



Exam Seat No:

02

**Satish Pradhan Dnyanasadhana College**

**Thane**

## **Certificate**

This is to certify that **Mr. Vivek Bhardwaj** of **T.Y.B.Sc. Information Technology (Semester – VI)** Class has successfully completed all the practical work in subject **Advanced Mobile Programming** during the Year 2024-2025 in partial fulfilment of Information Technology Practical Examination conducted by University of Mumbai.

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**Head of the Department**

**Date: 4 / 3 / 2 0 2 5**

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SR.NO	PRACTICAL NAME	SIGN
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**Practical 1 -****Create an android application to display Hello TYIT.****Code -****XML**

//activity\_hello.xml

&lt;?xml version="1.0" encoding="utf-8"?&gt;

&lt;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=".HelloActivity"

android:background="#CE93D8"&gt;

&lt;TextView

android:id="@+id/textView3"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerInParent="true"

android:text="Hello TYIT"

android:textSize="40dp"

android:textColor="#0277BD"/&gt;

&lt;/RelativeLayout

**Output –**



**Practical 2 –**

**Insert new content in the following resources and demonstrate their uses in the android application, android resources (color, theme, string, drawable, dimension, image).**

**Code –****XML**

//activity\_reg.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=".RegActivity"
    android:background="@drawable/phonebacktwo"
    >
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="41dp"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="41dp"
        android:text="USER REGISTRATION"
        android:textColor="#94CAF9"
        android:textSize="30dp" />
```

```
<EditText
    android:id="@+id/editText"
    android:layout_width="260dp"
    android:layout_height="40dp"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="92dp"
    android:background="#8888"
    android:textColorHint="#000000"
    android:ems="10"
    android:hint=" Username"
    android:inputType="textPersonName" />
```

```
<EditText
    android:id="@+id/editText2"
    android:layout_width="260dp"
    android:layout_height="40dp"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="150dp"
    android:background="#8888"
    android:ems="10"
    android:hint="Password"
    android:inputType="textPassword"
    android:textColorHint="#000000" />
```

```
<EditText
    android:id="@+id/editText3"
    android:layout_width="260dp"
```

```
        android:layout_height="40dp"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="210dp"
        android:background="#8888"
        android:ems="10"
        android:hint=" Phone No."
        android:inputType="phone"
        android:textColorHint="#000000" />
<EditText
    android:id="@+id/editText4"
    android:layout_width="260dp"
    android:layout_height="40dp"
    android:layout_centerInParent="true"
    android:layout_marginTop="150dp"
    android:background="#8888"
    android:textColorHint="#000000"
    android:ems="10"
    android:hint=" Email ID"
    android:inputType="textEmailAddress" />
<Button
    android:id="@+id/button"
    android:layout_width="137dp"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginBottom="167dp"
```



```
android:background="@android:color/holo_orange_dark"
```

```
android:text="Register" />
```

```
</RelativeLayout>
```

**Output -**

**Practical 3 –**

**Write an android application to perform android activity life cycle.**

**Code –****XML**

//activity\_life\_cycle.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=".LifeCycleActivity"
```

```
    android:background="@drawable/phoneback"
```

```
    android:alpha="0.8">
```

```
<TextView
```

```
    android:id="@+id/textView2"
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_alignParentTop="true"
```

```
    android:layout_centerHorizontal="true"
```

```
        android:layout_marginTop="99dp"
        android:textSize="40dp"
        android:textColor="#ffffff"
        android:text="Android Life Cycle" />
</RelativeLayout>
```

## JAVA

```
//LifeCycleActivity.java
```

```
package com.example.student.demo;
```

```
import android.support.v7.app.AppCompatActivity;
```

```
import android.app.Activity;
```

```
import android.os.Bundle;
```

```
import android.util.Log;
```

```
public class LifeCycleActivity extends AppCompatActivity {
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_life_cycle);
```

```
        Log.d("lifecycle", "onCreate invoked");
```

```
    }
```

```
    @Override
```

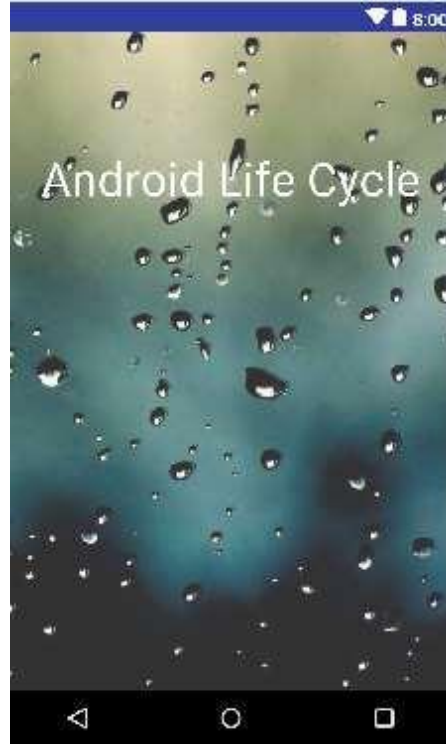
```
    protected void onStart() {
```

```
        super.onStart();
```

```
        Log.d("lifecycle", "onStart invoked");
```

```
}  
  
@Override  
protected void onResume() {  
    super.onResume();  
    Log.d("lifecycle","onResume invoked");  
}  
  
@Override  
protected void onPause() {  
    super.onPause();  
    Log.d("lifecycle","onPause invoked");  
}  
  
@Override  
protected void onStop() {  
    super.onStop();  
    Log.d("lifecycle","onStop invoked");  
}  
  
@Override  
protected void onRestart() {  
    super.onRestart();  
    Log.d("lifecycle","onRestart invoked");  
}  
  
@Override  
protected void onDestroy() {  
    super.onDestroy();  
    Log.d("lifecycle","onDestroy invoked");  
}  
}
```

**Output –**



**Practical 4 -****Write an android application to show different layout designs – List View****Code –****XML**

//activity\_listview.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=".list_view">

    <ListView
        android:id="@+id/listview1"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:outlineAmbientShadowColor="@color/colorAccent"
        android:divider="@color/colorAccent"
        android:dividerHeight="10dp"></ListView>

</LinearLayout>
```

**JAVA**

```
//ListView.java
```

```
package com.example.student.demo;
```

```
import android.support.v7.app.AppCompatActivity;
```

```
import android.os.Bundle;
```

```
import android.app.Activity;
```

```
import android.view.Menu;
```

```
import android.widget.ArrayAdapter;
```

```
import android.widget.ListView;
```

```
public class list_view extends AppCompatActivity {
```

```
    String[] mobileArray = {"Android", "IPhone", "WindowsMobile", "Blackberry",  
        "WebOS", "Ubuntu", "Windows7", "Max OS X"};
```

```
@Override
```

```
protected void onCreate(Bundle savedInstanceState) {
```

```
    super.onCreate(savedInstanceState);
```

```
    setContentView(R.layout.activity_list_view);
```

```
    ArrayAdapter adapter = new ArrayAdapter<String>(this,  
    R.layout.activity_listview, mobileArray);
```

