Fragment1 -->
    <FrameLayout android:id="@+id/frameLayout" android:layout_width="match_parent"
        android:layout_height="wrap_content">

        <TextView android:id="@+id/displayMessage" android:layout_width="match_parent"
            android:layout_height="wrap_content" android:text="Text"
            android:textSize="30sp">
```

Create Interface

- MainActivity.java: package com.mrtechy.gfg
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import com.mrtechy.gfg.fragments.Fragment1
import com.mrtechy.gfg.fragments.Fragment2

```
class MainActivity : AppCompatActivity(), Communicator { override fun onCreate(savedInstanceState: Bundle?) {  
    super.onCreate(savedInstanceState) setContentView(R.layout.activity_main)
```

```
// created instance of Fragment1 val fragment1 = Fragment1()
```

```
// Frame manager called to replace Fragment2 frame layout with Fragment1 data  
supportFragmentManager.beginTransaction().replace(R.id.frameLayout,fragment1  
)commit()  
}
```

```
// Override function which we  
// have created in our interface
```

```
override fun passData(editTextInput: String) { val bundle = Bundle() bundle.putString("message",  
editTextInput)
```

- Fragment1 & Fragment file

Output:



PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number:10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title:Q7. Demonstrate Array Adapter using List View to display list of fruits.		

a

ctivity_main.xml:

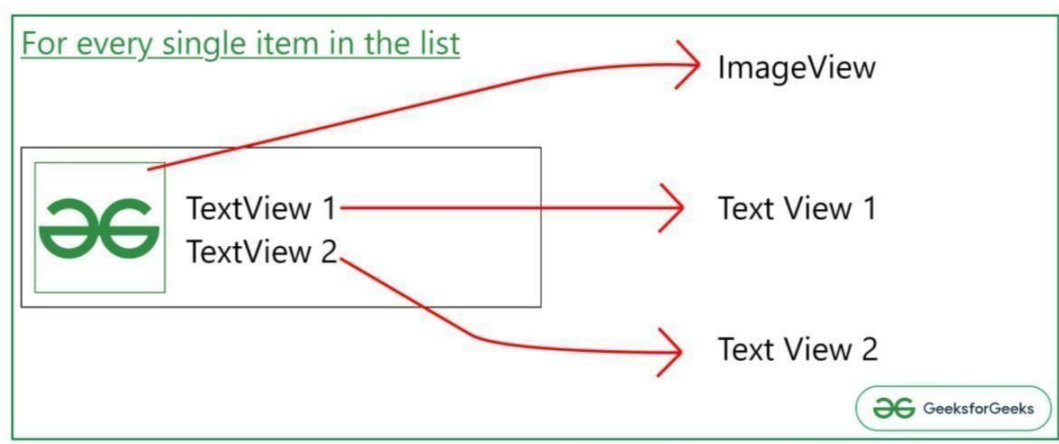
custom_list_view.xml

```
<ImageView android:id="@+id/imageView" android:layout_width="84dp"
android:layout_height="84dp" android:padding="16dp" tools:ignore="ContentDescription" />

<LinearLayout android:layout_width="match_parent" android:layout_height="match_parent"
android:gravity="center_vertical" android:orientation="vertical">

<TextView android:id="@+id/textView1" android:layout_width="match_parent"
android:layout_height="wrap_content" android:layout_marginTop="16dp"
android:gravity="bottom|left"
android:textColor="@android:color/black" android:textSize="18sp" android:textStyle="bold"
tools:ignore="RtlHardcoded" />

<TextView android:id="@+id/textView2" android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginBottom="16dp"
```



PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number:10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title: 8. Write an application to demonstrate Alert Dialog Box in android.		

Activity_maix.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=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Press The Back Button of Your Phone."
        android:textStyle="bold"
        android:textSize="30dp"
        android:gravity="center_horizontal"
        android:layout_marginTop="180dp"
    />

</RelativeLayout>
```

