

**RAJALAKSHMI INSTITUTE OF TECHNOLOGY**



**DEPARTMENT OF INFORMATION  
TECHNOLOGY**

**IT6611 – Mobile Application Development  
(VI SEMESTER)**

**IT6611 MOBILE APPLICATION DEVELOPMENT LABORATORY**  
**L T P C 0 0 3 2**

**OBJECTIVES:**

The student should be made to:

- Know the components and structure of mobile application development frameworks for Android and windows OS based mobiles.
- Understand how to work with various mobile application development frameworks.
- Learn the basic and important design concepts and issues of development of mobile applications.
- Understand the capabilities and limitations of mobile devices.

**LIST OF EXPERIMENTS**

1. Develop an application that uses GUI components, Font and Colours
2. Develop an application that uses Layout Managers and event listeners.
3. Develop a native calculator application.
4. Write an application that draws basic graphical primitives on the screen.
5. Develop an application that makes use of database.
6. Develop an application that makes use of RSS Feed.
7. Implement an application that implements Multi threading
8. Develop a native application that uses GPS location information.
9. Implement an application that writes data to the SD card.
10. Implement an application that creates an alert upon receiving a message.
11. Write a mobile application that creates alarm clock

**TOTAL: 45 PERIODS**

**OUTCOMES:**

At the end of the course, the student should be able to:

- Design and Implement various mobile applications using emulators.
- Deploy applications to hand-held devices

**LIST OF EQUIPMENT FOR A BATCH OF 30 STUDENTS**

Standalone desktops with Windows or Android or iOS or Equivalent Mobile Application Development Tools with appropriate emulators and debuggers - 30 Nos.

Expt No	Name of the Experiment	Page No	Signature
1	GUI APP		
2	Calculator App		
3	Graphics App		
4	Drawing App		
5	Database Connectivity App		
6	RSS Feed App		
7	Multithreading in App		
8	GPS App		
9	SD Card App		
10	Notification App		
11	Alarm Clock App		
12	Torch Light App		
13	Spin Bottle Game App		
14	Screen Lock App		
15	Simple SMS App		
16	Splash Screen App		
17	Calendar App		
18	Data Fetching App		
19	TV Channel App		
20	Google Sheet Access App		

**EXPT NO:1**

## **DEVELOP AN APPLICATION THAT USES GUI COMPONENTS, FONT AND**

**COLORS**

**DATE:**

**AIM:**

To develop an android application that invokes GUI components, Font and Colors using android studio and sdk.

**REQUIREMENT:** android studio and sdk.

**CODING:**

### **1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="calculator"
        android:textSize="25dp"
        android:textStyle="bold"
        android:layout_centerHorizontal="true"
        android:textColor="#ffff2a81"
        android:textColorHighlight="#ff4888ff"
        android:fontFamily="arial"
        android:textAllCaps="true"
        android:capitalize="words"
        android:clickable="false"
        tools:ignore="UnusedAttribute" />

    <TextView
        android:id="@+id/textview1"
```

```
        android:layout_width="fill_parent"
        android:layout_height="match_parent"
        android:text="Enter value A"
        android:textSize="25dp"
        android:textStyle="bold"
        android:layout_gravity="bottom"
        android:layout_marginTop="43dp"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true" />

<EditText
    android:id="@+id/edittext"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="9"
    android:inputType="text"
    android:layout_alignTop="@+id/textview1"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true" />

<TextView
    android:layout_width="fill_parent"
    android:layout_height="match_parent"
    android:text="Enter value B"
    android:textSize="25dp"
    android:textStyle="bold"
    android:layout_gravity="bottom"
    android:id="@+id/textview2"
    android:layout_below="@+id/edittext"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true" />

<EditText
    android:id="@+id/edittext2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="9"
    android:inputType="text"
    android:layout_alignTop="@+id/textview2"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true" />

<TextView
```

```
    android:layout_width="fill_parent"
    android:layout_height="match_parent"
    android:text="Result"
    android:textSize="20dp"
    android:textStyle="bold"
    android:layout_gravity="bottom"
    android:id="@+id/textview3"
    android:layout_below="@+id/edittext2"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true" />
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="55dp"
    android:text="Add"
    android:id="@+id/Button"
    android:layout_gravity="center_horizontal"
    android:checked="false"
    android:textSize="20dp"
    android:layout_below="@+id/edittext2"
    android:layout_alignLeft="@+id/edittext2"
    android:layout_alignStart="@+id/edittext2" />
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Subtract"
    android:id="@+id/Button2"
    android:layout_gravity="center_horizontal"
    android:checked="false"
    android:textSize="20dp"
    android:layout_weight="0.13"
    android:layout_centerVertical="true"
    android:layout_below="@+id/Button"
    android:layout_alignLeft="@+id/Button"
    android:layout_alignStart="@+id/Button" />
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="55dp"
    android:text="Multiply"
    android:id="@+id/Button3"
    android:layout_gravity="center_horizontal"
```

```
        android:checked="false"
        android:textSize="20dp"
        android:layout_below="@+id/Button2"
        android:layout_alignLeft="@+id/Button2"
        android:layout_alignStart="@+id/Button2" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="55dp"
        android:text="Divide"
        android:id="@+id/Button4"
        android:layout_gravity="center_horizontal"
        android:checked="false"
        android:textSize="20dp"
        android:layout_below="@+id/Button3"
        android:layout_alignLeft="@+id/Button3"
        android:layout_alignStart="@+id/Button3" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit"
        android:id="@+id/button5"
        android:layout_gravity="center_horizontal"
        android:layout_alignTop="@+id/button6"
        android:layout_toLeftOf="@+id/Button4"
        android:layout_toStartOf="@+id/Button4" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Cancel"
        android:id="@+id/button6"
        android:layout_gravity="center_horizontal"
        android:layout_below="@+id/Button4"
        android:layout_alignRight="@+id/Button3"
        android:layout_alignEnd="@+id/Button3"
        android:layout_marginTop="63dp" />
</RelativeLayout>
```

## 2.AndroidManifest.xml

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

```
<manifest
    xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.aishu.calc">
    <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>
        </activity>
    </application>
</manifest>
```

### **3.MainActivity.java**

```
package com.example.aishu.calc;
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);
    }
}
```

## OUTPUT:



Student Details

Enter Rollno:

Enter Name:

Enter Marks:

**ADD**

**DELETE**

**MODIFY**

**VIEW**

**VIEW ALL**

**SHOW  
INFORMATION**

## RESULT:

Thus an android application that invokes GUI components, Font and Colors using android studio and sdk was successfully developed.

**EXPT NO:2**

**CALCULATOR APP**

**DATE:**

**AIM:**

To develop a native calculator application that uses layout managers and event listeners.

**REQUIREMENTS:** android studio and sdk.

**CODING:**

**1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Calculator"
        android:textSize="25dp"
        android:textStyle="bold"
        android:layout_centerHorizontal="true"
        android:textColor="@color/colorAccent"
        android:fontFamily="@string/hello_world"
        android:textAllCaps="true"
        android:capitalize="words"
        android:clickable="false" />

    <TextView
```

```
    android:id="@+id/TextView1"
    android:layout_width="fill_parent"
    android:layout_height="match_parent"
    android:text="Enter the value A:"
    android:textSize="25dp"
    android:textStyle="bold"
    android:layout_gravity="bottom"
    android:layout_marginTop="43dp"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true" />

<EditText
    android:id="@+id/editText1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="7"
    android:inputType="text"
    android:layout_alignTop="@+id/TextView1"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true" />

<TextView
    android:id="@+id/TextView2"
    android:layout_width="fill_parent"
    android:layout_height="match_parent"
    android:text="Enter the value B:"
    android:textSize="25dp"
    android:textStyle="bold"
    android:layout_gravity="bottom"
    android:layout_below="@+id/editText1"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true" />

<EditText
    android:id="@+id/editText2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="7"
    android:inputType="text"
    android:layout_alignTop="@+id/TextView2"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"/>
```

```
<TextView  
    android:id="@+id/TextView3"  
    android:layout_width="fill_parent"  
    android:layout_height="match_parent"  
    android:text="Result:"  
    android:textSize="23dp"  
    android:textStyle="bold"  
    android:layout_gravity="bottom"  
    android:layout_below="@id/editText2"  
    android:layout_alignParentLeft="true"  
    android:layout_alignParentStart="true" />  
  
<Button  
    android:id="@+id/Button1"  
    android:layout_width="wrap_content"  
    android:layout_height="55dp"  
    android:text="ADD"  
    android:textSize="20dp"  
    android:gravity="center_horizontal"  
    android:checked="false"  
    android:layout_below="@id/editText2"  
    android:layout_alignLeft="@id/editText2"  
    android:layout_alignStart="@id/editText2" />  
  
<Button  
    android:id="@+id/Button2"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="SUB"  
    android:textSize="20dp"  
    android:checked="false"  
    android:gravity="center_horizontal"  
    android:layout_centerVertical="true"  
    android:layout_weight="0.13"  
    android:layout_below="@id/Button1"  
    android:layout_alignLeft="@id/Button1"  
    android:layout_alignStart="@id/Button1" />  
  
<Button  
    android:id="@+id/Button3"  
    android:layout_width="wrap_content"  
    android:layout_height="55dp"  
    android:text="MUL"
```

```
        android:textSize="20dp"
        android:checked="false"
        android:gravity="center_horizontal"
        android:layout_below="@+id/Button2"
        android:layout_alignLeft="@+id/Button2"
        android:layout_alignStart="@+id/Button2" />

<Button
    android:id="@+id/Button4"
    android:layout_width="wrap_content"
    android:layout_height="55dp"
    android:text="DIV"
    android:textSize="20dp"
    android:checked="false"
    android:gravity="center_horizontal"
    android:layout_below="@+id/Button3"
    android:layout_alignLeft="@+id/Button3"
    android:layout_alignStart="@+id/Button3" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    android:textSize="20dp"
    android:id="@+id/button5"
    android:layout_gravity="center_horizontal"
    android:layout_alignTop="@+id/button6"
    android:layout_toLeftOf="@+id/Button4"
    android:layout_toStartOf="@+id/Button4" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="CANCEL"
    android:textSize="20dp"
    android:id="@+id/button6"
    android:layout_gravity="center_horizontal"
    android:layout_below="@+id/Button4"
    android:layout_alignRight="@+id/Button3"
    android:layout_alignEnd="@+id/Button3"
    android:layout_marginTop="63dp" />
</RelativeLayout>
```