```
    ListView listView = findViewById(R.id.listview1);
```

```
    listView.setAdapter(adapter);
```

```
}  
}
```

**Output –**





**Practical 5 –**

**Write an android application to setup the appbar and create calculator using UI components**

**Code –**

**XML**

//activity\_calculator.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"
    android:background="@drawable/homescreen"
    tools:context=".CalculatorActivity">
    <EditText
        android:id="@+id/no1"
        android:layout_width="368dp"
        android:layout_height="68dp"
        android:layout_alignParentStart="
            true"
        android:layout_alignParentLeft
            ="true"
        android:layout_alignParentTop
            ="true"
        android:layout_centerHorizontal="
            true"
        android:layout_marginStart="1
            18dp"
        android:layout_marginLeft="1
            18dp"
        android:layout_marginTop="1
            36dp"
```

```
android:layout_alignParentStart="true"
android:layout_alignParentLeft="true"
android:layout_alignParentTop="true"
android:layout_centerHorizontal="true"
android:layout_marginStart="118dp"
android:layout_marginLeft="118dp"
android:layout_marginTop="136dp"
android:ems="10"
    android:hint="Enter no. 1"
    android:inputType="textPersonName"
    android:textColorHint="@color/colorPrimaryDark" />
<EditText
    android:id="@+id/no2"
    android:layout_width="368dp"
    android:layout_height="65dp"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="224dp"
    android:ems="10"
    android:hint="Enter no. 2"
    android:textColorHint="@color/colorPrimaryDark"
    android:inputType="textPersonName" />
<EditText
    android:id="@+id/result"
    android:layout_width="366dp"
    android:layout_height="68dp"
    android:layout_alignParentTop="true"
```

```
        android:layout_centerHorizontal="true"
        android:layout_marginTop="300dp"
        android:textColorHint="@color/colorPrimaryDark"
        android:ems="10"
        android:hint="Store Result"
        android:inputType="textPersonName" />
<Button
    android:id="@+id/btnAdd"
    android:layout_width="141dp"
    android:layout_height="66dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentBottom="true"
    android:layout_marginStart="72dp"
    android:layout_marginLeft="72dp"
    android:layout_marginBottom="407dp"
    android:background="#6666"
    android:text="ADD(+)" />
<Button
    android:id="@+id/btnSub"
    android:layout_width="146dp"
    android:layout_height="70dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginStart="343dp"
```

```
android:layout_marginLeft="343dp"  
android:layout_marginBottom="398dp"  
android:background="#6666"  
android:text="SUB(-)" />
```

<Button

```
android:id="@+id/btnMul"  
android:layout_width="148dp"  
android:layout_height="69dp"  
android:layout_alignParentEnd="true"  
android:layout_alignParentRight="true"  
android:layout_alignParentBottom="true"  
android:layout_marginEnd="64dp"  
android:layout_marginRight="64dp"  
android:layout_marginBottom="263dp"  
android:background="#6666"  
android:text="MUL(*)" />
```

<Button

```
android:id="@+id/btnDiv"  
android:layout_width="wrap_content"  
android:layout_height="68dp"  
android:layout_alignParentStart="true"  
android:layout_alignParentEnd="true"  
android:layout_alignParentRight="true"  
android:layout_alignParentBottom="true"  
android:layout_centerHorizontal="true"  
android:layout_marginStart="32dp"  
android:layout_marginEnd="237dp"
```

```
        android:layout_marginRight="237dp"
        android:layout_marginBottom="267dp"
        android:background="#6666"
        android:text="DIV(/)" />
</RelativeLayout>
```

## **JAVA**

```
//CalculatorActivity.java
```

```
package com.example.myapplication;
```

```
import androidx.appcompat.app.AppCompatActivity;
```

```
import android.os.Bundle;
```

```
import android.view.View;
```

```
import android.widget.*;
```

```
import android.content.Intent;
```

```
public class CalculatorActivity extends AppCompatActivity {
```

```
    Button b1,b2,b3,b4;
```

```
    EditText t1,t2,t3;
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_calculator);
```

```
t1=(EditText)findViewById(R.id.no1);
t2=(EditText)findViewById(R.id.no2);
t3=(EditText)findViewById(R.id.result);
b1=(Button)findViewById(R.id.btnAdd);
b2=(Button)findViewById(R.id.btnSub);
b3=(Button)findViewById(R.id.btnDiv);
b4=(Button)findViewById(R.id.btnMul);

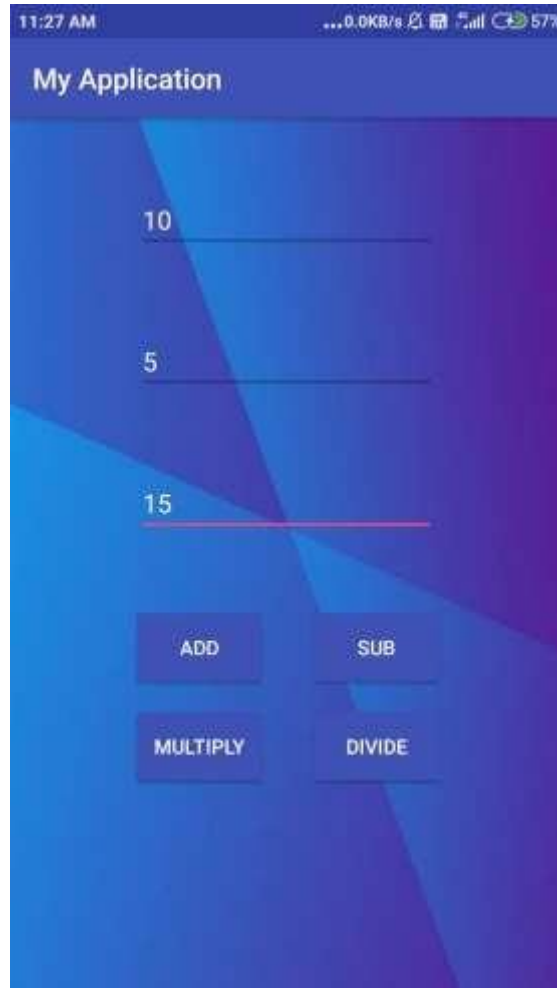
b1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Integer a=Integer.parseInt(t1.getText().toString());
        Integer b=Integer.parseInt(t2.getText().toString());
        Integer c=a+b;
        t3.setText(c.toString());
    }
});

b2.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Integer a=Integer.parseInt(t1.getText().toString());
        Integer b=Integer.parseInt(t2.getText().toString());
        Integer c=a-b;
        t3.setText(c.toString());
    }
});
```

```
b3.setOnClickListener(new
View.OnClickListener() {
@Override
public void onClick(View view) {
Integer a=Integer.parseInt(t1.getText().toString());
Integer b=Integer.parseInt(t2.getText().toString());
Integer c=a/b;
t3.setText(c.toString());
}
});

b4.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View view) {
Integer a=Integer.parseInt(t1.getText().toString());
Integer b=Integer.parseInt(t2.getText().toString());
Integer c=a*b;
t3.setText(c.toString());
}
});
}
```