MainActivity.java

```
package org.geeksforgeeks.navedmalik.alertdialog;

import android.content.DialogInterface;
import android.support.v7.app.AlertDialog;
import android.support.v7.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);
    }

    // Declare the onBackPressed method
    // when the back button is pressed
    // this method will call
    @Override
    public void onBackPressed()
    {

        // Create the object of
        // AlertDialog Builder class
        AlertDialog.Builder builder
            = new AlertDialog
                .Builder(MainActivity.this);

        // Set the message show for the Alert time
        builder.setMessage("Do you want to exit ?");

        // Set Alert Title
        builder.setTitle("Alert !");

        // Set Cancelable false
        // for when the user clicks on the outside
        // the Dialog Box then it will remain show
        builder.setCancelable(false);

        // Set the positive button with yes name
        // OnClickListener method is use of
        // DialogInterface interface.

        builder
            .setPositiveButton(
                "Yes",
                new DialogInterface
                    .OnClickListener() {

                        @Override
                        public void onClick(DialogInterface dialog,
                                                int which)
                        {

                            // When the user click yes button
                            // then app will close
                            finish();
                        }
                    }
            );

        // Set the Negative button with No name
        // OnClickListener method is use
        // of DialogInterface interface.

```

builder

```

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

                @Override
                public void onClick(DialogInterface dialog,
                                    int which)
                {

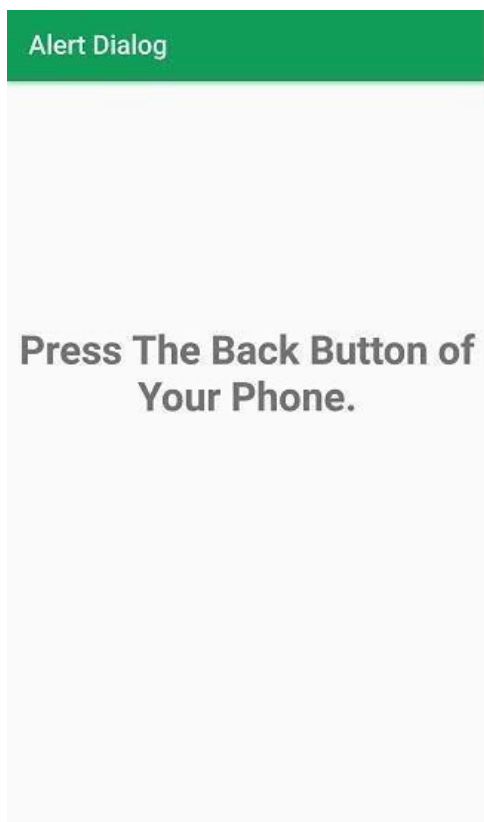
                    // If user click no
                    // then dialog box is canceled.
                    dialog.cancel();
                }
            });

        // Create the Alert dialog
        AlertDialog alertDialog = builder.create();

        // Show the Alert Dialog box
        alertDialog.show();
    }
}

```

Output:-



PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number:10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title:Q 9. Demonstrate Options Menu, Context Menu and Popup Menu in android		

A) Option menu

Mymenu.xml

```

<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto">
<item
    android:id="@+id/item1"
    android:title="Option 1"
    app:showAsAction="never"
    />

<item
    android:id="@+id/item2"
    android:title="Option 2"
    app:showAsAction="never"
    />

<item
    android:id="@+id/item3"
    android:title="Option 3"
    app:showAsAction="never">
    <menu>
        <item android:id="@+id/subitem1"
            android:title="Subitem1"/>
        <item android:id="@+id/subitem2"
            android:title="Subitem2"/>

    </menu>
</item>

</menu>