## 2.MainActivity.java

```
package com.example.aishu.myapplication;
import android.app.Activity;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends Activity {
    Button add,sub,mul,div;
    EditText x,y;
    TextView display;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        x=(EditText)findViewById(R.id.editText1);
        y=(EditText)findViewById(R.id.editText2);
        add=(Button)findViewById(R.id.Button1);
        sub=(Button)findViewById(R.id.Button2);
        mul=(Button)findViewById(R.id.Button3);
        div=(Button)findViewById(R.id.Button4);
        display=(TextView)findViewById(R.id.TextView3);

        add.setOnClickListener(new View.OnClickListener()
        {
            public void onClick(View v)
            {
                String a=x.getText().toString();
                int m = Integer.parseInt(a);
                String b=y.getText().toString();
                int n=Integer.parseInt(b);
                Integer result=m+n;
                String res=result.toString();
                display.setText(res);
            }
        });
    }
}
```

```
sub.setOnClickListener(new View.OnClickListener()
{
    public void onClick(View v)
    {
        String a=x.getText().toString();
        int m = Integer.parseInt(a);
        String b=y.getText().toString();
        int n=Integer.parseInt(b);
        Integer result=m-n;
        String res=result.toString();
        display.setText(res);
    }
});

mul.setOnClickListener(new View.OnClickListener()
{
    public void onClick(View v)
    {
        String a=x.getText().toString();
        int m = Integer.parseInt(a);
        String b=y.getText().toString();
        int n=Integer.parseInt(b);
        Integer result=m*n;
        String res=result.toString();
        display.setText(res);
    }
});

div.setOnClickListener(new View.OnClickListener()
{
    public void onClick(View v)
    {
        String a=x.getText().toString();
        int m = Integer.parseInt(a);
        String b=y.getText().toString();
        int n=Integer.parseInt(b);
        Integer result=m/n;
        String res=result.toString();
        display.setText(res);
    }
});
```

```
@Override  
public boolean onCreateOptionsMenu(Menu menu) {  
    getMenuInflater().inflate(R.menu.main, menu);  
    return true;  
}  
  
@Override  
public boolean onOptionsItemSelected(MenuItem item) {  
    int id = item.getItemId();  
    if (id == R.id.action_settings) {  
        return true;  
    }  
    return super.onOptionsItemSelected(item);  
}  
}
```

## **OUTPUT:**



Student Details

Enter Rollno: \_\_\_\_\_

Enter Name: \_\_\_\_\_

Enter Marks: \_\_\_\_\_

ADD

DELETE

MODIFY

VIEW

VIEW ALL

SHOW  
INFORMATION

Enter the value  $A_6$  \_\_\_\_\_

Enter the value  $B_9$  \_\_\_\_\_

15

ADD

SUB

MUL

DIV

SUBMIT CANCEL



## CALCULATOR

Enter the value  $A_6$  \_\_\_\_\_

Enter the value  $B_9$  \_\_\_\_\_

-3

ADD

SUB

MUL

DIV

SUBMIT CANCEL

## CALCULATOR

Enter the value  $A_6$  \_\_\_\_\_

Enter the value  $B_9$  \_\_\_\_\_

54

ADD

SUB

MUL

DIV

SUBMIT CANCEL



## CALCULATOR

Enter the value A<sub>3</sub>:

Enter the value B<sub>3</sub>:

3

ADD

SUB

MUL

DIV

**SUBMIT** **CANCEL**

## RESULT:

Thus a native calculator application using layout managers and event listeners was developed successfully.

**EXPT NO:3**

**GRAPHICS APP**

**DATE:**

**AIM:**

To develop an android application that draws basic graphical primitives on the screen using android studio and sdk.

**REQUIREMENTS:**Android Studio and sdk.

**CODING:****1.activity\_main.xml**

```
<FrameLayout  
    xmlns:android="http://schemas.android.com/apk/res/android"  
        xmlns:tools="http://schemas.android.com/tools"  
            android:layout_width="match_parent"  
            android:layout_height="match_parent"  
            android:background="#ffffff"  
            tools:context=".FullscreenActivity">  
  
<view  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    class="com.example.hp.graphical.MainDrawingView"  
    android:id="@+id/single_touch_view"  
    android:layout_gravity="left|top"  
    android:background="#ffffff" />  
</FrameLayout>
```

**2.MainDrawingView.java**

```
import android.content.Context;  
import android.graphics.Canvas;  
import android.graphics.Color;  
import android.graphics.Paint;  
import android.graphics.Path;  
import android.util.AttributeSet;  
import android.view.MotionEvent;  
import android.view.View;  
public class MainDrawingView extends View {  
    private Paint paint = new Paint();  
    private Path path = new Path();  
    public MainDrawingView(Context context, AttributeSet attrs) {  
        super(context, attrs);  
        paint.setAntiAlias(true);  
        paint.setStrokeWidth(5f);  
        paint.setColor(Color.BLACK);
```

```
        paint.setStyle(Paint.Style.STROKE);
        paint.setStrokeJoin(Paint.Join.ROUND);
    }
@Override
protected void onDraw(Canvas canvas) {
    canvas.drawPath(path, paint);
}
@Override
public boolean onTouchEvent(MotionEvent event) {
    float eventX = event.getX();
    float eventY = event.getY();
    switch (event.getAction()) {
        case MotionEvent.ACTION_DOWN:
            path.moveTo(eventX, eventY);
            return true;
        case MotionEvent.ACTION_MOVE:
            path.lineTo(eventX, eventY);
            break;
        default:
            return false;
    }
    invalidate();
    return true;
}
}
```

## OUTPUT:



**RESULT:**

Thus an android application that draws basic graphical primitives on the screen using android studio and sdk was developed successfully.

**EXPT NO:4****DRAWING APPLICATION****DATE:****AIM:**

To develop an android application that draws basic graphical primitives on the screen using android studio and sdk.

**REQUIREMENTS:**Android Studio and sdk.

**CODING:****1.*dimes.xml*:**

```
<resources>
```

```
    <dimen name="activity_horizontal_margin">16dp</dimen>
    <dimen name="activity_vertical_margin">16dp</dimen>
    <dimen name="small_brush">10dp</dimen>
```

```
<integer name="small_size">10</integer>
<dimen name="medium_brush">20dp</dimen>
<integer name="medium_size">20</integer>
<dimen name="large_brush">30dp</dimen>
<integer name="large_size">30</integer>
</resources>
```

## **2. *Strings.xml*:**

```
<resources>
    <string name="app_name">Graphicalcolor</string>
    <string name="hello_world">Hello world!</string>
    <string name="action_settings">Settings</string>
    <string name="start_new">New</string>
    <string name="brush">Brush</string>
    <string name="erase">Erase</string>
    <string name="save">Save</string>
    <string name="paint">Paint</string>
    <string name="sml">Small</string>
    <string name="med">Medium</string>
    <string name="lrg">Large</string>
</resources>
```

## **3. *paint.xml*:**

```
<?xml version="1.0" encoding="utf-8"?>
<layer-list
    xmlns:android="http://schemas.android.com/apk/res/android" >
    <item>
        <shape android:shape="rectangle" >
            <stroke
                android:width="4dp"
                android:color="#FF999999" />
            <solid android:color="#00000000" />
            <padding
                android:bottom="0dp"
                android:left="0dp"
                android:right="0dp"
                android:top="0dp" />
        </shape>
    </item>
    <item>
        <shape
            xmlns:android="http://schemas.android.com/apk/res/android" >
            <stroke
```

```
        android:width="4dp"
        android:color="#FF999999" />
    <solid android:color="#00000000" />
    <corners android:radius="10dp" />
</shape>
</item>
</layer-list>
```

#### **4. paint\_pressed.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<layer-list
    xmlns:android="http://schemas.android.com/apk/res/android" >
    <item>
        <shape android:shape="rectangle" >
            <stroke
                android:width="4dp"
                android:color="#FF999999" />
            <solid android:color="#00000000" />
            <padding
                android:bottom="0dp"
                android:left="0dp"
                android:right="0dp"
                android:top="0dp" />
        </shape>
    </item>
    <item>
        <shape
            xmlns:android="http://schemas.android.com/apk/res/android" >
            <stroke
                android:width="4dp"
                android:color="#FF999999" />
            <solid android:color="#00000000" />
            <corners android:radius="10dp" />
        </shape>
    </item>
</layer-list>
```

#### **5. small.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<shape
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:dither="true"
```

```
    android:shape="oval" >
    <size
        android:height="@dimen/small_brush"
        android:width="@dimen/small_brush" />
    <solid android:color="#FF666666" />
</shape>
```

### **6.medium.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:dither="true"
    android:shape="oval" >
    <size
        android:height="@dimen/medium_brush"
        android:width="@dimen/medium_brush" />
    <solid android:color="#FF666666" />
</shape>
```

### **7.large.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:dither="true"
    android:shape="oval" >
    <size
        android:height="@dimen/large_brush"
        android:width="@dimen/large_brush" />
    <solid android:color="#FF666666" />
</shape>
```

### **8.brush\_chooser.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical">
    <ImageButton
        android:id="@+id/small_brush"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:contentDescription="@string/sml"
```

```
        android:src="@drawable/small1" />
<ImageButton
    android:id="@+id/medium_brush"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:contentDescription="@string/med"
    android:src="@drawable/medium1" />
<ImageButton
    android:id="@+id/large_brush"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:contentDescription="@string/lrg"
    android:src="@drawable/large1" />
</LinearLayout>
```

### **9. Activity\_main.xml:**

```
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#FFCCCCCC"
    android:orientation="vertical"
    tools:context=".MainActivity" >
    <com.example.hp.graphicalcolor.DrawingView
        android:id="@+id/drawing"
        android:layout_width="fill_parent"
        android:layout_height="0dp"
        android:layout_marginBottom="3dp"
        android:layout_marginLeft="5dp"
        android:layout_marginRight="5dp"
        android:layout_marginTop="3dp"
        android:layout_weight="1"
        android:background="#FFFFFF" />
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="50dp"
        android:layout_gravity="center"
        android:orientation="horizontal" >
        <ImageButton
```

```
    android:id="@+id/new_btn"
    android:layout_width="wrap_content"
    android:layout_height="fill_parent"
    android:contentDescription="@string/start_new"
    android:src="@drawable/new_pic" />
<ImageButton
    android:id="@+id/draw_btn"
    android:layout_width="wrap_content"
    android:layout_height="fill_parent"
    android:contentDescription="@string/brush"
    android:src="@drawable/brush" />
<ImageButton
    android:id="@+id/erase_btn"
    android:layout_width="wrap_content"
    android:layout_height="fill_parent"
    android:contentDescription="@string/erase"
    android:src="@drawable/eraser"/>
<ImageButton
    android:id="@+id/save_btn"
    android:layout_width="wrap_content"
    android:layout_height="fill_parent"
    android:contentDescription="@string/save"
    android:src="@drawable/save" />
</LinearLayout>
<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:orientation="vertical" >
<LinearLayout
    android:id="@+id/paint_colors"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_width="wrap_content"
    android:orientation="horizontal" >
<ImageButton
    android:layout_width="@dimen/large_brush"
    android:layout_height="@dimen/large_brush"
    android:layout_margin="2dp"
    android:background="#FF660000"
    android:contentDescription="@string/paint"
    android:onClick="paintClicked"
    android:src="@drawable/paint"
```