**Output –**





**Practical 6 –**

**Create an android application for the following menu item, the appropriate toast should appear by clicking on the item. (Home, Gallery, Settings, etc.)**

**Code –****XML (app/res/menu)**

//main\_menu.xml

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

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

    <item android:id="@id/home" android:title="Home"></item>

    <item android:id="@+id/listview" android:title="Listview"></item>

    <item android:id="@+id/setting" android:title="Settings"></item>

    <item android:id="@+id/gallery" android:title="Gallary"></item>

</menu>
```

//activity\_menu.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=".MenuActivity">

</RelativeLayout>
```

**JAVA**

```
//MenuActivity.java

package com.example.student.demo;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.content.Intent;
import android.view.Menu;
import android.view.MenuItem;
import android.view.MenuInflater;
import android.view.View;
import android.widget.Toast;

public class MenuActivity extends AppCompatActivity {

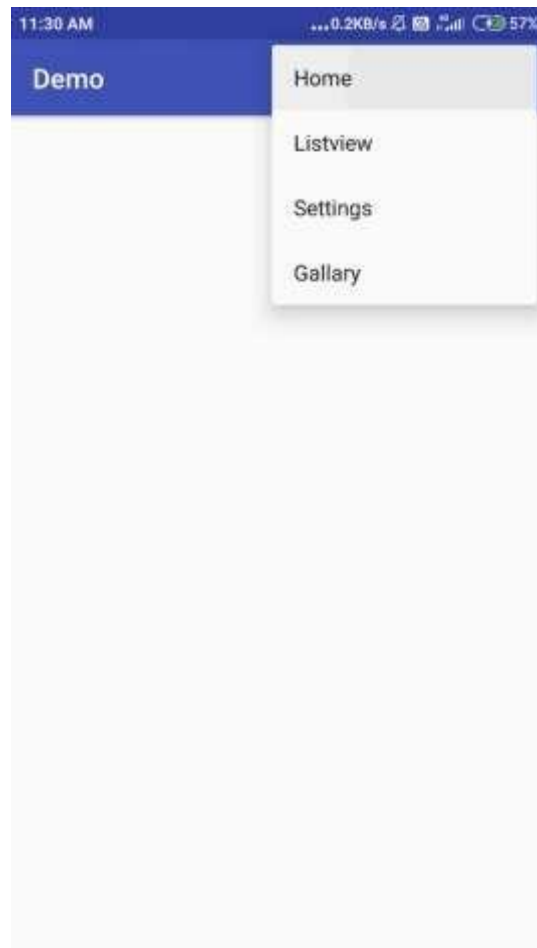
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_menu);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        getMenuInflater().inflate(R.menu.main_menu, menu);
        return super.onCreateOptionsMenu(menu);
    }

    @Override
```

```
public boolean onOptionsItemSelected(MenuItem item) {  
    if(item.getItemId()==R.id.home)  
    {  
        Intent i = new Intent(getApplicationContext(),MainActivity.class);  
        startActivity(i);  
    }  
    if(item.getItemId()==R.id.listview)  
    {  
        Intent i = new Intent(getApplicationContext(),list_view.class);  
        startActivity(i);  
    }  
    if(item.getItemId()==R.id.setting)  
    {  
        Toast.makeText(this, "Settings Menu now selected!", Toast.LENGTH_SHORT).show();  
    }  
    if(item.getItemId()==R.id.gallary)  
    {  
        Toast.makeText(this, "Gallary Now Selected!", Toast.LENGTH_SHORT).show();  
    }  
    return super.onOptionsItemSelected(item);  
}  
  
}
```

**Output –**



**Practical 7**

**Create an android application to pass the data from one activity to another activity in the same application using Intent.**

**Code –**

**XML (app/res/layout)**

//activity\_first.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=".FirstActivity"
    android:background="#F6F6">
    <EditText
        android:id="@+id/editUsername"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="167dp"
        android:ems="10"
        android:hint="Enter Username"
        android:inputType="textPersonName" />
    <Button
        android:id="@+id/btnData"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:background="@android:color/holo_blue_light"
        android:text="Button"
        tools:text="Data Transfer" />
</RelativeLayout>

//activity_second.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=".SecondActivity">
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="119dp"
        android:text="TextView"
        android:textSize="30sp"
        tools:text="Welcome User" />
    <TextView
```

```
        android:id="@+id/txtUsername"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:text="TextView"
        android:textSize="36sp" />
</RelativeLayout>
```

### **JAVA (app/java/appname)**

```
//FirstActivity.java
package com.example.student.prax7to11;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.*;
import android.content.Intent;

public class FirstActivity extends AppCompatActivity {

    Button b1;
    EditText t1;

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

```
b1 = findViewById(R.id.btnData);

    t1 = (EditText) findViewById(R.id.editUsername);
    b1.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View view) {

            String str = t1.getText().toString();
            Intent i = new Intent(FirstActivity.this,SecondActivity.class);
            i.putExtra("username",str);
            startActivity(i);

        }

    });

}
```



```
//SecondActivity.java
package com.example.student.prax7to11;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.content.Intent;
import android.widget.*;

public class SecondActivity extends AppCompatActivity {

    TextView t1;

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

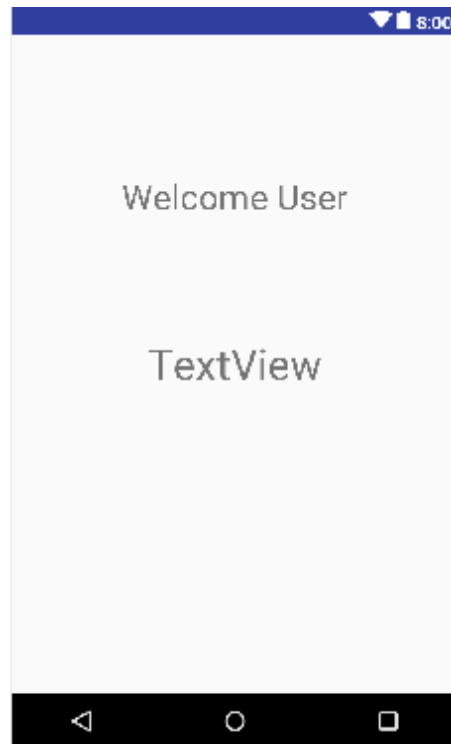
        t1=(TextView) findViewById(R.id.txtUsername);
        String str = getIntent().getStringExtra("username");
        t1.setText(str);
    }
}
```

**Output –**

//first activity



//second activity



**Practical 8 –**

**Create an android application to generate two notifications, one notification will be non-clickable and another is clickable (It will reload the current application)**