```

MainActivity.java

```
package com.example.optionmenu;
```

```

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;

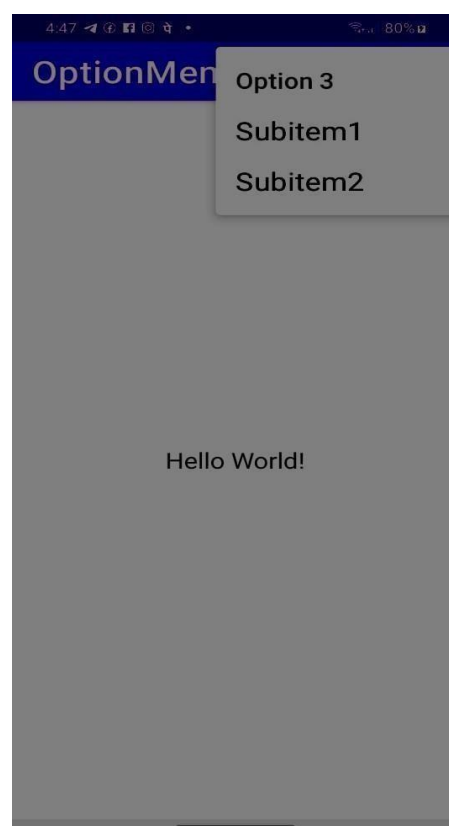
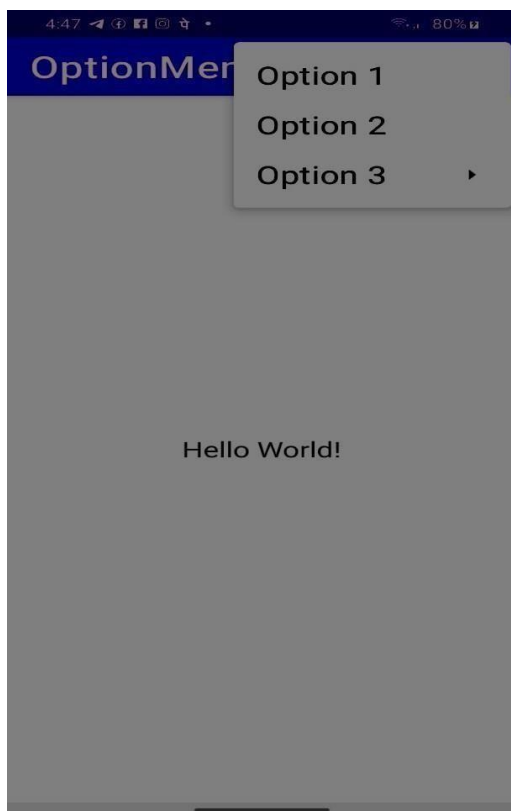
public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        MenuInflater inflater = getMenuInflater();
        inflater.inflate(R.menu.mymenu, menu);
        return true;
    }
}

```

Output:



B Context Menu

ActivityMain.xml

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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="example.javatpoint.com.contextmenu.MainActivity">

    <ListView
        android:layout_width="368dp"
        android:layout_height="495dp"
        android:id="@+id/listView"
        android:layout_marginEnd="8dp"
        android:layout_marginStart="8dp"
        android:layout_marginTop="8dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>
```

main_menu.xml

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

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

    <item android:id="@+id/call"

        android:title="Call" />

    <item android:id="@+id/sms"

        android:title="SMS" />

</menu>
```

MainActivity.java

```
package example.javatpoint.com.contextmenu;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.ContextMenu;
```

```

import android.view.MenuInflater;
import android.view.MenuItem;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ListView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    ListView listView;

    String contacts[]={ "Ajay","Sachin","Sumit","Tarun","Yogesh"};

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        listView=(ListView)findViewById(R.id.listView);
        ArrayAdapter<String> adapter=new
ArrayAdapter<String>(this,android.R.layout.simple_list_item_1,contacts);
        listView.setAdapter(adapter);
        // Register the ListView for Context menu
        registerForContextMenu(listView);
    }

    @Override
    public void onCreateContextMenu(ContextMenu menu, View v,
ContextMenu.ContextMenuInfo menuInfo)
    {
        super.onCreateContextMenu(menu, v, menuInfo);
        MenuInflater inflater = getMenuInflater();
        inflater.inflate(R.menu.menu_main, menu);
        menu.setHeaderTitle("Select The Action");
    }
}