```
        android:tag="#FF660000" />
<ImageButton
    android:layout_width="@dimen/large_brush"
    android:layout_height="@dimen/large_brush"
    android:layout_margin="2dp"
    android:background="#FFFF0000"
    android:contentDescription="@string/paint"
    android:onClick="paintClicked"
    android:src="@drawable/paint"
    android:tag="#FFFF0000" />
<ImageButton
    android:layout_width="@dimen/large_brush"
    android:layout_height="@dimen/large_brush"
    android:layout_margin="2dp"
    android:background="#FFFF6600"
    android:contentDescription="@string/paint"
    android:onClick="paintClicked"
    android:src="@drawable/paint"
    android:tag="#FFFF6600" />
<ImageButton
    android:layout_width="@dimen/large_brush"
    android:layout_height="@dimen/large_brush"
    android:layout_margin="2dp"
    android:background="#FFFFCC00"
    android:contentDescription="@string/paint"
    android:onClick="paintClicked"
    android:src="@drawable/paint"
    android:tag="#FFFFCC00" />
<ImageButton
    android:layout_width="@dimen/large_brush"
    android:layout_height="@dimen/large_brush"
    android:layout_margin="2dp"
    android:background="#FF009900"
    android:contentDescription="@string/paint"
    android:onClick="paintClicked"
    android:src="@drawable/paint"
    android:tag="#FF009900" />
<ImageButton
    android:layout_width="@dimen/large_brush"
    android:layout_height="@dimen/large_brush"
    android:layout_margin="2dp"
    android:background="#FF009999"
```

```
        android:contentDescription="@string/paint"
        android:onClick="paintClicked"
        android:src="@drawable/paint"
        android:tag="#FF009999" />
    </LinearLayout>
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal" >
        <ImageButton
            android:layout_width="@dimen/large_brush"
            android:layout_height="@dimen/large_brush"
            android:layout_margin="2dp"
            android:background="#FF0000FF"
            android:contentDescription="@string/paint"
            android:onClick="paintClicked"
            android:src="@drawable/paint"
            android:tag="#FF0000FF" />
        <ImageButton
            android:layout_width="@dimen/large_brush"
            android:layout_height="@dimen/large_brush"
            android:layout_margin="2dp"
            android:background="#FF990099"
            android:contentDescription="@string/paint"
            android:onClick="paintClicked"
            android:src="@drawable/paint"
            android:tag="#FF990099" />
        <ImageButton
            android:layout_width="@dimen/large_brush"
            android:layout_height="@dimen/large_brush"
            android:layout_margin="2dp"
            android:background="#FFFF6666"
            android:contentDescription="@string/paint"
            android:onClick="paintClicked"
            android:src="@drawable/paint"
            android:tag="#FFFF6666" />
        <ImageButton
            android:layout_width="@dimen/large_brush"
            android:layout_height="@dimen/large_brush"
            android:layout_margin="2dp"
            android:background="#FFFFFFFF"
            android:contentDescription="@string/paint"
```

```
        android:onClick="paintClicked"
        android:src="@drawable/paint"
        android:tag="#FFFFFF" />
    <ImageButton
        android:layout_width="@dimen/large_brush"
        android:layout_height="@dimen/large_brush"
        android:layout_margin="2dp"
        android:background="#FF787878"
        android:contentDescription="@string/paint"
        android:onClick="paintClicked"
        android:src="@drawable/paint"
        android:tag="#FF787878" />
    <ImageButton
        android:layout_width="@dimen/large_brush"
        android:layout_height="@dimen/large_brush"
        android:layout_margin="2dp"
        android:background="#FF000000"
        android:contentDescription="@string/paint"
        android:onClick="paintClicked"
        android:src="@drawable/paint"
        android:tag="#FF000000" />
</LinearLayout>
</LinearLayout>
</LinearLayout>
```

### **10.DrawingView.class**

```
package com.example.hp.graphicalcolor;
import android.content.Context;
import android.graphics.Bitmap;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.graphics.Path;
import android.graphics.PorterDuff;
import android.graphics.PorterDuffXfermode;
import android.util.AttributeSet;
import android.util.TypedValue;
import android.view.MotionEvent;
import android.view.View;
public class DrawingView extends View {
    private Path drawPath;
    private Paint drawPaint, canvasPaint;
    private int paintColor = 0xFF660000;
```

```
private Canvas drawCanvas;
private Bitmap canvasBitmap;
private float brushSize, lastBrushSize;
private boolean erase=false;
public DrawingView(Context context, AttributeSet attrs){
    super(context, attrs);
    setupDrawing();
}
private void setupDrawing(){
    brushSize = getResources().getInteger(R.integer.medium_size);
    lastBrushSize = brushSize;
    drawPath = new Path();
    drawPaint = new Paint();
    drawPaint.setColor(paintColor);
    drawPaint.setAntiAlias(true);
    drawPaint.setStrokeWidth(brushSize);
    drawPaint.setStyle(Paint.Style.STROKE);
    drawPaint.setStrokeJoin(Paint.Join.ROUND);
    drawPaint.setStrokeCap(Paint.Cap.ROUND);
    canvasPaint = new Paint(Paint.DITHER_FLAG);
}
@Override
protected void onSizeChanged(int w, int h, int oldw, int oldh) {
    super.onSizeChanged(w, h, oldw, oldh);
    canvasBitmap = Bitmap.createBitmap(w, h,
Bitmap.Config.ARGB_8888);
    drawCanvas = new Canvas(canvasBitmap);
}
@Override
protected void onDraw(Canvas canvas) {
    canvas.drawBitmap(canvasBitmap, 0, 0, canvasPaint);
    canvas.drawPath(drawPath, drawPaint);
}
@Override
public boolean onTouchEvent(MotionEvent event) {
    float touchX = event.getX();
    float touchY = event.getY();
    switch (event.getAction()) {
        case MotionEvent.ACTION_DOWN:
            drawPath.moveTo(touchX, touchY);
            break;
        case MotionEvent.ACTION_MOVE:
```

```
        drawPath.lineTo(touchX, touchY);
        break;
    case MotionEvent.ACTION_UP:
        drawPath.lineTo(touchX, touchY);
        drawCanvas.drawPath(drawPath, drawPaint);
        drawPath.reset();
        break;
    default:
        return false;
    }
    invalidate();
    return true;
}
public void setColor(String newColor){
    invalidate();
    paintColor = Color.parseColor(newColor);
    drawPaint.setColor(paintColor);
}

public void setBrushSize(float newSize){
    float pixelAmount = TypedValue.applyDimension(TypedValue.COMPLEX_UNIT_DIP,
        newSize, getResources().getDisplayMetrics());
    brushSize=pixelAmount;
    drawPaint.setStrokeWidth(brushSize);
}
public void setLastBrushSize(float lastSize){
    lastBrushSize=lastSize;
}
public float getLastBrushSize(){
    return lastBrushSize;
}
public void setErase(boolean isErase){
    erase=isErase;
    if(erase) drawPaint.setXfermode(new
PorterDuffXfermode(PorterDuff.Mode.CLEAR));
    else drawPaint.setXfermode(null);
}
public void startNew(){
    drawCanvas.drawColor(0, PorterDuff.Mode.CLEAR);
    invalidate();
}
```

```
}
```

## 11. **MainActivity.java**

```
package com.example.hp.graphicalcolor;
import java.util.UUID;
import android.os.Bundle;
import android.provider.MediaStore;
import android.app.Activity;
import android.app.AlertDialog;
import android.app.Dialog;
import android.content.DialogInterface;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.ImageButton;
import android.widget.LinearLayout;
import android.widget.Toast;