**Code –****XML (app/res/menu)**

//main\_menu1.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/action_5"
        app:showAsAction="never"
        android:title="5 seconds"
    />
    <item
        android:id="@+id/action_10"
        app:showAsAction="never"
        android:title="10 seconds"
    />
    <item
        android:id="@+id/action_30"
        app:showAsAction="never"
        android:title="30 seconds"
    />
</menu>
```

**JAVA**

```
//MyNotificationPublisher.java
```

```
package com.example.student.demo;
```

```
import android.app.Notification ;
```

```
import android.app.NotificationChannel ;
```

```
import android.app.NotificationManager ;
```

```
import android.content.BroadcastReceiver ;
```

```
import android.content.Context ;
```

```
import android.content.Intent ;
```

```
import android.support.v7.app.AppCompatActivity;
```

```
import static com.example.student.demo.MainActivity.NOTIFICATION_CHANNEL_ID;
```

```
public class MyNotificationPublisher extends BroadcastReceiver {
```

```
    public static String NOTIFICATION_ID = "notification-id" ;
```

```
    public static String NOTIFICATION = "notification" ;
```

```
    public void onReceive (Context context , Intent intent) {
```

```
        NotificationManager notificationManager = (NotificationManager)
        context.getSystemService(Context. NOTIFICATION_SERVICE ) ;
```

```
        Notification notification = intent.getParcelableExtra( NOTIFICATION ) ;
```

```
        if (android.os.Build.VERSION.SDK_INT >= android.os.Build.VERSION_CODES.O ) {
```

```
            int importance = NotificationManager.IMPORTANCE_HIGH ;
```

```
            NotificationChannel notificationChannel = new NotificationChannel(
            NOTIFICATION_CHANNEL_ID , "NOTIFICATION_CHANNEL_NAME" , importance) ;
```

```
        assert notificationManager != null;
        notificationManager.createNotificationChannel(notificationChannel);
    }
    int id = intent.getIntExtra( NOTIFICATION_ID , 0 );
    assert notificationManager != null;
    notificationManager.notify(id , notification);
}
}
```

//MainActivity.java

```
package com.example.student.demo;

import android.app.AlarmManager;
import android.app.Notification;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;
import android.os.Bundle;
import android.os.SystemClock;
import android.support.v4.app.NotificationCompat;
import android.support.v7.app.AppCompatActivity;
import android.view.Menu;
import android.view.MenuItem;
```

```
public class MainActivity extends AppCompatActivity {  
    public static final String NOTIFICATION_CHANNEL_ID = "10001" ;  
    private final static String default_notification_channel_id = "default" ;  
    @Override  
    protected void onCreate (Bundle savedInstanceState) {  
        super .onCreate(savedInstanceState) ;  
        setContentView(R.layout. activity_main ) ;  
    }  
    @Override  
    public boolean onCreateOptionsMenu (Menu menu) {  
        // Inflate the menu; this adds items to the action bar if it is present.  
        getMenuInflater().inflate(R.menu.main_menu1 , menu) ;  
        return true;  
    }  
    @Override  
    public boolean onOptionsItemSelected (MenuItem item) {  
        switch (item.getItemId()) {  
            case R.id. action_5 :  
                scheduleNotification(getNotification( "5 second delay" ) , 5000 ) ;  
                return true;  
            case R.id. action_10 :  
                scheduleNotification(getNotification( "10 second delay" ) , 10000 ) ;  
                return true;  
        }  
    }  
}
```

```
        default :  
            return super .onOptionsItemSelected(item) ;  
        }  
    }  
    private void scheduleNotification (Notification notification , int delay) {  
        Intent notificationIntent = new Intent( this, MyNotificationPublisher.class ) ;  
  
        notificationIntent.putExtra(MyNotificationPublisher.NOTIFICATION_ID , 1 ) ;  
        notificationIntent.putExtra(MyNotificationPublisher.NOTIFICATION , notification) ;  
  
        PendingIntent pendingIntent = PendingIntent. getBroadcast ( this, 0 , notificationIntent ,  
PendingIntent. FLAG_UPDATE_CURRENT ) ;  
  
        long futureInMillis = SystemClock. elapsedRealtime () + delay ;  
  
        AlarmManager alarmManager = (AlarmManager) getSystemService(Context.  
ALARM_SERVICE ) ;  
  
        assert alarmManager != null;  
  
        alarmManager.set(AlarmManager.ELAPSED_REALTIME_WAKEUP , futureInMillis ,  
pendingIntent) ;  
    }  
    private Notification getNotification (String content) {  
        NotificationCompat.Builder builder = new NotificationCompat.Builder( this,  
default_notification_channel_id ) ;  
  
        builder.setContentTitle( "Scheduled Notification" ) ;  
        builder.setContentText(content) ;  
        builder.setSmallIcon(R.drawable.ic_launcher_foreground ) ;  
        builder.setAutoCancel( true ) ;  
        builder.setChannelId( NOTIFICATION_CHANNEL_ID ) ;  
        return builder.build() ;  
    }  
}
```



//AndroidManifest.xml

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

<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.student.demo">

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

    <uses-permission android:name="android.permission.BROADCAST_SMS"
tools:ignore="ProtectedPermissions" />

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

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="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>

            <receiver android:name=".MyNotificationPublisher" ></receiver>
            <activity android:name=".RegActivity" />
            <activity android:name=".LifeCycleActivity" />
        </activity>
    </application>
</manifest>
```

```
<activity android:name=".list_view"></activity>
<activity android:name=".MenuActivity">
</activity>
<activity android:name=".PrimaryActivity"></activity>
<activity android:name=".WelcomeActivity" />
<activity android:name=".HelloActivity"></activity>
</application>

</manifest>
```

**Output –**



**Practical 9 –**

**Create an android application using SQLite database to manage the student data by using Insert, Update and delete operations and display the data in Alert Dialogue. Allow user to insert Roll no., name and marks of student.**

**Code –****XML**

//activity\_data.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=".DataActivity"
    android:background="@drawable/phonebacktwo">

    <EditText
        android:id="@+id/studId"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="75dp"
        android:ems="10"
        android:hint="Enter Student ID"
        android:inputType="textPersonName"
        android:textColor="#ffffff"
        android:textColorHint="#ffffff" />
```

```
<EditText
    android:id="@+id/txtftname"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/studId"
    android:layout_centerHorizontal="true"
    android:ems="10"
    android:hint="Enter Firstname"
    android:inputType="textPersonName"
    android:textColor="#ffffff"
    android:textColorHint="#ffffff" />
```

```
<EditText
    android:id="@+id/txtlname"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/txtftname"
    android:layout_centerHorizontal="true"
    android:ems="10"
    android:hint="Enter Lastname"
    android:inputType="textPersonName"
    android:textColor="#ffffff"
    android:textColorHint="#ffffff" />
```

```
<EditText
    android:id="@+id/txtmarks"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
```