```



```

    }

    @Override

    public boolean onContextItemSelected(MenuItem item){

        if(item.getItemId()==R.id.call){

            Toast.makeText(getApplicationContext(),"calling
code",Toast.LENGTH_LONG).show();

        }

        else if(item.getItemId()==R.id.sms){

            Toast.makeText(getApplicationContext(),"sending sms
code",Toast.LENGTH_LONG).show();

        }else{

            return false;

        }

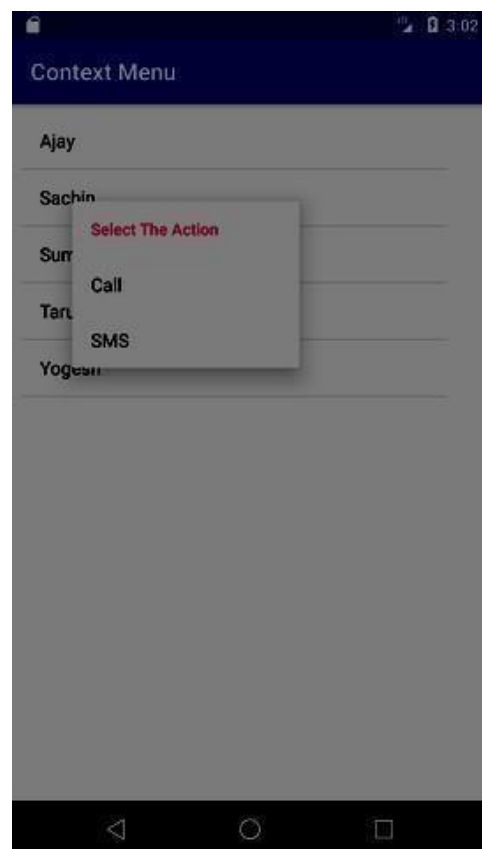
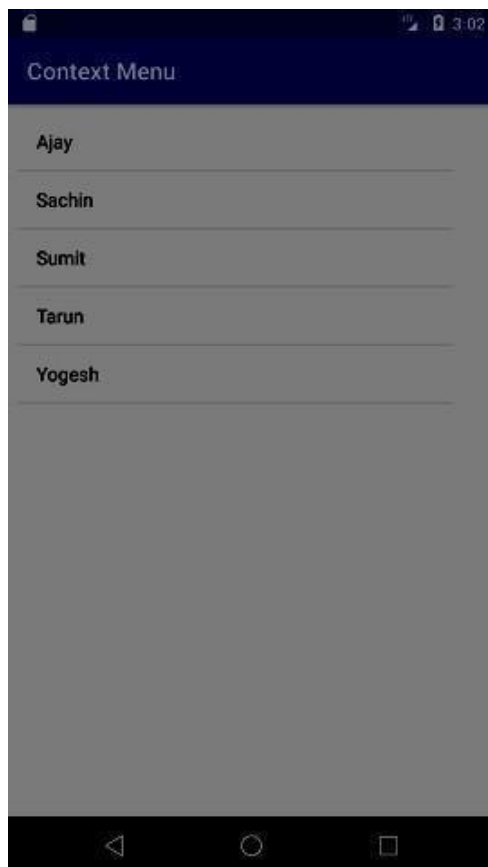
        return true;

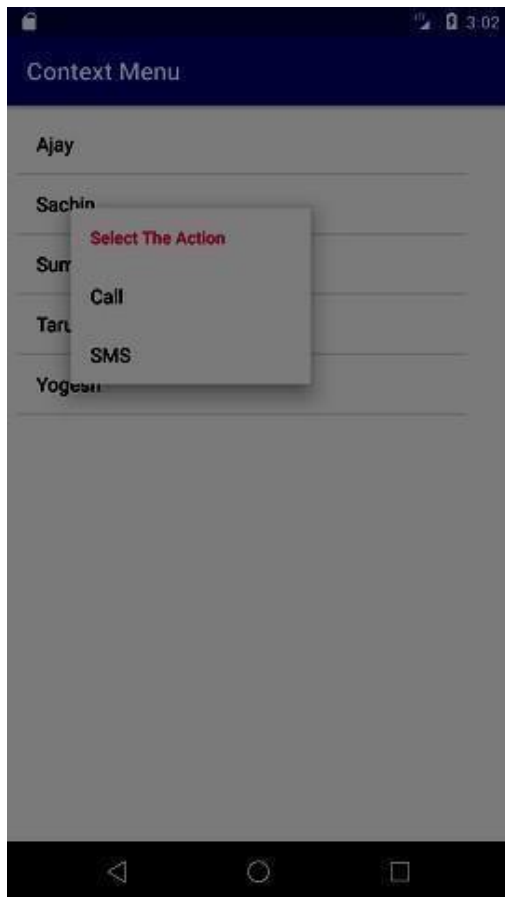
    }

}