public class MainActivity extends Activity implements OnClickListener
{
    private DrawingView drawView;
    private ImageButton currPaint, drawBtn, eraseBtn, newBtn, saveBtn;
    private float smallBrush, mediumBrush, largeBrush;
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        drawView = (DrawingView) findViewById(R.id.drawing);
        LinearLayout paintLayout = (LinearLayout) findViewById(R.id.paint_colors);
        currPaint = (ImageButton) paintLayout.getChildAt(0);
        currPaint.setImageDrawable(getResources().getDrawable(R.drawable.paint_pressed));
        smallBrush = getResources().getInteger(R.integer.small_size);
        mediumBrush = getResources().getInteger(R.integer.medium_size);
        largeBrush = getResources().getInteger(R.integer.large_size);
        drawBtn = (ImageButton) findViewById(R.id.draw_btn);
        drawBtn.setOnClickListener(this);
        drawView.setBrushSize(mediumBrush);
        eraseBtn = (ImageButton) findViewById(R.id.erase_btn);
        eraseBtn.setOnClickListener(this);
    }
}
```

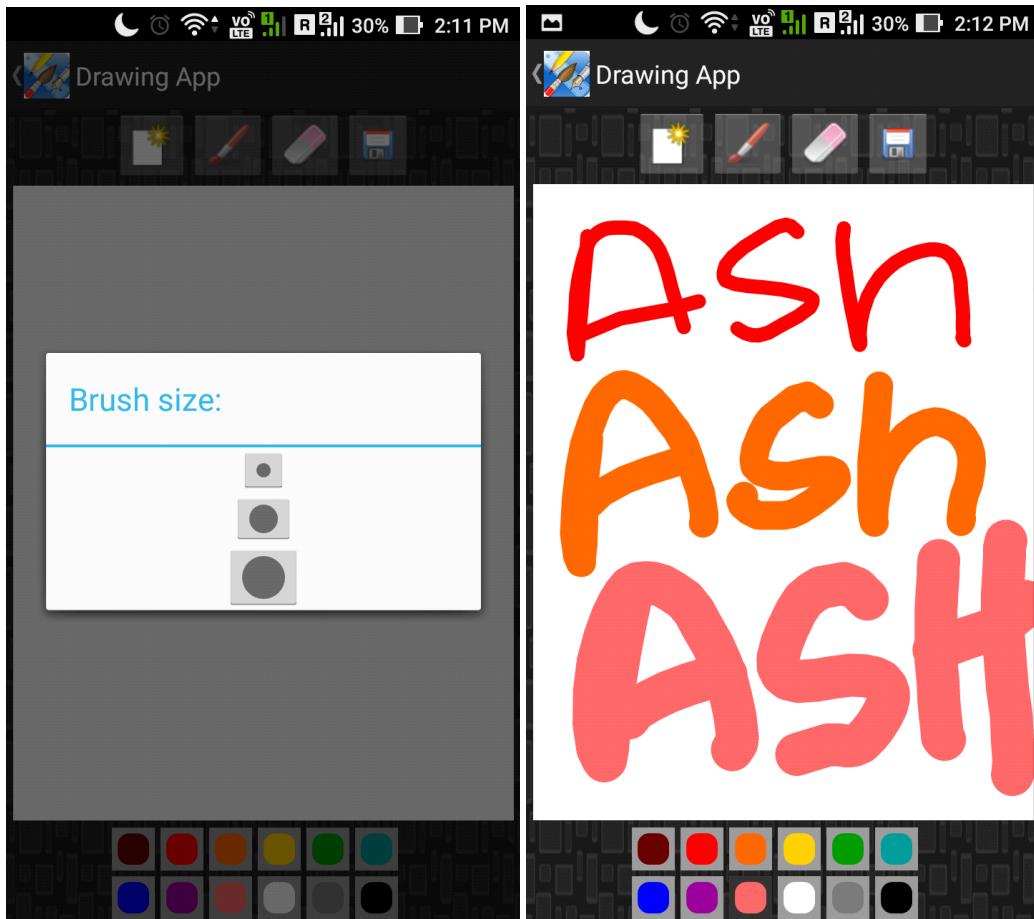
```
    newBtn = (ImageButton)findViewById(R.id.new_btn);
    newBtn.setOnClickListener(this);
    saveBtn = (ImageButton)findViewById(R.id.save_btn);
    saveBtn.setOnClickListener(this);
}
@Override
public boolean onCreateOptionsMenu(Menu menu)
{
    getMenuInflater().inflate(R.menu.menu_main, menu);
    return true;
}
public void paintClicked(View view)
{
    drawView.setErase(false);
    drawView.setBrushSize(drawView.getLastBrushSize());
    if(view!=currPaint){
        ImageButton imgView = (ImageButton)view;
        String color = view.getTag().toString();
        drawView.setColor(color);
        imgView.setImageDrawable(getResources().getDrawable(R.drawable.paint_pressed));
        currPaint.setImageDrawable(getResources().getDrawable(R.drawable.paint));
        currPaint=(ImageButton)view;
    }
}
@Override
public void onClick(View view)
{
    if(view.getId()==R.id.draw_btn)
    {
        final Dialog brushDialog = new Dialog(this);
        brushDialog.setTitle("Brush size:");
        brushDialog.setContentView(R.layout.brush_chooser);
        ImageButton smallBtn = (ImageButton)brushDialog.findViewById(R.id.small_brush);
        smallBtn.setOnClickListener(new OnClickListener(){
            @Override
            public void onClick(View v)
            {
                drawView.setErase(false);
                drawView.setBrushSize(smallBrush);
```

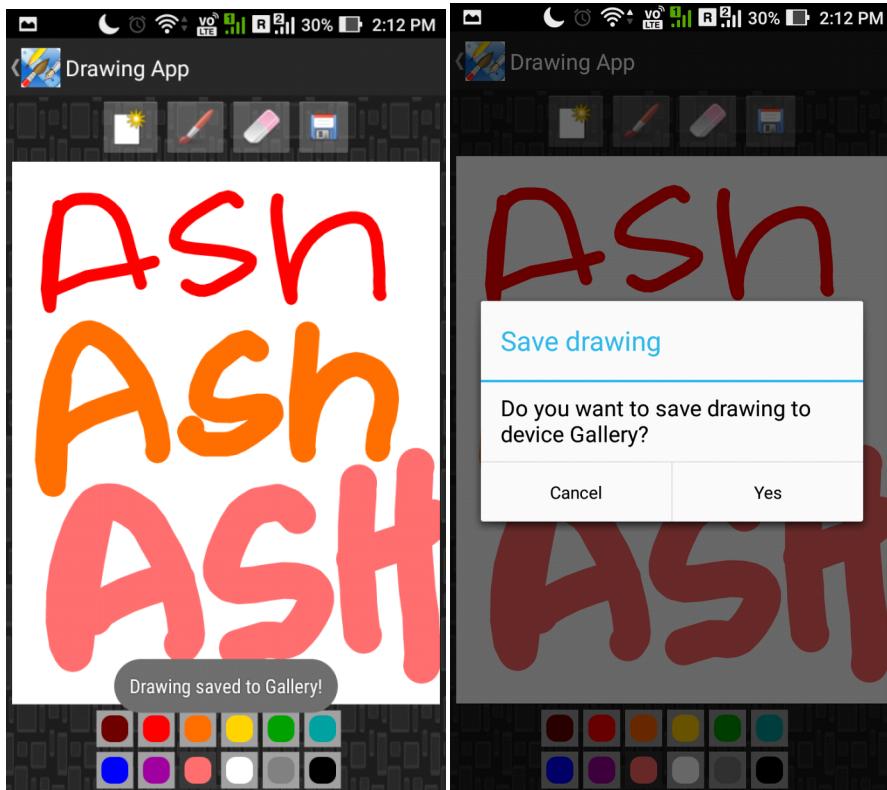
```
        drawView.setLastBrushSize(smallBrush);
        brushDialog.dismiss();
    }
});
ImageButtonmediumBtn=(ImageButton)brushDialog.findViewById(R.id.
medium_brush);
mediumBtn.setOnClickListener(new OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        drawView.setErase(false);
        drawView.setBrushSize(mediumBrush);
        drawView.setLastBrushSize(mediumBrush);
        brushDialog.dismiss();
    }
});
ImageButton      largeBtn      =
(ImageButton)brushDialog.findViewById(R.id.large_brush);
largeBtn.setOnClickListener(new OnClickListener(){
    @Override
    public void onClick(View v)
    {
        drawView.setErase(false);
        drawView.setBrushSize(largeBrush);
        drawView.setLastBrushSize(largeBrush);
        brushDialog.dismiss();
    }
});
brushDialog.show();
}
else if(view.getId()==R.id.erase_btn){
    final Dialog brushDialog = new Dialog(this);
    brushDialog.setTitle("Eraser size:");
    brushDialog.setContentView(R.layout.brush_chooser);
    ImageButton      smallBtn      =
(ImageButton)brushDialog.findViewById(R.id.small_brush);
    smallBtn.setOnClickListener(new OnClickListener(){
        @Override
        public void onClick(View v) {
            drawView.setErase(true);
            drawView.setBrushSize(smallBrush);
```

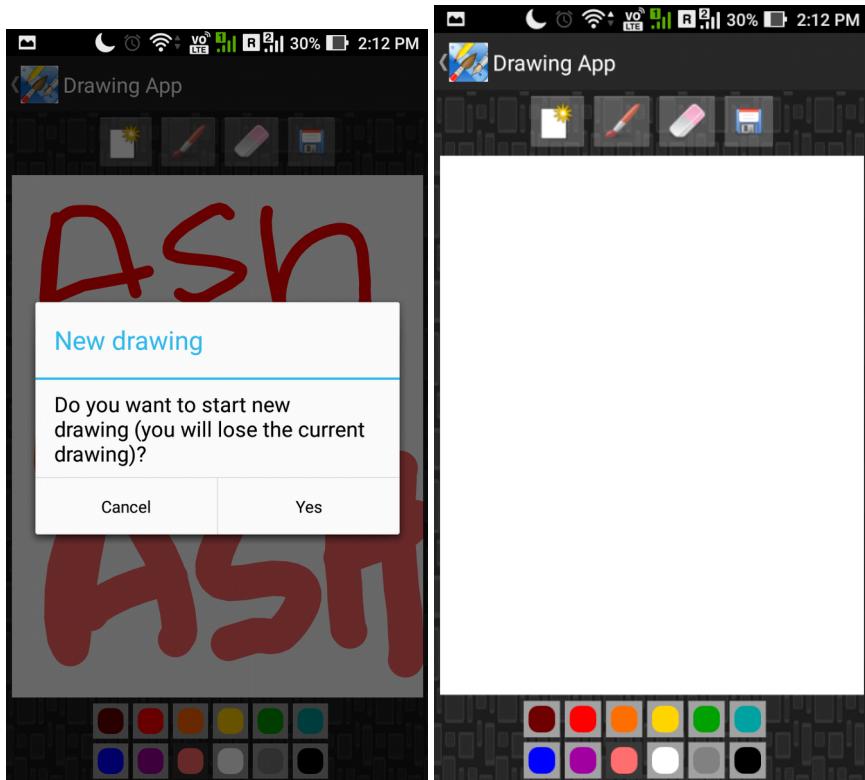
```
        brushDialog.dismiss();
    }
});
ImageButtonmediumBtn=(ImageButton)brushDialog.findViewById(R.id.
medium_brush);
mediumBtn.setOnClickListener(new OnClickListener(){
    @Override
    public void onClick(View v) {
        drawView.setErase(true);
        drawView.setBrushSize(mediumBrush);
        brushDialog.dismiss();
    }
});
ImageButton largeBtn = (ImageButton)brushDialog.findViewById(R.id.large_brush);
largeBtn.setOnClickListener(new OnClickListener(){
    @Override
    public void onClick(View v) {
        drawView.setErase(true);
        drawView.setBrushSize(largeBrush);
        brushDialog.dismiss();
    }
});
brushDialog.show();
}
else if(view.getId()==R.id.new_btn){
    AlertDialog.Builder newDialog = new AlertDialog.Builder(this);
    newDialog.setTitle("New drawing");
    newDialog.setMessage("Start new drawing (you will lose the current
drawing)?");
    newDialog.setPositiveButton("Yes", new
DialogInterface.OnClickListener(){
        public void onClick(DialogInterface dialog, int which){
            drawView.startNew();
            dialog.dismiss();
        }
    });
    newDialog.setNegativeButton("Cancel", new
DialogInterface.OnClickListener(){
        public void onClick(DialogInterface dialog, int which)
{
            dialog.cancel();
        }
    });
}
```

```
        }
    });
    newDialog.show();
}
else if(view.getId()==R.id.save_btn){
    AlertDialog.Builder saveDialog = new AlertDialog.Builder(this);
    saveDialog.setTitle("Save drawing");
    saveDialog.setMessage("Save drawing to device Gallery?");
    saveDialog.setPositiveButton("Yes", new
DialogInterface.OnClickListener(){
    public void onClick(DialogInterface dialog, int which){
        drawView.setDrawingCacheEnabled(true);
        String imgSaved = MediaStore.Images.Media.insertImage(
            getContentResolver(), drawView.getDrawingCache(),
            UUID.randomUUID().toString() + ".png", "drawing");
        if(imgSaved!=null){
            Toast savedToast =
Toast.makeText(getApplicationContext(),
                    "Drawing saved to Gallery!",
                    Toast.LENGTH_SHORT);
            savedToast.show();
        }
        else{
            Toast unsavedToast =
Toast.makeText(getApplicationContext(),
                    "Oops! Image could not be saved.",
                    Toast.LENGTH_SHORT);
            unsavedToast.show();
        }
        drawView.destroyDrawingCache();
    }
});
    saveDialog.setNegativeButton("Cancel", new
DialogInterface.OnClickListener(){
    public void onClick(DialogInterface dialog, int which){
        dialog.cancel();
    }
});
    saveDialog.show();
}
}
```

## OUTPUT:







### **RESULT:**

Thus an android application that draws basic graphical primitives on the screen using android studio and sdk was developed successfully.

### **EXPT NO:5**

## DATABASE CONNECTIVITY

**DATE:****AIM:**

To develop an android application that makes use of database using android studio and sdk.

**REQUIREMENTS:** android studio and sdk.**CODING:****1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<AbsoluteLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
        android:id="@+id/myLayout"
        android:stretchColumns="0"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent">

    <TextView
        android:text="@string/title"
        android:layout_x="110dp"
        android:layout_y="10dp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>

    <TextView
        android:text="@string/roll_no"
        android:layout_x="30dp"
        android:layout_y="50dp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>

    <EditText
        android:id="@+id/editRollno"
        android:inputType="number"
        android:layout_x="150dp"
        android:layout_y="50dp"
        android:layout_width="150dp"
        android:layout_height="40dp"/>

    <TextView
        android:text="@string/name"
        android:layout_x="30dp"
```

```
        android:layout_y="100dp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>

<EditText
    android:id="@+id/editName"
    android:inputType="text"
    android:layout_x="150dp"
    android:layout_y="100dp"
    android:layout_width="150dp"
    android:layout_height="40dp"/>

<TextView
    android:text="@string/marks"
    android:layout_x="30dp"
    android:layout_y="150dp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"/>

<EditText android:id="@+id/editMarks"
    android:inputType="number"
    android:layout_x="150dp"
    android:layout_y="150dp"
    android:layout_width="150dp"
    android:layout_height="40dp"/>

<Button    android:id="@+id	btnAdd"
    android:text="@string/add"
    android:layout_x="30dp"
    android:layout_y="200dp"
    android:layout_width="100dp"
    android:layout_height="40dp"/>

<Button    android:id="@+id	btnDelete"
    android:text="@string/delete"
    android:layout_x="150dp"
    android:layout_y="200dp"
    android:layout_width="100dp"
    android:layout_height="40dp"/>

<Button    android:id="@+id	btnModify"
    android:text="@string/modify"
    android:layout_x="30dp"
```

```
        android:layout_y="250dp"
        android:layout_width="100dp"
        android:layout_height="40dp"/>

    <Button android:id="@+id	btnView"
        android:text="@string/view"
        android:layout_x="150dp"
        android:layout_y="250dp"
        android:layout_width="100dp"
        android:layout_height="40dp"/>

    <Button android:id="@+id	btnViewAll"
        android:text="@string/view_all"
        android:layout_x="30dp"
        android:layout_y="300dp"
        android:layout_width="100dp"
        android:layout_height="40dp"/>

    <Button android:id="@+id	btnShowInfo"
        android:text="@string/show_info"
        android:layout_x="150dp"
        android:layout_y="300dp"
        android:layout_width="150dp"
        android:layout_height="70dp"/>
</AbsoluteLayout>
```