```
android:layout_below="@+id/txtlname"
android:layout_centerHorizontal="true"
android:ems="10"
android:hint="Enter Marks"
android:inputType="textPersonName"
android:textColor="#ffffff"
android:textColorHint="#ffffff" />
```

<Button

```
android:id="@+id/btnAdd"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentBottom="true"
android:layout_alignStart="@+id/studId"
android:layout_marginBottom="208dp"
android:text="ADD"
android:layout_alignLeft="@+id/studId" />
```

<Button

```
android:id="@+id/btnShow"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignEnd="@+id/studId"
android:layout_alignTop="@+id/btnAdd"
android:text="SHOW ALL"
android:layout_alignRight="@+id/studId" />
```

```
<Button
    android:id="@+id/btnUpdate"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_alignStart="@+id/studId"
    android:layout_marginBottom="121dp"
    android:text="UPDATE"
    android:layout_alignLeft="@+id/studId" />

<Button
    android:id="@+id/btnDelete"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignStart="@+id/btnShow"
    android:layout_alignTop="@+id/btnUpdate"
    android:text="DELETE"
    android:layout_alignLeft="@+id/btnShow" />

</RelativeLayout>
```

## JAVA

```
//DatabaseHelper.java
```

```
package com.example.student.demo;
```

```
import android.content.ContentValues;
```

```
import android.content.Context;
```

```
import android.database.Cursor;
```

```
import android.database.sqlite.SQLiteDatabase;
```

```
import android.database.sqlite.SQLiteOpenHelper;

public class DatabaseHelper extends SQLiteOpenHelper {

    public static final String DATABASE_NAME = "Student.db";
    public static final String TABLE_NAME = "Student_table";
    public static final String COL1 = "ID";
    public static final String COL2 = "FIRSTNAME";
    public static final String COL3 = "LASTNAME";
    public static final String COL4 = "MARKS";

    public DatabaseHelper(Context context) {
        super(context, DATABASE_NAME, null, 1);
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("create table " + TABLE_NAME + " (ID INTEGER PRIMARY KEY AUTOINCREMENT,FIRSTNAME TEXT, LASTNAME TEXT, MARKS INTEGER)");
        // db.execSQL("create table " + TABLE_NAME + " (ID INTEGER PRIMARY KEY AUTOINCREMENT,FIRSTNAME TEXT, LASTNAME TEXT, MARKS INTEGER)");
    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int i, int i1) {
        db.execSQL("DROP TABLE IF EXISTS "+TABLE_NAME);
    }
}
```

```
public boolean insertData(String firstname,String lastname,String marks) {  
    SQLiteDatabase sqLiteDatabase = this.getWritableDatabase();  
    ContentValues contentValues = new ContentValues();  
    contentValues.put(COL2,firstname);  
    contentValues.put(COL3,lastname);  
    contentValues.put(COL4,marks);  
  
    long result = sqLiteDatabase.insert(TABLE_NAME,null ,contentValues);  
    if(result == -1)  
        return false;  
    else  
        return true;  
}  
  
public Cursor showData() {  
    SQLiteDatabase db = this.getWritableDatabase();  
    Cursor res = db.rawQuery("select * from "+TABLE_NAME,null);  
    return res;  
}  
public boolean updateData(String id,String firstname,String lastname,String marks) {  
    SQLiteDatabase db = this.getWritableDatabase();  
    ContentValues contentValues = new ContentValues();  
    contentValues.put(COL1,id);  
    contentValues.put(COL2,firstname);  
    contentValues.put(COL3,lastname);  
    contentValues.put(COL4,marks);  
    db.update(TABLE_NAME, contentValues, "ID = ?",new String[] { id });  
    return true;  
}
```



```
}

public Integer deleteData (String id) {
    SQLiteDatabase db = this.getWritableDatabase();
    return db.delete(TABLE_NAME, "ID = ?",new String[] {id});
}
}
//DataActivity.java
package com.example.student.demo;

import android.database.Cursor;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.*;
import android.content.DialogInterface;
import android.app.AlertDialog;

public class DataActivity extends AppCompatActivity {

    DatabaseHelper myDb;
    Button b1,b2,b3,b4;
    EditText txtId,txtFtName,txtLtName,txtMarks;

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

```
myDb = new DatabaseHelper(this);

b1 = (Button) findViewById(R.id.btnAdd);
b2 = (Button) findViewById(R.id.btnShow);
b3 = (Button) findViewById(R.id.btnUpdate);
b4 = (Button) findViewById(R.id.btnDelete);

txtId = findViewById(R.id.studId);
txtFtName = findViewById(R.id.txtftname);
txtLtName = findViewById(R.id.txtltname);
txtMarks = findViewById(R.id.txtmarks);
AddRecord();
ShowRecord();
UpdateRecord();
DeleteRecord();
}

public void showMessage(String title,String Message){
    AlertDialog.Builder builder = new AlertDialog.Builder(this);
    builder.setCancelable(true);
    builder.setTitle(title);
    builder.setMessage(Message);
    builder.show();
}
private void AddRecord() {
    b1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            boolean isInserted = myDb.insertData(txtFtName.getText().toString(),
            txtLtName.getText().toString(),txtMarks.getText().toString() );
```

```
        if(isInserted)
            Toast.makeText(DataActivity.this,"Data Inserted",Toast.LENGTH_LONG).show();
        else
            Toast.makeText(DataActivity.this,"Data not
Inserted",Toast.LENGTH_LONG).show();
    }
});
}
```

```
private void ShowRecord() {
    b2.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {

            Cursor res = myDb.showData();
            if(res.getCount() == 0) {
                // show message
                showMessage("Error","Nothing found");
                return;
            }

            StringBuilder buffer = new StringBuilder();
            while (res.moveToNext()) {
                buffer.append("Id :").append(res.getString(0)).append("\n");
                buffer.append("Name :").append(res.getString(1)).append("\n");
                buffer.append("Surname :").append(res.getString(2)).append("\n");
                buffer.append("Marks :").append(res.getString(3)).append("\n\n");
            }
        }
    });
}
```