```

Output:-





B) Popup menu

ActivityMain.xml

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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="example.javatpoint.com.popupmenu.MainActivity">

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/button"
        android:text="Click"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
```

```

</android.support.constraint.ConstraintLayout>
PopupMenu.xml
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
    <item
        android:id="@+id/one"
        android:title="One" />
    <item
        android:id="@+id/two"
        android:title="Two"/>
    <item
        android:id="@+id/three"
        android:title="Three"/>
</menu>

```

MainActivity.java

```
package example.javatpoint.com.popupmenu;
```

```

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.PopupMenu;
import android.widget.Toast;

```

```

public class MainActivity extends AppCompatActivity {
    Button button;

```

```
    @Override
```

```

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

```

```

        button = (Button) findViewById(R.id.button);
        button.setOnClickListener(new View.OnClickListener() {

```

```
            @Override
```

```

            public void onClick(View v) {
                //Creating the instance of PopupMenu
                PopupMenu popup = new PopupMenu(MainActivity.this, button);
                //Inflating the Popup using xml file
                popup.getMenuInflater().inflate(R.menu.popup_menu, popup.getMenu());

```

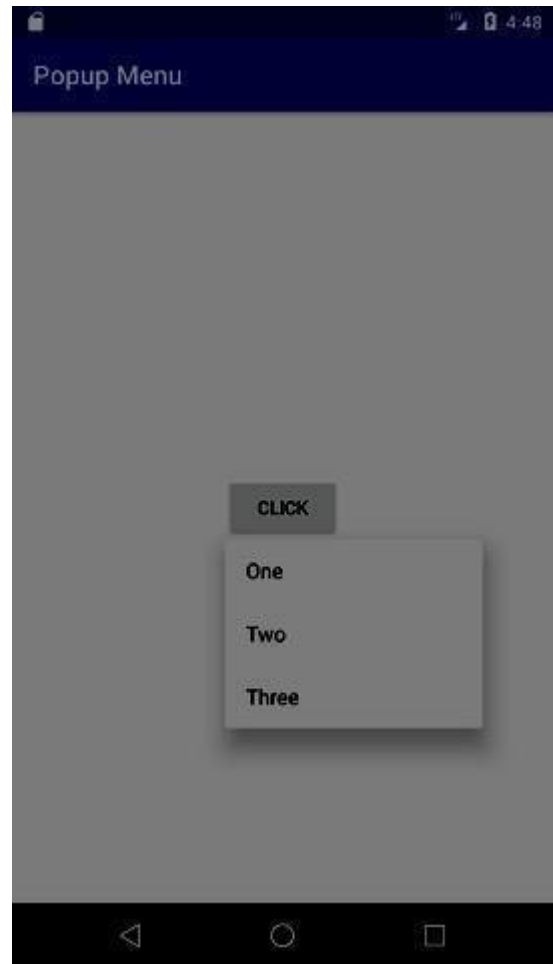
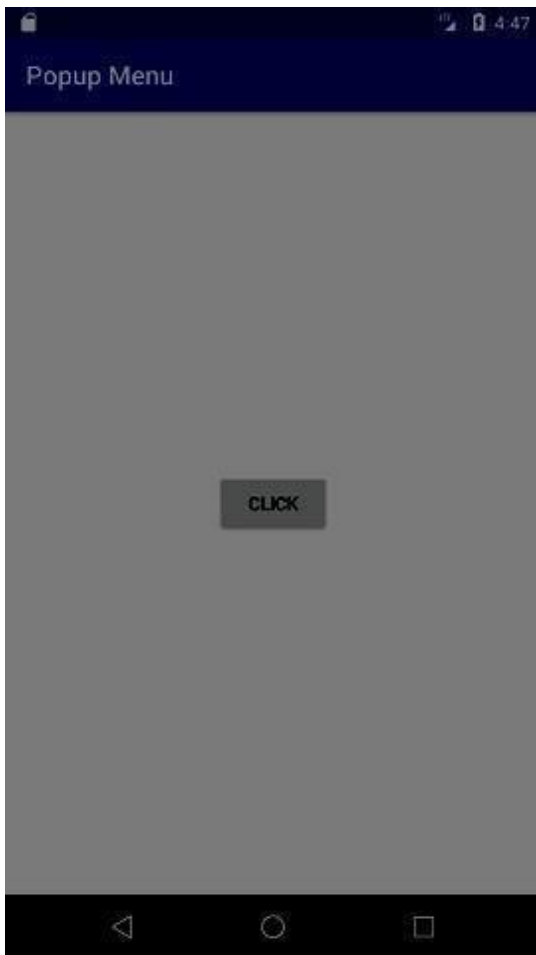
```