## 2. MainActivity.java

```
package com.example.aishu.database;
import android.app.Activity;
import android.app.AlertDialog.Builder;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends Activity implements OnClickListener
{
    EditText editRollno,editName,editMarks;
    Button btnAdd,btnDelete,btnModify,btnView,btnViewAll,btnShowInfo;
```

```
SQLiteDatabase db;

@Override
public void onCreate(Bundle savedInstanceState)
{
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    editRollno=(EditText)findViewById(R.id.editRollno);
    editName=(EditText)findViewById(R.id.editName);
    editMarks=(EditText)findViewById(R.id.editMarks);
    btnAdd=(Button)findViewById(R.id.btnAdd);
    btnDelete=(Button)findViewById(R.id.btnDelete);
    btnModify=(Button)findViewById(R.id.btnModify);
    btnView=(Button)findViewById(R.id.btnView);
    btnViewAll=(Button)findViewById(R.id.btnViewAll);
    btnShowInfo=(Button)findViewById(R.id.btnShowInfo);
    btnAdd.setOnClickListener(this);
    btnDelete.setOnClickListener(this);
    btnModify.setOnClickListener(this);
    btnView.setOnClickListener(this);
    btnViewAll.setOnClickListener(this);
    btnShowInfo.setOnClickListener(this);
    db=openOrCreateDatabase("StudentDB", Context.MODE_PRIVATE,
null);
    db.execSQL("CREATE TABLE IF NOT EXISTS student(rollno
VARCHAR,name VARCHAR,marks VARCHAR');");
}
public void onClick(View view)
{
    if(view==btnAdd)
    {
        if(editRollno.getText().toString().trim().length()==0||
           editName.getText().toString().trim().length()==0||
           editMarks.getText().toString().trim().length()==0)
        {
            showMessage("Error", "Please enter all values");
            return;
        }
        db.execSQL("INSERT INTO student
VALUES('"+editRollno.getText()+"','"+editName.getText()+
"', '"+editMarks.getText()+"');");
        showMessage("Success", "Record added");
    }
}
```

```
        clearText();
    }
    if(view==btnDelete)
    {
        if(editRollno.getText().toString().trim().length()==0)
        {
            showMessage("Error", "Please enter Rollno");
            return;
        }
        Cursor c=db.rawQuery("SELECT * FROM student WHERE
rollno='"++editRollno.getText()+"'", null);
        if(c.moveToFirst())
        {
            db.execSQL("DELETE FROM student WHERE
rollno='"++editRollno.getText()+"'");
            showMessage("Success", "Record Deleted");
        }
        else
        {
            showMessage("Error", "Invalid Rollno");
        }
        clearText();
    }
    if(view==btnModify)
    {
        if(editRollno.getText().toString().trim().length()==0)
        {
            showMessage("Error", "Please enter Rollno");
            return;
        }
        Cursor c=db.rawQuery("SELECT * FROM student WHERE
rollno='"++editRollno.getText()+"'", null);
        if(c.moveToFirst())
        {
            db.execSQL("UPDATE student SET
name='"++editName.getText()+"',marks='"++editMarks.getText()+"+
" WHERE rollno='"++editRollno.getText()+"'");
            showMessage("Success", "Record Modified");
        }
        else
        {
            showMessage("Error", "Invalid Rollno");
```

```
        }
        clearText();
    }
    if(view==btnView)
    {
        if(editRollno.getText().toString().trim().length()==0)
        {
            showMessage("Error", "Please enter Rollno");
            return;
        }
        Cursor c=db.rawQuery("SELECT * FROM student WHERE
rollno='"++editRollno.getText()+"'", null);
        if(c.moveToFirst())
        {
            editName.setText(c.getString(1));
            editMarks.setText(c.getString(2));
        }
        else
        {
            showMessage("Error", "Invalid Rollno");
            clearText();
        }
    }
    if(view==btnViewAll)
    {
        Cursor c=db.rawQuery("SELECT * FROM student", null);
        if(c.getCount()==0)
        {
            showMessage("Error", "No records found");
            return;
        }
        StringBuffer buffer=new StringBuffer();
        while(c.moveToNext())
        {
            buffer.append("Rollno: "+c.getString(0)+"\n");
            buffer.append("Name: "+c.getString(1)+"\n");
            buffer.append("Marks: "+c.getString(2)+"\n\n");
        }
        showMessage("Student Details", buffer.toString());
    }
    if(view==btnShowInfo)
    {
```

```
        showMessage("Student Management Application", "Developed  
By IT Students");  
    }  
}  
public void showMessage(String title,String message)  
{  
    Builder builder=new Builder(this);  
    builder.setCancelable(true);  
    builder.setTitle(title);  
    builder.setMessage(message);  
    builder.show();  
}  
public void clearText()  
{  
    editRollno.setText("");  
    editName.setText("");  
    editMarks.setText("");  
    editRollno.requestFocus();  
}  
}
```

## **OUTPUT:**



Student Details

Enter Rollno:

Enter Name:

Enter Marks:

**ADD**   **DELETE**

**MODIFY**   **VIEW**

**VIEW ALL**   **SHOW INFORMATION**



Student Details

Enter Rollno:

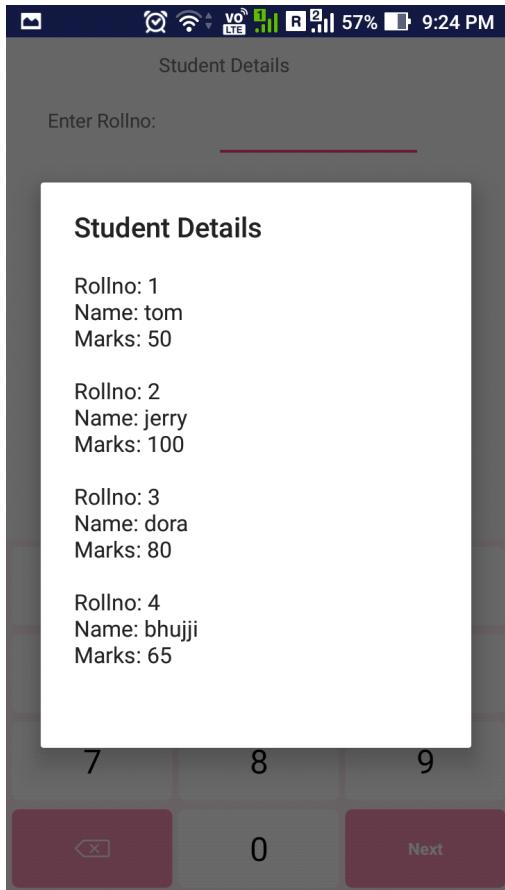
Enter Name:

Enter Marks:

**ADD**   **DELETE**

**Success**

Record added





### Student Details

Enter Rollno:

3

Enter Name:

Enter Marks:

**ADD**

**DELETE**

**MODIFY**

**VIEW**

**VIEW ALL**

**SHOW  
INFORMATION**

1

2

3

4

5

6

7

8

9



0

Next

Two screenshots of a mobile application interface for managing student details.

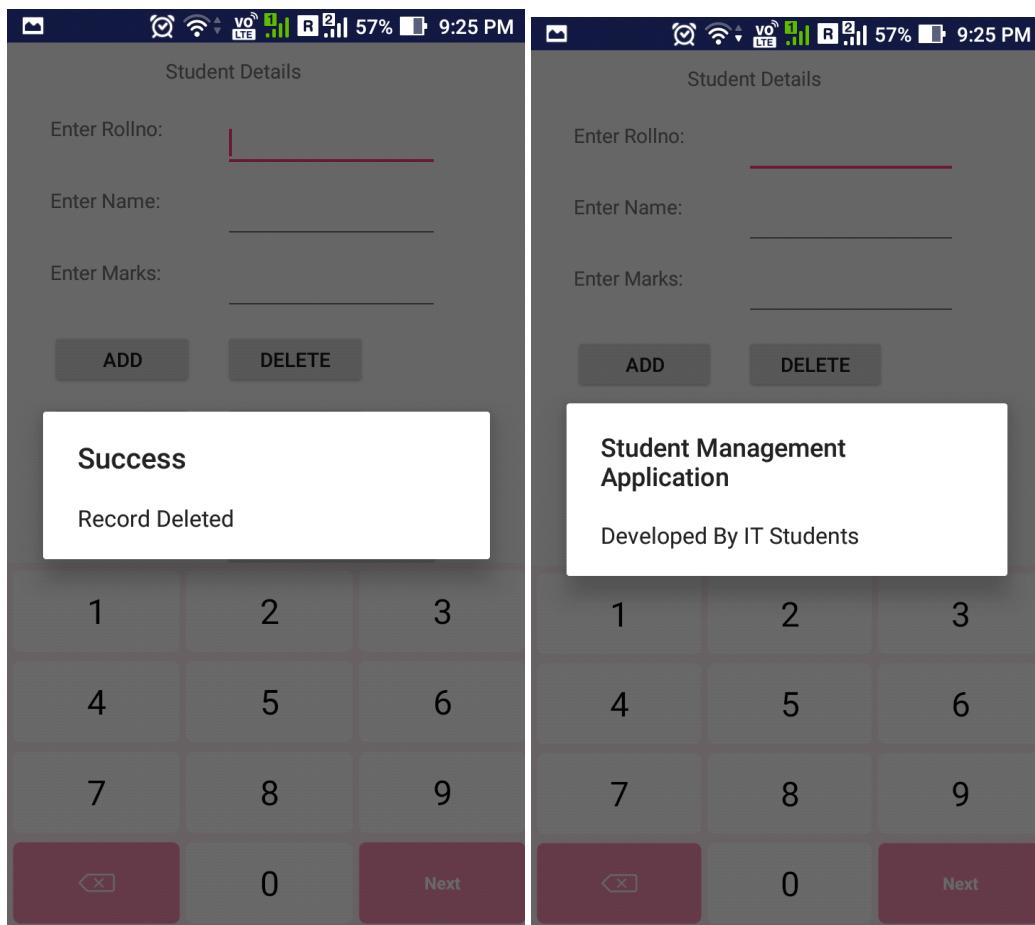
**Screenshot 1 (Left):**

- Header:** Student Details
- Fields:** Enter Rollno: (text input), Enter Name: (text input), Enter Marks: (text input)
- Buttons:** ADD, DELETE
- Success Message:** Success  
Record Modified
- Data Table:** A 3x3 grid of numbers:

1	2	3
4	5	6
7	8	9
- Page Navigation:** Back, Home, Next

**Screenshot 2 (Right):**

- Header:** Student Details
- Fields:** Enter Rollno: (text input with value 4), Enter Name: (text input with value bhujji), Enter Marks: (text input with value 65)
- Buttons:** ADD, DELETE, MODIFY, VIEW
- Other Options:** VIEW ALL, SHOW INFORMATION



## RESULT:

Thus an android application that makes use of database using android studio and sdk was developed successfully.