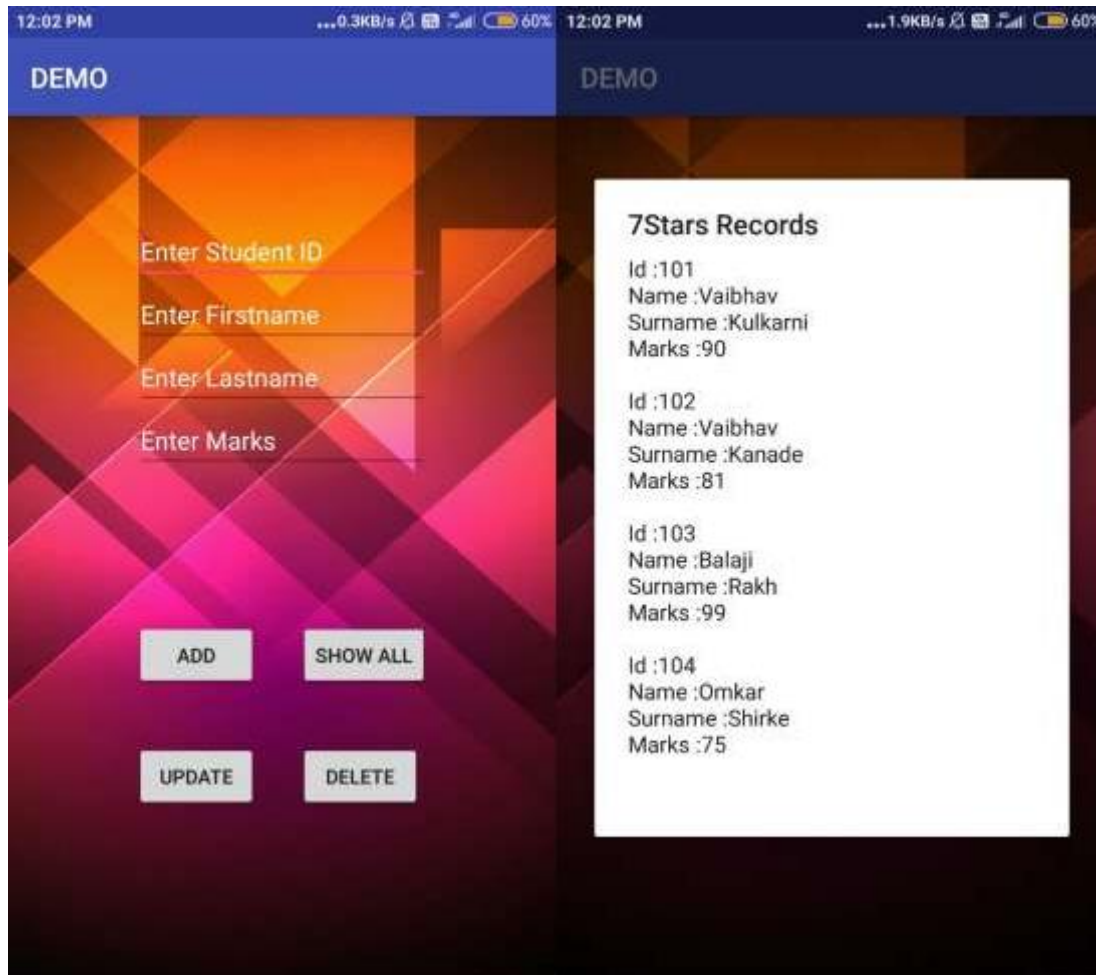
```
// Show all data
showMessage("7Stars Records",buffer.toString());
}
});
}

private void UpdateRecord() {
    b3.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            boolean isUpdate = myDb.updateData(txtId.getText().toString(),
txtFtName.getText().toString(), txtLtName.getText().toString(), txtMarks.getText().toString());
            if(isUpdate == true)
                Toast.makeText(DataActivity.this,"Data Update",Toast.LENGTH_LONG).show();
            else
                Toast.makeText(DataActivity.this,"Data not
Updated",Toast.LENGTH_LONG).show();
        }
    });
}

private void DeleteRecord() {
    b4.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Integer deletedRows = myDb.deleteData(txtId.getText().toString());
            if(deletedRows > 0)
                Toast.makeText(DataActivity.this,"Data Deleted",Toast.LENGTH_LONG).show();
            else
                Toast.makeText(DataActivity.this,"Data not
```

```
Deleted",Toast.LENGTH_LONG).show();  
    }  
});  
}  
}
```

**Output –**



**Practical 10 –**

**Write an android application to implement telephone (API) calling to remote user.**

**Code –****XML**

//activity\_telephone.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=".TelephoneActivity">
```

```
    <EditText
```

```
        android:id="@+id/phoneNo"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_alignParentTop="true"
```

```
        android:layout_centerHorizontal="true"
```

```
        android:layout_marginTop="101dp"
```

```
        android:ems="10"
```

```
        android:hint="Enter Mobile No."
```

```
        android:inputType="phone">
```

```
android:gravity="center"/>
```

```
<Button
```

```
    android:id="@+id/btnCall"
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_alignParentTop="true"
```

```
    android:layout_centerHorizontal="true"
```

```
    android:layout_marginTop="224dp"
```

```
    android:text="Call" />
```

```
</RelativeLayout>
```

## **JAVA**

```
//TelephoneActivity.java
```

```
package com.example.student.prax7to11;
```

```
import android.Manifest;
```

```
import android.content.Context;
```

```
import android.content.pm.PackageManager;
```

```
import android.net.Uri;
```

```
import android.os.Build;
```

```
import android.support.annotation.NonNull;
```

```
import android.support.v4.app.ActivityCompat;
```

```
import android.support.v7.app.AppCompatActivity;
```

```
import android.view.View;
```

```
import android.widget.*;
```

```
import android.content.Intent;
```

```
public class TelephoneActivity extends AppCompatActivity {

    Button b1;
    EditText t1;

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

        b1 = findViewById(R.id.btnCall);
        t1 = (EditText) findViewById(R.id.phoneNo);
        b1.setOnClickListener(new View.OnClickListener() {
            //String number = t1.getText().toString().trim();

            @Override
            public void onClick(View view) {
                callPhoneNumber();
            }
        });
    }

    @Override
    public void onRequestPermissionsResult(int requestCode, @NonNull String[] permissions,
    @NonNull int[] grantResults)
    {
        if(requestCode == 101)
        {
            if(grantResults[0] == PackageManager.PERMISSION_GRANTED)
```



```
{
    callPhoneNumber();
}
}
}

public void callPhoneNumber()
{
    String number = t1.getText().toString().trim();
    try
    {
        if(Build.VERSION.SDK_INT > 22)
        {
            if (ActivityCompat.checkSelfPermission(this, Manifest.permission.CALL_PHONE) !=
PackageManager.PERMISSION_GRANTED) {

                ActivityCompat.requestPermissions(TelephoneActivity.this, new
String[]{Manifest.permission.CALL_PHONE}, 101);