                //registering popup with OnMenuItemClickListener
                popup.setOnMenuItemClickListener(new
                PopupMenu.OnMenuItemClickListener() {
                    public boolean onMenuItemClick(MenuItem item) {
                        Toast.makeText(MainActivity.this, "You Clicked : " + item.getTitle(),
                        Toast.LENGTH_SHORT).show();
                        return true;
                    }
                }

```

```
    });  
  
    popup.show();//showing popup menu  
  }  
}); //closing the setOnClickListener method  
}  
}
```

Output:



PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number:10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title: Q10. Write an application to produce Notification.		

activity_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout xmlns:android="http://schemas.android.co
m/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="example.javatpoint.com.androidnotification.MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="ANDROID NOTIFICATION"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.091"
        android:textAppearance="@style/Base.TextAppearance.AppCompat.Medium"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/button"
        android:layout_marginBottom="112dp"
        android:layout_marginEnd="8dp"
        android:layout_marginStart="8dp"

```

```

        android:text="Notify"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent" />

</android.support.constraint.ConstraintLayout>

```

activity_notification_view.xml

```

<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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="example.javatpoint.com.androidnotification.NotificationView">

    <TextView
        android:id="@+id/textView2"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:text="your detail of notification..."
        android:textAppearance="@style/Base.TextAppearance.AppCompat.Medium" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="8dp"
        android:layout_marginEnd="8dp"
        android:layout_marginStart="8dp"
        android:layout_marginTop="8dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.096"
        app:layout_constraintStart_toStartOf="parent"

```

```

        app:layout_constraintTop_toBottomOf="@+id/textView2"
        app:layout_constraintVertical_bias="0.206"
        android:textAppearance="@style/Base.TextAppearance.AppCompat.Medium"/>
</android.support.constraint.ConstraintLayout>

```

MainActivity.java

```

package example.javatpoint.com.androidnotification;

import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;
import android.support.v4.app.NotificationCompat;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {
    Button button;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button = findViewById(R.id.button);
        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                addNotification();
            }
        });
    }

    private void addNotification() {
        NotificationCompat.Builder builder =
            new NotificationCompat.Builder(this)
                .setSmallIcon(R.drawable.messageicon) //set icon for notification
                .setContentTitle("Notifications Example") //set title of notification
    }
}

```

```

        .setContentText("This is a notification message");//this is notification message
        .setAutoCancel(true) // makes auto cancel of notification
        .setPriority(NotificationCompat.PRIORITY_DEFAULT); //set priority of
notification

```

```

Intent notificationIntent = new Intent(this, NotificationView.class);
notificationIntent.addFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP);
//notification message will get at NotificationView
notificationIntent.putExtra("message", "This is a notification message");

```

```

PendingIntent pendingIntent = PendingIntent.getActivity(this, 0, notificationIntent,
        PendingIntent.FLAG_UPDATE_CURRENT);
builder.setContentIntent(pendingIntent);

```

```

        NotificationManager manager = (NotificationManager) getSystemService(Cntext.N
OTIFICATION_SERVICE);
        manager.notify(0, builder.build());
    }
}

```

NotificationView.java

```

package example.javatpoint.com.androidnotification;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
import android.widget.Toast;

public class NotificationView extends AppCompatActivity {
    TextView textView;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_notification_view);
        textView = findViewById(R.id.textView);
        //getting the notification message
        String message=getIntent().getStringExtra("message");
    }
}

```



```

        textView.setText(message);
    }
}

```

strings.xml

```

<resources>
    <string name="app_name">AndroidNotification</string>
    <string name="notification_activity">NotificationView</string>
</resources>