**EXPT NO: 6****RSS FEED****DATE:****AIM:**

To develop an android application that makes use of RSS feed of any website using android studio and sdk.

**REQUIREMENTS:** android studio and sdk.

**CODING:****1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:id="@+id/fragment_container"
    android:layout_height="fill_parent" />
```

**2.rss\_xml.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<TextView
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/itemTitle"
    android:textSize="18dp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content" />
```

**3.AndroidManifest.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<manifest
    xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.aishu.rssfeed">
    <uses-permission android:name="android.permission.INTERNET" />
    <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>
</activity>
<service android:name=".RssService" />
</application> </manifest>
```

#### **4.Constants.java**

```
package com.example.aishu.rssfeed;
public class Constants {
    public static final String TAG = "RssApp";
}
```

#### **5.PcWorldRssParser.java**

```
package com.example.aishu.rssfeed;
import java.io.IOException;
import java.io.InputStream;
import java.util.ArrayList;
import java.util.List;
import org.xmlpull.v1.XmlPullParser;
import org.xmlpull.v1.XmlPullParserException;
import android.util.Xml;

public class PcWorldRssParser {
    private final String ns = null;
    public List<RssItem> parse(InputStream inputStream) throws
XmlPullParserException, IOException {
        try {
            XmlPullParser parser = Xml.newPullParser();
parser.setFeature(XmlPullParser.FEATURE_PROCESS_NAMESPACES,
false);
            parser.setInput(inputStream, null);
            parser.nextTag();
            return readFeed(parser);
        } finally {
            inputStream.close();
        }
    }
    private List<RssItem> readFeed(XmlPullParser parser) throws
XmlPullParserException, IOException {
        parser.require(XmlPullParser.START_TAG, null, "rss");
        String title = null;
```

```
String link = null;
List<RssItem> items = new ArrayList<RssItem>();
while (parser.next() != XmlPullParser.END_DOCUMENT) {
    if (parser.getEventType() != XmlPullParser.START_TAG) {
        continue;
    }
    String name = parser.getName();
    if (name.equals("title")) {
        title = readTitle(parser);
    } else if (name.equals("link")) {
        link = readLink(parser);
    }
    if (title != null && link != null) {
        RssItem item = new RssItem(title, link);
        items.add(item);
        title = null;
        link = null;
    }
}
return items;
}
private String readLink(XmlPullParser parser) throws
XmlPullParserException, IOException {
    parser.require(XmlPullParser.START_TAG, ns, "link");
    String link = readText(parser);
    parser.require(XmlPullParser.END_TAG, ns, "link");
    return link;
}
private String readTitle(XmlPullParser parser) throws
XmlPullParserException, IOException {
    parser.require(XmlPullParser.START_TAG, ns, "title");
    String title = readText(parser);
    parser.require(XmlPullParser.END_TAG, ns, "title");
    return title;
}
private String readText(XmlPullParser parser) throws IOException,
XmlPullParserException {
    String result = "";
    if (parser.next() == XmlPullParser.TEXT) {
        result = parser.getText();
        parser.nextTag();
    }
}
```

```
        return result;
    }
}
```

## 6.RssAdapter.java

```
package com.example.aishu.rssfeed;
import java.util.List;
import android.content.Context;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
import android.widget.TextView;
public class RssAdapter extends BaseAdapter {
    private final List<RssItem> items;
    private final Context context;
    public RssAdapter(Context context, List<RssItem> items) {
        this.items = items;
        this.context = context;
    }
    @Override
    public int getCount() {
        return items.size();
    }
    @Override
    public Object getItem(int position) {
        return items.get(position);
    }
    @Override
    public long getItemId(int id) {
        return id;
    }
    @Override
    public View getView(int position, View convertView, ViewGroup
parent) {
        ViewHolder holder;
        if (convertView == null) {
            convertView = View.inflate(context, R.layout.rss_xml, null);
            holder = new ViewHolder();
            holder.itemTitle = (TextView)
convertView.findViewById(R.id.itemTitle);
            convertView.setTag(holder);
        } else {
```

```
        holder = (ViewHolder) convertView.getTag();
    }
    holder.itemTitle.setText(items.get(position).getTitle());
    return convertView;
}
static class ViewHolder {
    TextView itemTitle;
}
}
```

## 7.RssFragment.java

```
package com.example.aishu.rssfeed;
import java.util.List;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.os.Handler;
import android.os.ResultReceiver;
import android.support.v4.app.Fragment;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ListView;
import android.widget.ProgressBar;
import android.widget.Toast;
public class RssFragment extends Fragment implements
OnItemClickListener {
    private ProgressBar progressBar;
    private ListView listView;
    private View view;
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setRetainInstance(true);
    }
    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup
container, Bundle savedInstanceState) {
        if (view == null) {
```

```
        view = inflater.inflate(R.layout.fragment_layout, container,
false);
        progressBar = (ProgressBar)
view.findViewById(R.id.progressBar);
        listView = (ListView) view.findViewById(R.id.listView);
        listView.setOnItemClickListener(this);
        startService();
    } else {
        ViewGroup parent = (ViewGroup) view.getParent();
        parent.removeView(view);
    }
    return view;
}
private void startService() {
    Intent intent = new Intent(getActivity(), RssService.class);
    intent.putExtra(RssService.RECEIVER, resultReceiver);
    getActivity().startService(intent);
}
private final ResultReceiver resultReceiver = new
ResultReceiver(new Handler()) {
    @SuppressWarnings("unchecked")
    @Override
    protected void onReceiveResult(int resultCode, Bundle resultData)
{
    progressBar.setVisibility(View.GONE);
    List<RssItem> items = (List<RssItem>)
resultData.getSerializable(RssService.ITEMS);
    if (items != null) {
        RssAdapter adapter = new RssAdapter(getActivity(), items);
        listView.setAdapter(adapter);
    } else {
        Toast.makeText(getActivity(), "An error occurred while
downloading the rss feed.",
Toast.LENGTH_LONG).show();
    }
};
    @Override
    public void onItemClick(AdapterView<?> parent, View view, int
position, long id) {
        RssAdapter adapter = (RssAdapter) parent.getAdapter();
        RssItem item = (RssItem) adapter.getItem(position);
```

```
        Uri uri = Uri.parse(item.getLink());
        Intent intent = new Intent(Intent.ACTION_VIEW, uri);
        startActivity(intent);
    }
}
```

## 8.RssItem.java

```
package com.example.aishu.rssfeed;
public class RssItem {
    private final String title;
    private final String link;
    public RssItem(String title, String link) {
        this.title = title;
        this.link = link;
    }
    public String getTitle() {
        return title;
    }
    public String getLink() {
        return link;
    }
}
```

## 9.RssService.java

```
package com.example.aishu.rssfeed;
import java.io.IOException;
import java.io.InputStream;
import java.io.Serializable;
import java.net.URL;
import java.util.List;
import org.xmlpull.v1.XmlPullParserException;
import android.app.IntentService;
import android.content.Intent;
import android.os.Bundle;
import android.os.ResultReceiver;
import android.util.Log;

public class RssService extends IntentService {
    private static final String RSS_LINK =
"http://www.thehindu.com/news/?service=rss";
    public static final String ITEMS = "items";
    public static final String RECEIVER = "receiver";
    public RssService() {
```

```

        super("RssService");
    }
    @Override
    protected void onHandleIntent(Intent intent) {
        Log.d(Constants.TAG, "Service started");
        List<RssItem> rssItems = null;
        try {
            PcWorldRssParser parser = new PcWorldRssParser();
            rssItems = parser.parse(getInputStream(RSS_LINK));
        } catch (XmlPullParserException e) {
            Log.w(e.getMessage(), e);
        } catch (IOException e) {
            Log.w(e.getMessage(), e);
        }
        Bundle bundle = new Bundle();
        bundle.putSerializable(ITEMS, (Serializable) rssItems);
        ResultReceiver receiver = intent.getParcelableExtra(RECEIVER);
        receiver.send(0, bundle);
    }
    public InputStream getInputStream(String link) {
        try {
            URL url = new URL(link);
            return url.openConnection().getInputStream();
        } catch (IOException e) {
            Log.w(Constants.TAG, "Exception while retrieving the input
stream", e);
            return null;
        }
    }
}

```

## **10.fragment\_layout.xml**

```

<?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"
        android:orientation="vertical" >
    <ListView
        android:id="@+id/listView"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent" >

```