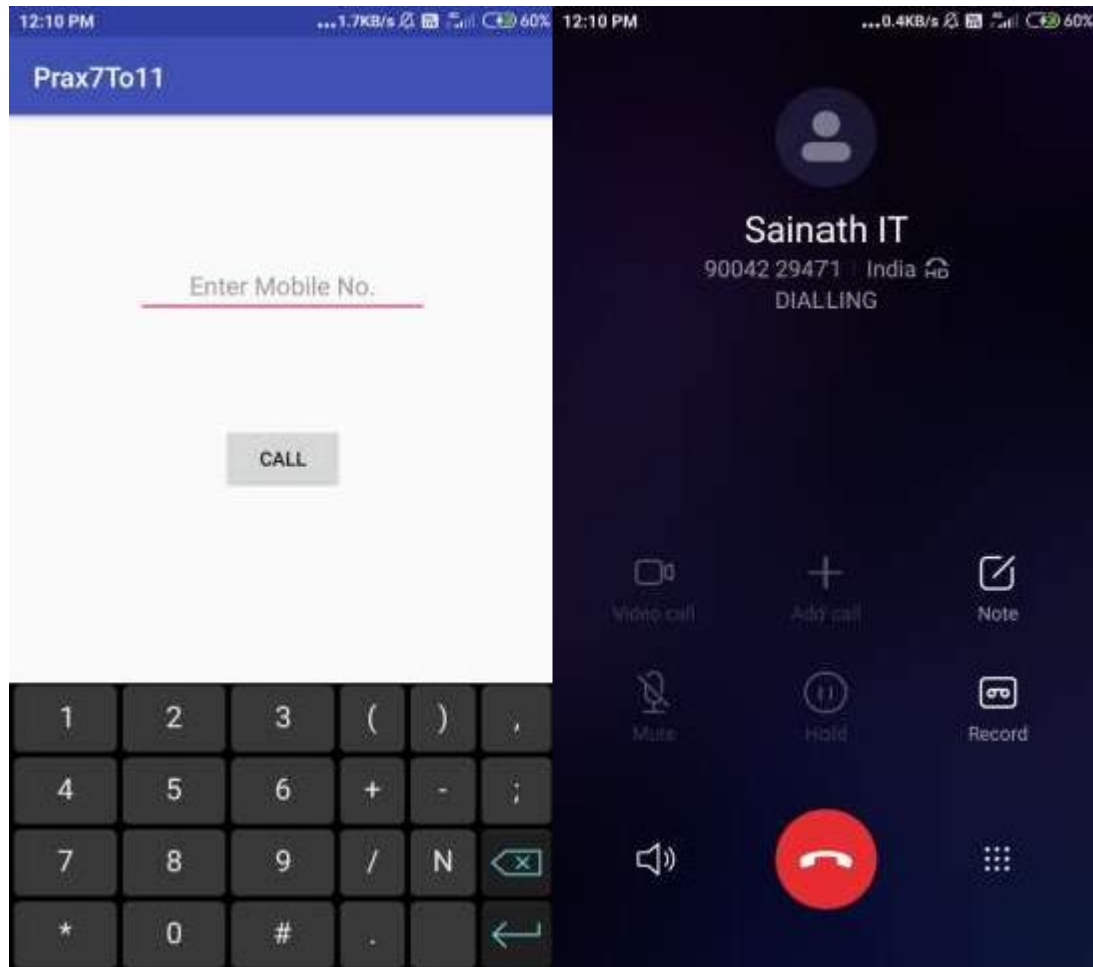
                return;
            }

            Intent callIntent = new Intent(Intent.ACTION_CALL);
            callIntent.setData(Uri.parse("tel:" + number));
            startActivity(callIntent);

        }
        else {
            Intent callIntent = new Intent(Intent.ACTION_CALL);
            callIntent.setData(Uri.parse("tel:" + number));
            startActivity(callIntent);
        }
    }
}
```

```
    }  
    }  
    catch (Exception ex)  
    {  
        ex.printStackTrace();  
    }  
}
```

### Output –



**Practical 11 –**

**Create an android application to display Alert Dialog on pressing the Back button.**

**Code –****XML**

//activity\_dialogue.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=".DialogueActivity"
    android:gravity="center">
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="100dp"
        android:layout_weight="1"
        android:gravity="center"
        android:textSize="25dp"
        android:textColor="#000000"
        android:text="Please press back
        button to exit !" />
</LinearLayout>
```

**JAVA**

```
//DialogueActivity.java
```

```
package com.example.student.demo;
```

```
import android.app.AlertDialog;
```

```
import android.content.DialogInterface;
```

```
import android.support.v7.app.AppCompatActivity;
```

```
import android.os.Bundle;
```

```
public class DialogueActivity extends AppCompatActivity {
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_dialogue);
```

```
    }
```

```
    @Override
```

```
    public void onBackPressed() {
```

```
        AlertDialog.Builder builder = new AlertDialog.Builder(this);
```

```
        builder.setCancelable(false);
```

```
        builder.setMessage("Do you want to exit ?");
```

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

```
            @Override
```

```
            public void onClick(DialogInterface dialogInterface, int i) {
```

```
                finish();
```

```
            }
```

```
});
```

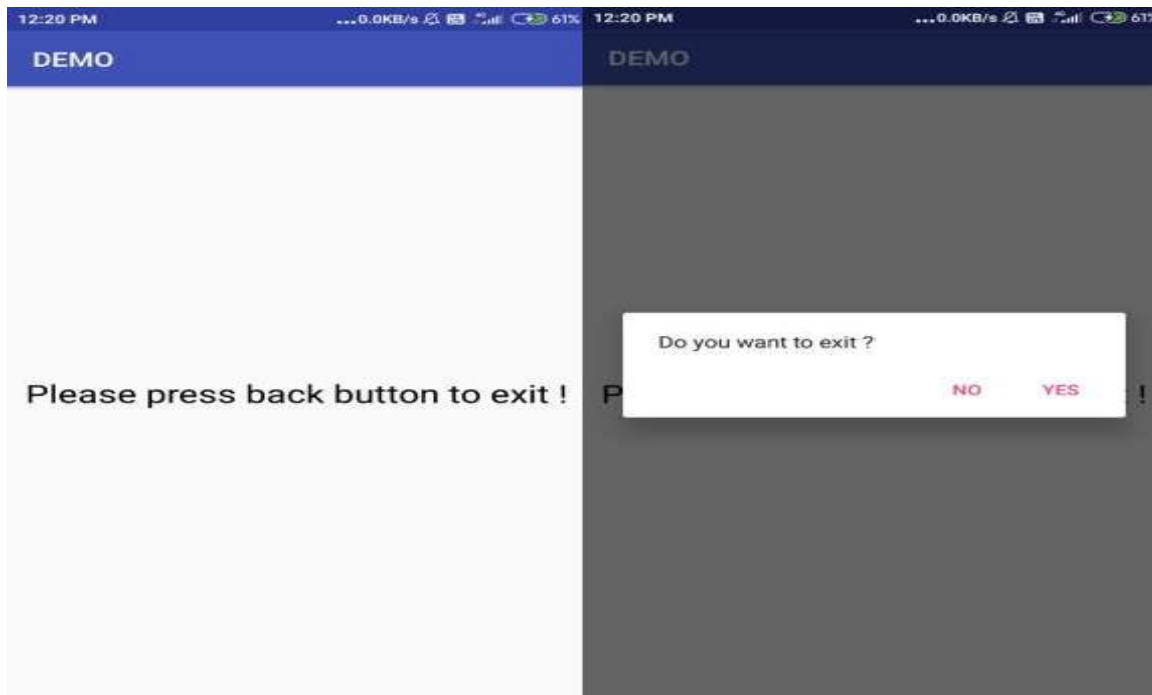
```
builder.setNegativeButton("No", new DialogInterface.OnClickListener() {  
    @Override  
    public void onClick(DialogInterface dialogInterface, int i) {  
        dialogInterface.cancel();  
    }  
});
```

```
AlertDialog alert = builder.create();  
alert.show();
```

```
}
```

```
}
```