```

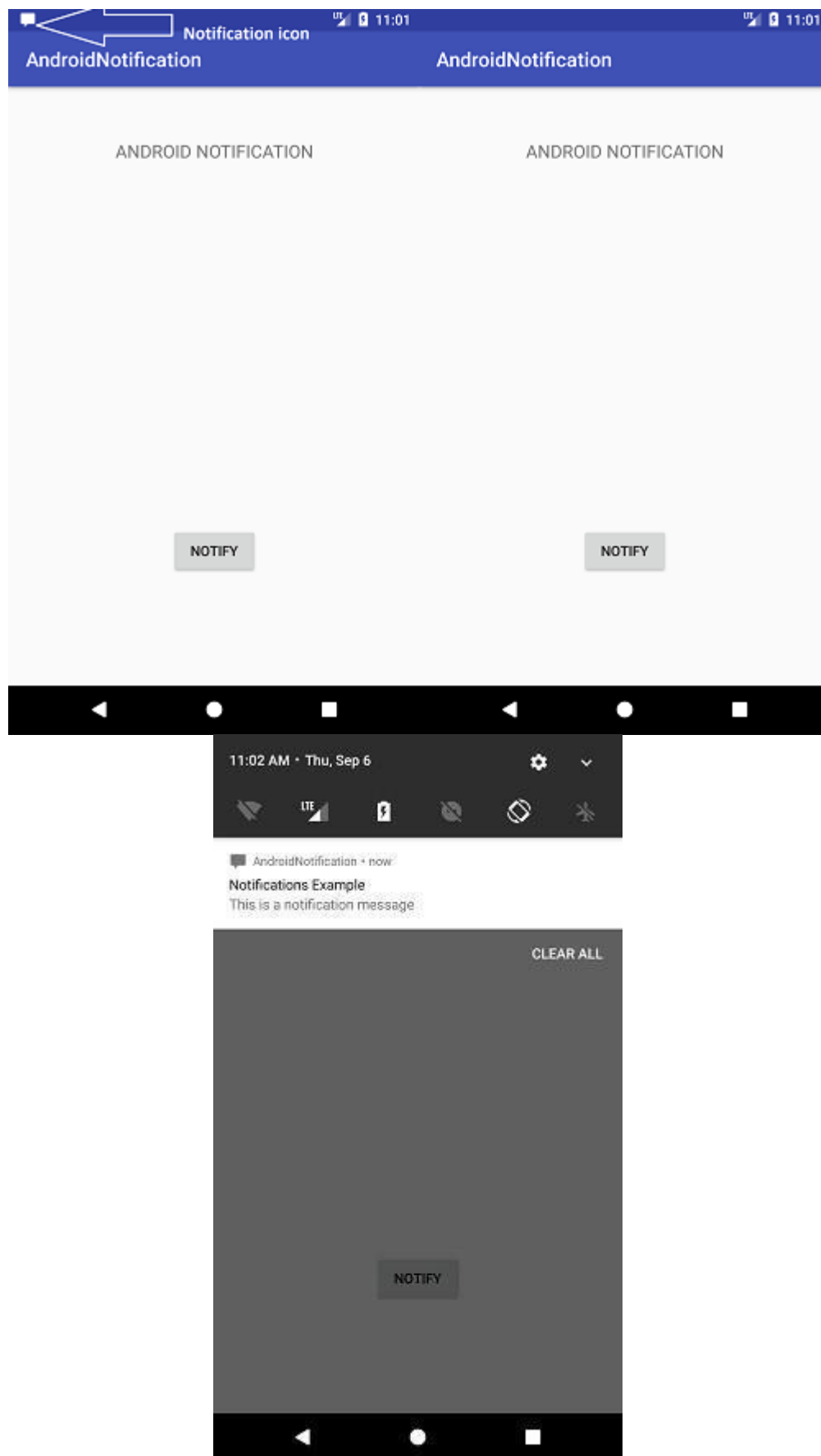
AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="example.javatpoint.com.androidnotification">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <activity android:name=".NotificationView"
            android:label="@string/notification_activity"
            android:parentActivityName=".MainActivity">
            <meta-data
                android:name="android.support.PARENT_ACTIVITY"
                android:value=".MainActivity"/>
        </activity>
    </application>
</manifest>

```

Output:



PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number:10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title: Q11. Demonstrate WebView to display the web pages in an android application ActivityMain.xml		

Program:-

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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="example.javatpoint.com.webview.MainActivity">
```

```
<WebView
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:id="@+id/webView"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