```

</ListView>
<ProgressBar
    android:id="@+id/progressBar"
    style="?android:attr/progressBarStyleLarge"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerInParent="true" />
</RelativeLayout>

```

## OUTPUT:

     55%  9:42 PM	     54%  9:43 PM
The Hindu - News	As Anna Hazare continues stir in Delhi, his village people stage a 'Sholay' style protest
Bring Manjolai tea estate under TANTEA: workers	AWARENESS at a click
Police constable, two accused injured in shootout	Watch: Rescued juvenile Olive Ridley turtle released into the sea
Cheating case filed against AIADMK MP's son	Straight from the hive
Water billing process picks pace in Hyderabad	Delhi court grants CBI 5-day custody of Peter Mukerjea in INX Media case
Sharing the love for books	Tempered with science
Sheep die in large numbers in Nalgonda	Burglary at Indian Overseas Bank's Virugambakkam branch in Chennai
Insect Museum opened at TNAU	Twirl those thumbsticks
Milk dairy at the foothills of Nandi Hills	Fire breaks out at Chennai Citi Centre mall
Govt sets up Nava Kerala Nidhi	Merchants of Cathedral Road
Rudresh murder: HC upholds decision of Ministry of Home Affairs	Supreme Court agrees to consider Jacob Thomas' plea challenging Kerala HC
Discussion held	Twitter spat: Rahul calls Modi 'Big Boss who likes to spy on Indians', BJP accuses Cong. of 'theft'
Govt taking steps to expedite settlement of cases	SC seeks Centre's views on polygamy, 'nikah halala'
SC seeks Centre's views on polygamy, US expels 60 Russian diplomats, and other top stories of the day	China willing to hold talks with U.S. to resolve trade differences
Satheesan seeks vigilance inquiry into IFTAS deal	Malaysia proposes 10 years in jail for fake news
U.S. expels 60 Russian diplomats, orders closure of Seattle consulate	Two Bihar journalists killed as car rams into

**RESULT:**

Thus an android application that makes use of RSS feed of any website using android studio and sdk was developed successfully.

**EXPT NO:7****MULTITHREADING APPLICATION****DATE:****AIM:**

To implement an android application that implements multithreading using android studio and sdk.

**REQUIREMENTS:** android studio and sdk.

**CODING:****1.activity\_main.xml**

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

    <RelativeLayout
        android:id="@+id/firstlayout"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:layout_marginTop="80dp">

        <TextView
            android:id="@+id/display"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Button will appear after 10 seconds" />
    </RelativeLayout>

    <RelativeLayout
```

```
        android:id="@+id/secondlayout"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_below="@+id/firstlayout"
        android:gravity="center">

    <TextView
        android:id="@+id/timer"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:gravity="center_horizontal"
        android:text="12"
        android:layout_marginTop="80dp"
        android:textSize="36dp"/>
</RelativeLayout>

<RelativeLayout
    android:id="@+id/thirdlayout"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/secondlayout"
    android:gravity="center">

    <Button
        android:id="@+id/clickme"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Click_me"
        android:visibility="invisible"
        android:layout_marginTop="100dp"/>
</RelativeLayout>
</RelativeLayout>
```

## 2. MainActivity.java

```
package com.example.aishu.multi_thread;
import android.app.Activity;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

public class MainActivity extends Activity {
```

```
Handler hand=new Handler();
Button clickme;
TextView timer;

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    timer=(TextView)findViewById(R.id.timer);
    clickme=(Button)findViewById(R.id.clickme);
    hand.postDelayed(run,100);
}
Runnable run=new Runnable() {
    @Override
    public void run() {
        updateTime();
    }
};
public void updateTime()
{
    timer.setText(""+(Integer.parseInt(timer.getText().toString()) -
1));
    if (Integer.parseInt(timer.getText().toString()) == 0)
    {
        clickme.setVisibility(View.VISIBLE);
    }
    else
    {
        hand.postDelayed(run, 100);
    }
}
```

## **OUTPUT:**



Button will appear after 10 seconds

11



Button will appear after 10 seconds

0

CLICK\_ME

**RESULT:**

Thus an android application that implements multithreading using android studio and sdk was developed successfully.

**EXPT NO:8****GSP APP****DATE:06-02-18****AIM:**

To develop a native application that uses GPS location information using android studio and sdk.

**REQUIREMENTS:**Android studio and sdk.**CODING:****1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".AndroidLocationActivity" >
```

```
<Button  
    android:id="@+id/btnGPSShowLocation"  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:layout_alignLeft="@+id/btnNWShowLocation"  
    android:layout_alignParentTop="true"  
    android:layout_marginTop="36dp"  
    android:minWidth="100dp"  
    android:text="Show Location\n(GPS)" />  
  
<Button  
    android:id="@+id/btnNWShowLocation"  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:layout_below="@+id/btnGPSShowLocation"  
    android:layout_centerHorizontal="true"  
    android:layout_marginTop="44dp"  
    android:minWidth="100dp"  
    android:text="Show Location\n(network provider)" />  
</RelativeLayout>
```

## 2.AndroidLocationActivity.java

```
package com.example.aishu.gps;  
import android.app.Activity;  
import android.app.AlertDialog;  
import android.content.DialogInterface;  
import android.content.Intent;  
import android.location.Location;  
import android.location.LocationManager;  
import android.os.Bundle;  
import android.provider.Settings;  
import android.view.Menu;  
import android.view.View;  
import android.widget.Button;  
import android.widget.Toast;  
import com.javapapers.android.androidgps.R;  
public class AndroidLocationActivity extends Activity {  
    Button btnGPSShowLocation;  
    Button btnNWShowLocation;  
    AppLocationService appLocationService;  
    @Override
```

```
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    appLocationService = new AppLocationService(
        AndroidLocationActivity.this);
    btnGPSShowLocation = (Button)
    findViewById(R.id.btnGPSShowLocation);
    btnGPSShowLocation.setOnClickListener(new
    View.OnClickListener() {
        @Override
        public void onClick(View arg0) {
            Location gpsLocation = appLocationService
                .getLocation(LocationManager.GPS_PROVIDER);
            if (gpsLocation != null) {
                double latitude = gpsLocation.getLatitude();
                double longitude = gpsLocation.getLongitude();
                Toast.makeText(
                    getApplicationContext(),
                    "Mobile Location (GPS): \nLatitude: " + latitude
                    + "\nLongitude: " + longitude,
                    Toast.LENGTH_LONG).show();
            } else {
                showSettingsAlert("GPS");
            }
        }
    });
    btnNWShowLocation = (Button)
    findViewById(R.id.btnNWShowLocation);
    btnNWShowLocation.setOnClickListener(new
    View.OnClickListener() {
        @Override
        public void onClick(View arg0) {
            Location nwLocation = appLocationService
                .getLocation(LocationManager.NETWORK_PROVIDER);
            if (nwLocation != null) {
                double latitude = nwLocation.getLatitude();
                double longitude = nwLocation.getLongitude();
                Toast.makeText(
                    getApplicationContext(),
                    "Mobile Location (NW): \nLatitude: " + latitude
                    + "\nLongitude: " + longitude,
                    Toast.LENGTH_LONG).show();
            }
        }
    });
}
```

```

        } else {
            showSettingsAlert("NETWORK");
        }
    });
}
public void showSettingsAlert(String provider) {
    AlertDialog.Builder alertDialog = new AlertDialog.Builder(
        AndroidLocationActivity.this);
    alertDialog.setTitle(provider + " SETTINGS");
    alertDialog
        .setMessage(provider + " is not enabled! Want to go to
settings menu?");
    alertDialog.setPositiveButton("Settings",
        new DialogInterface.OnClickListener() {
            public void onClick(DialogInterface dialog, int which) {
                Intent intent = new Intent(
                    Settings.ACTION_LOCATION_SOURCE_SETTINGS);
                AndroidLocationActivity.this.startActivity(intent);
            }
        });
    alertDialog.setNegativeButton("Cancel",
        new DialogInterface.OnClickListener() {
            public void onClick(DialogInterface dialog, int which) {
                dialog.cancel();
            }
        });
    alertDialog.show();
}
}

```

### **3.AppLocationService.java**

```

package com.example.aishu.gps;
import android.app.Service;
import android.content.Context;
import android.content.Intent;
import android.location.Location;
import android.location.LocationListener;
import android.location.LocationManager;
import android.os.Bundle;
import android.os.IBinder;

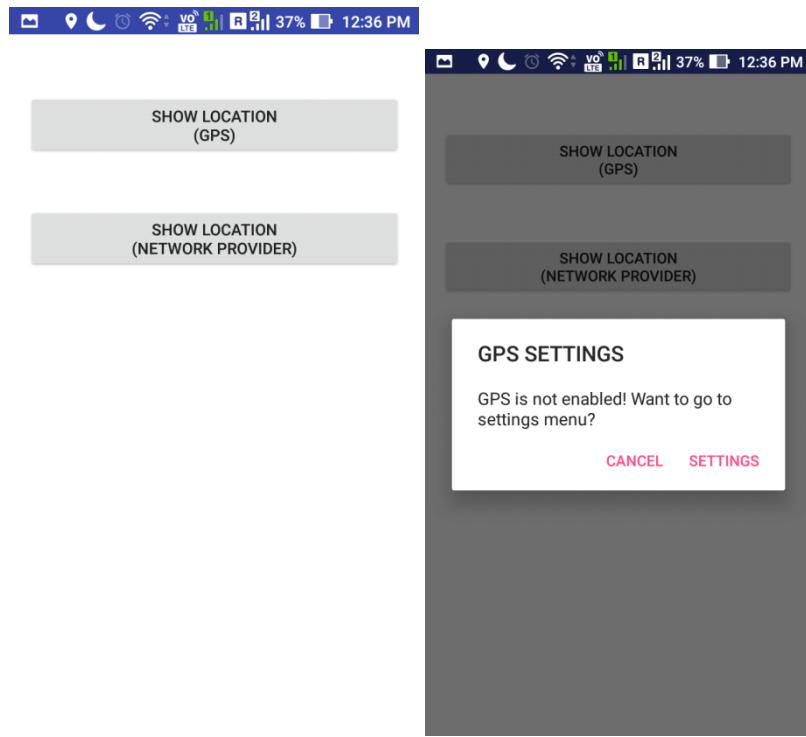
```

```
public class AppLocationService extends Service implements
LocationListener {
    protected LocationManager locationManager;
    Location location;
    private static final long MIN_DISTANCE_FOR_UPDATE = 10;
    private static final long MIN_TIME_FOR_UPDATE = 1000 * 60 * 2;
    public AppLocationService(Context context) {
        locationManager = (LocationManager) context
            .getSystemService(LOCATION_SERVICE);
    }
    public Location getLocation(String provider) {
        if (locationManager.isProviderEnabled(provider)) {
            locationManager.requestLocationUpdates(provider,
                MIN_TIME_FOR_UPDATE, MIN_DISTANCE_FOR_UPDATE,
this);
            if (locationManager != null) {
                location = locationManager.getLastKnownLocation(provider);
                return location;
            }
        }
        return null;
    }
    @Override
    public void onLocationChanged(Location location) {
    }
    @Override
    public void onProviderDisabled(String provider) {
    }
    @Override
    public void onProviderEnabled(String provider) {
    }
    @Override
    public void onStatusChanged(String provider, int status, Bundle
extras) {
    }
    @Override
    public IBinder onBind(Intent arg0) {
        return null;
    }
}
```

#### **4.Androidmanifest.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<manifest
    xmlns:android="http://schemas.android.com/apk/res/android"
        package="com.javapapers.android.androidgps"
        android:versionCode="1"
        android:versionName="1.0" >
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />
    <!-- to get location using GPS -->
    <uses-permission
        android:name="android.permission.ACCESS_FINE_LOCATION" />
    <!-- to get location using NetworkProvider -->
    <uses-permission android:name="android.permission.INTERNET" />
    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher_background"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.aishu.gps.AndroidLocationActivity"
            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:**





SHOW LOCATION  
(GPS)

SHOW LOCATION  
(GPS)

SHOW LOCATION  
(NETWORK PROVIDER)

SHOW LOCATION  
(NETWORK PROVIDER)

Mobile Location (GPS):  
Latitude: 13.0410567  
Longitude: 80.20532927

Mobile Location (NW):  
Latitude: 13.0412172  
Longitude: 80.2054385

## **RESULT:**

Thus a native application that uses GPS location information using android studio and sdk was developed successfully.

## **EXPT NO:9**

### **SD CARD APP**

#### **DATE:**

#### **AIM:**

To implement an android application that writes data to the SD card using android studio and sdk

**REQUIREMENTS:**Android studio and sdk.

**CODING:****1.Activity\_main.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    android:id="@+id/widget28"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:background="#ffff6fdff"
    android:orientation="vertical"
    xmlns:android="http://schemas.android.com/apk/res/android">
    <EditText
        android:id="@+id/txtData"
        android:layout_width="fill_parent"
        android:layout_height="180px"
        android:textSize="18sp" />

    <Button
        android:id="@+id	btnWriteSDFile"
        android:layout_width="216dp"
        android:layout_height="60px"
        android:text="1. Write SD File" />

    <Button
        android:id="@+id	btnClearScreen"
        android:layout_width="216dp"
        android:layout_height="60px"
        android:text="2. Clear Screen" />

    <Button
        android:id="@+id	btnReadSDFile"
        android:layout_width="216dp"
        android:layout_height="60px"
        android:text="3. Read SD File" />

    <Button
        android:id="@+id	btnClose"
        android:layout_width="216dp"
        android:layout_height="60px"
        android:text="4. Close" />
</LinearLayout>
```