**Output –**



**Practical 12 –**

**Create an android application to implement camera when click on button and display the image in the ImageView.**

**Code –**

**XML**

//activity\_camera.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=".CameraActivity">

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:text="Take a Photo" >

    </Button>

    <ImageView
        android:id="@+id/imageView1"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:layout_above="@+id/button1"
        android:layout_alignParentTop="true"
        android:src="@drawable/ic_launcher_background" >

    </ImageView></RelativeLayout>
```

**JAVA**

```
//CameraActivity.java
```

```
package com.vk.amp;
```

```
import android.support.v7.app.AppCompatActivity;
```

```
import android.os.Bundle;
```

```
import android.app.Activity;
```

```
import android.content.Intent;
```

```
import android.graphics.Bitmap;
```

```
import android.os.Bundle;
```

```
import android.view.Menu;
```

```
import android.view.View;
```

```
import android.widget.Button;
```

```
import android.widget.ImageView;
```

```
public class CameraActivity extends AppCompatActivity {  
    private static final int CAMERA_REQUEST = 1888;
```

```
    ImageView imageView;
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_camera);
```

```
        imageView = (ImageView) this.findViewById(R.id.imageView1);
```

```
        Button photoButton = (Button) this.findViewById(R.id.button1);
```

```
photoButton.setOnClickListener(new View.OnClickListener() {

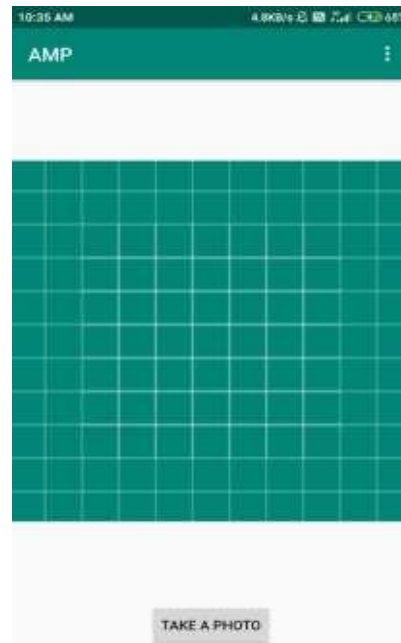
    @Override
    public void onClick(View v) {
        Intent cameraIntent = new
Intent(android.provider.MediaStore.ACTION_IMAGE_CAPTURE);
        startActivityForResult(cameraIntent, CAMERA_REQUEST);
    }
});
}

protected void onActivityResult(int requestCode, int resultCode, Intent data) {
    if (requestCode == CAMERA_REQUEST) {
        Bitmap photo = (Bitmap) data.getExtras().get("data");
        imageView.setImageBitmap(photo);
    }
}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    // Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.main_menu, menu);
    return true;
}

}
```



**Output –**

**Practical 13 –**

**Create an android application using GridView layout and insert 6 images of animals as item and toast the animal name by clicking the image.**

**Code –****XML**

```
//activity_gridview.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=".GridViewActivity">

    <GridView android:id="@+id/gridView"
        android:layout_width="395dp"
        android:layout_height="715dp"
        tools:layout_editor_absoluteX="8dp"
        tools:layout_editor_absoluteY="8dp"
        android:numColumns="2">

        </GridView>
```

```
</RelativeLayout>
```

**JAVA**

```
//GridViewActivity.java
```

```
package com.vk.amp;
```

```
import android.support.v7.app.AppCompatActivity;
```

```
import android.os.Bundle;
```

```
import android.widget.*;
```

```
import android.view.*;
import android.content.Intent;
import android.content.Context;

public class GridViewActivity extends AppCompatActivity {
    GridView gv1;
    public static String[] osNameList = {
        "Android",
        "iOS",
        "Linux",
        "MacOS",
    };
    public static int[] osImages = {
        R.drawable.android,
        R.drawable.android1,
        R.drawable.android2,
        R.drawable.android3,
    };
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_grid_view);
        gv1 = (GridView) findViewById(R.id.gridView);
        gv1.setAdapter(new CustomAdaptor(this, osNameList, osImages));
    }
}
//CustomAdaptor.java
package com.vk.amp;
```

```
import android.content.Context;
import android.view.View.OnClickListener;
import android.view.*;;
import android.widget.*;

public class CustomAdaptor extends BaseAdapter {
    String [] result;
    Context context;
    int [] imageId;
    private static
    LayoutInflater
    inflater=null;

    public CustomAdaptor(GridViewActivity context, String[] result, int[] imageId) {
        this.result = result;
        this.context = context;
        this.imageId = imageId;
        inflater = ( LayoutInflater )context.
            getSystemService(Context.LAYOUT_INFLATER_SERVICE);
    }

    @Override
    public int getCount() {
        return result.length;
    }
}
```

@Override

```
public Object getItem(int position) {  
    return position;  
}
```

@Override

```
public long getItemId(int position) {  
    return position;  
}
```

public class Holder

{

TextView os\_text;

ImageView os\_img;

}

@Override

```
public View getView(final int position, View convertView, ViewGroup parent) {
```

```
    Holder holder=new Holder();
```

```
    View rowView;
```

```
    rowView = inflater.inflate(R.layout.sample_gridlayout, null);
```

```
    holder.os_text =(TextView) rowView.findViewById(R.id.os_texts);
```

```
    holder.os_img =(ImageView) rowView.findViewById(R.id.os_images);
```

```
    holder.os_text.setText(result[position]);
```

```
    holder.os_img.setImageResource(imageId[position]);
```

```
    rowView.setOnClickListener(new OnClickListener() {
```

```
@Override  
public void onClick(View v) {  
    Toast.makeText(context, "You Clicked "+result[position],  
    Toast.LENGTH_SHORT).show();  
}  
});  
return rowView;  
}
```

```
}  
//sample_gridview.xml (Resource Layout Activity)  
<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout  
    xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent">  
  
    <ImageView  
        android:id="@+id/os_images"  
        android:layout_width="match_parent"  
        android:layout_height="wrap_content"  
        android:src="@mipmap/ic_launcher"  
    />  
  
    <TextView  
        android:layout_below="@+id/os_images"  
        android:id="@+id/os_texts"  
        android:layout_width="match_parent"  
        android:layout_height="wrap_content"
```

```
android:text="This is Just Dummy Text"
```

```
android:textAlignment="center"
```

```
android:textSize="18dp"
```

```
android:textStyle="bold"/>
```

```
</RelativeLayout>
```

**Output –**