```
</android.support.constraint.ConstraintLayout>
```

mainActivity.java

```
package example.javatpoint.com.webview;
```

```
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.webkit.WebView;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        WebView mywebview = (WebView) findViewById(R.id.webView);
        // mywebview.loadUrl("https://www.javatpoint.com/");
```

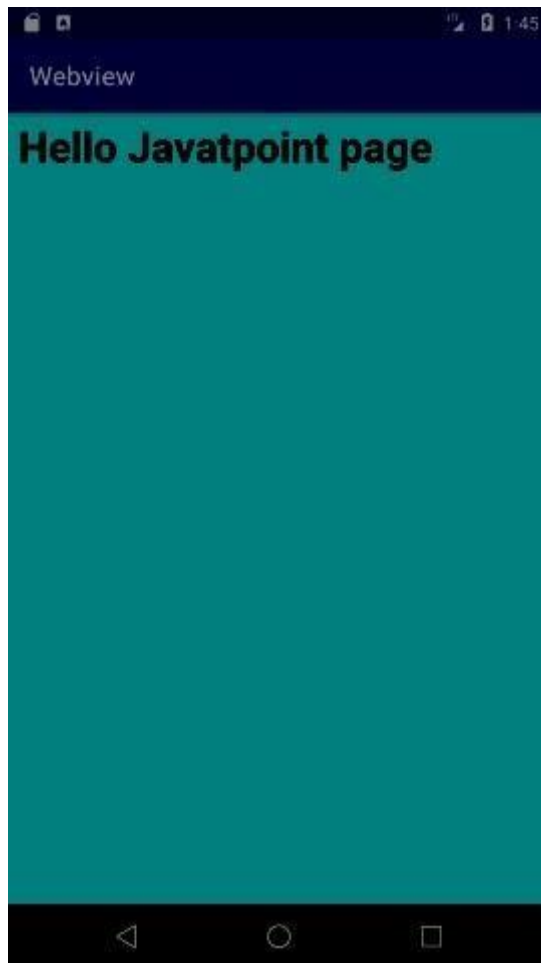
```

/*String data = "<html><body><h1>Hello, Javatpoint!</h1></body></html>";
mywebview.loadData(data, "text/html", "UTF-8"); */

mywebview.loadUrl("file:///android_asset/myresource.html");
}
}

```

Output:



PIRENS Institute of Business Management and Administration, Loni BK.		
Roll Number: 10097	Sign:	Date: / /
Student Name: Yash Bora		
Subject Name: Mobile Application Development		
Program Title: Q 12. Write an android app to write JSON data into a file and read JSON data from created file.		

Activity_man.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=".MainActivity">

    <TextView
        android:id="@+id/name" android:layout_width="wrap_content"
        android:layout_height="wrap_content" android:layout_centerHorizontal="true"
        android:layout_marginTop="50dp" android:text="Name" android:textColor="#000"
        android:textSize="20sp" />

    <TextView
        android:id="@+id/salary" android:layout_width="wrap_content"
        android:layout_height="wrap_content" android:layout_centerHorizontal="true"
        android:layout_marginTop="80dp" android:text="Salary" android:textColor="#000"
        android:textSize="20sp"
    />

</RelativeLayout>

```

MainActivity.java

```

@SuppressLint("SetTextI18n")

@Override
protected void onCreate(Bundle savedInstanceState)
{
    super.onCreate(savedInstanceState); setContentView(R.layout.activity_main);

    // get the reference of TextView's employeeName = findViewById(R.id.name);
    employeeSalary = findViewById(R.id.salary);

```

```
try {  
    // get JSONObject from JSON file  
    JSONObject obj = (new JSONObject(JSON_STRING)).getJSONObject("employee");  
    // get employee name and salary  
    name = obj.getString("name"); salary = obj.getString("salary");  
    // set employee name and salary in TextView's employeeName.setText("Name: "+name);  
    employeeSalary.setText("Salary: "+salary);  
  
    } catch (JSONException e) { e.printStackTrace();  
    }  
    }  
    }
```

Output:-