**2.AndroidManifest.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<manifest
    xmlns:android="http://schemas.android.com/apk/res/android"
        package="com.example.hp.sdcard" >
<uses-permission
    android:name="android.permission.WRITE_EXTERNAL_STORAGE">
</uses-permission>
<application
    android:allowBackup="true"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
        android:name=".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>
```

### **3.MainActivity.java**

```
import java.io.*;
import android.app.Activity;
import android.os.Bundle;
import android.os.Environment;
import android.view.*;
import android.view.View.OnClickListener;
import android.widget.*;

public class MainActivity extends Activity {
    EditText txtData;
    Button btnWriteSDFile;
    Button btnReadSDFile;
    Button btnClearScreen;
    Button btnClose;

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

```
txtData = (EditText) findViewById(R.id.txtData);
txtData.setHint("Enter some lines of data here...");
btnWriteSDFile = (Button) findViewById(R.id.btnWriteSDFile);
btnWriteSDFile.setOnClickListener(new OnClickListener() {
    public void onClick(View v) {
        String baseDir = Environment.getExternalStorageDirectory().getAbsolutePath();
        String fileName = "myfile.txt";
        try {
            File myFile = new File(baseDir + "/" + fileName);
            myFile.createNewFile();
            FileOutputStream fOut = new FileOutputStream(myFile);
            OutputStreamWriter myOutWriter =
                new OutputStreamWriter(fOut);
            myOutWriter.append(txtData.getText());
            myOutWriter.close();
            fOut.close();
            Toast.makeText(getApplicationContext(),
                "Done writing SD 'myfile.txt'",
                Toast.LENGTH_SHORT).show();
        } catch (Exception e) {
            Toast.makeText(getApplicationContext(), e.getMessage(),
                Toast.LENGTH_SHORT).show();
        }
    }
});
btnReadSDFile = (Button) findViewById(R.id.btnReadSDFile);
btnReadSDFile.setOnClickListener(new OnClickListener() {
    public void onClick(View v) {
        String baseDir = Environment.getExternalStorageDirectory().getAbsolutePath();
        String fileName = "myfile.txt";
        try {
            File myFile = new File(baseDir + "/" + fileName);
            FileInputStream fIn = new FileInputStream(myFile);
            BufferedReader myReader = new BufferedReader(
                new InputStreamReader(fIn));
            String aDataRow = "";
            String aBuffer = "";
            while ((aDataRow = myReader.readLine()) != null) {
                aBuffer += aDataRow + "\n";
            }
        }
    }
});
```

```
        txtData.setText(aBuffer);
        myReader.close();
        Toast.makeText(getApplicationContext(),
                "Done reading SD 'myfile.txt'",
                Toast.LENGTH_SHORT).show();
    } catch (Exception e) {
        Toast.makeText(getApplicationContext(), e.getMessage(),
                Toast.LENGTH_SHORT).show();
    }
}
});
btnClearScreen = (Button) findViewById(R.id.btnClearScreen);
btnClearScreen.setOnClickListener(new OnClickListener() {
    public void onClick(View v) {
        txtData.setText("");
    }
}); // btnClearScreen
btnClose = (Button) findViewById(R.id.btnClose);
btnClose.setOnClickListener(new OnClickListener() {
    public void onClick(View v) {
        finish();
    }
});
}
}
```

## **OUTPUT:**



hello world

hello world

1. WRITE SD FILE

2. CLEAR SCREEN

3. READ SD FILE

4. CLOSE

1. WRITE SD FILE

2. CLEAR SCREEN

3. READ SD FILE

4. CLOSE

Done writing SD 'myfile.txt'

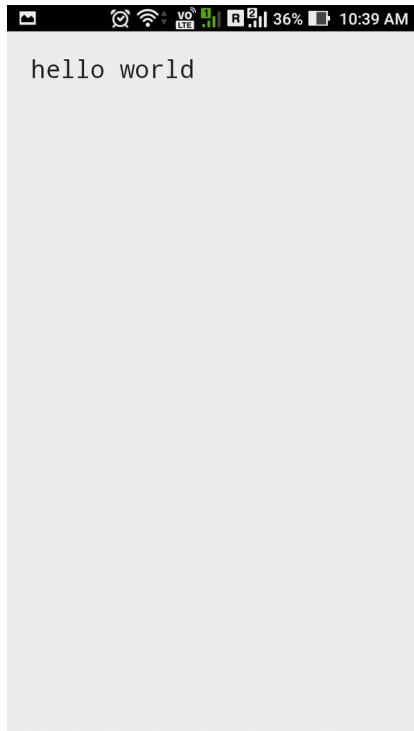


Enter some lines of data here...

hello world



Done reading SD 'myfile.txt'



### **RESULT:**

Thus an android application to writes data to the SD card using android studio and sdk was implemented successfully.

**EXPT NO:10**

## NOTIFICATION APP

**DATE:****AIM:**

To develop a notification application that uses layout managers and event listeners.

**REQUIREMENTS:** android studio and sdk.**CODING:****1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="368dp"
    android:layout_height="495dp"
    tools:layout_editor_absoluteX="8dp"
    tools:layout_editor_absoluteY="8dp"
    tools:context="com.example.aishu.fetch.MainActivity">
    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="45dp"
        android:text="information"

    android:textAppearance="@style/TextAppearance.AppCompat.Large" />
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/textView1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="127dp"
        android:text="send notification" />
    <EditText
        android:id="@+id/editText"
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
        android:layout_below="@+id/textView1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="39dp"
        android:ems="10"
        android:inputType="text" />
    </RelativeLayout>
```

## 2.MainActivity.java

```
package com.example.aishu.fetch;
import android.annotation.SuppressLint;
import android.app.Activity;
import android.app.Notification;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.net.Uri;
import android.support.v4.app.NotificationCompat;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import java.util.Calendar;
public class MainActivity extends Activity {
    EditText txtInfo;
    Button btnSend;
    public final static String NOTIFICATION_DATA =
"NOTIFICATION_DATA";
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        txtInfo = (EditText) this.findViewById(R.id.editText);
        btnSend = (Button) this.findViewById(R.id.button);
        btnSend.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
```

```

        createNotification(Calendar.getInstance().getTimeInMillis(),
txtInfo.getText().toString());
    } });
private void createNotification(long time, String text){
    String notificationContent = "Detail : Press to show detail !";
    String notificationTitle = "Notification";
    Bitmap largeicon =
BitmapFactory.decodeResource(getResources(),
R.drawable.ic_launcher_background);
    int smallicon = R.drawable.ic_launcher_background;
    Intent intent = new Intent(getApplicationContext(),
NotifDetailActivity.class);
    intent.putExtra(NOTIFICATION_DATA, "Detail : " + text);
    intent.setData(Uri.parse("content://" + time));
    PendingIntent pendingIntent =
PendingIntent.getActivity(getApplicationContext(), 0, intent,
Intent.FLAG_ACTIVITY_NEW_TASK);
    NotificationManager notificationManager
        = (NotificationManager)
getSystemService(Context.NOTIFICATION_SERVICE);
    NotificationCompat.Builder builder;
    builder = new
NotificationCompat.Builder(getApplicationContext());
    builder.setWhen(time)
        .setContentText(notificationContent)
        .setContentTitle(notificationTitle)
        .setSmallIcon(smallicon)
        .setAutoCancel(true)
        .setTicker(notificationTitle)
        .setLargeIcon(largeicon)
        .setDefaults(Notification.DEFAULT_LIGHTS |
Notification.DEFAULT_SOUND|
Notification.DEFAULT_VIBRATE)
        .setContentIntent(pendingIntent);
    Notification notification = builder.build();
    notificationManager.notify((int)time, notification); } }

```

### **3.AndroidManifest.xml**

```

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

```

```
<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>
    </activity>
    <activity android:name=".NotifDetailActivity"></activity>
</application>
</manifest>
```

#### **4.activity\_notif\_detail.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="com.example.aishu.fetch.NotifDetailActivity">
</android.support.constraint.ConstraintLayout>
```

#### **5.NotifDetailActivity.java**

```
package com.example.aishu.fetch;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
public class NotifDetailActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_notif_detail);
        TextView tv = new TextView(this);
        setContentView(tv);
```

```
Intent intent = getIntent();
String data =
intent.getExtras().getString(MainActivity.NOTIFICATION_DATA);
tv.setText(data); } }
```

## OUTPUT:



information

information

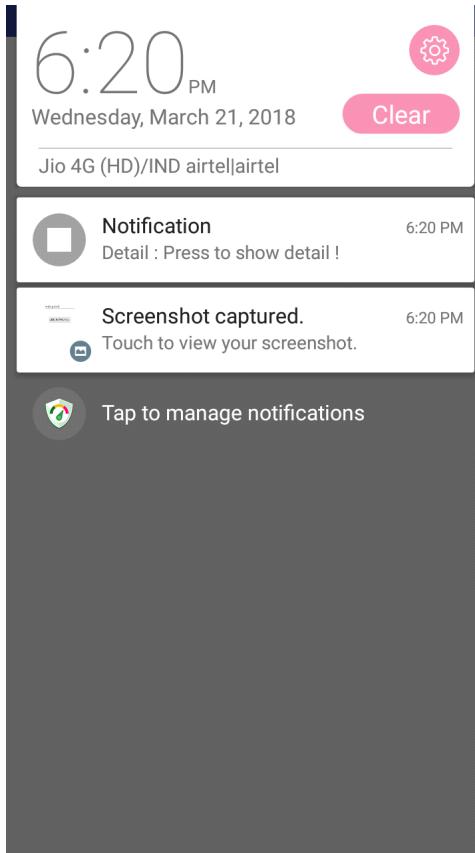


SEND NOTIFICATION



SEND NOTIFICATION

testing data



Detail : testing data

**RESULT:**

Thus a notification application using layout managers and event listeners was developed successfully.

## **EXPT NO:11**

### **ALARM CLOCK APP**

#### **DATE:**

#### **AIM:**

To develop an android application that creates alarm clock using android studio and sdk.

**REQUIREMENTS:** android studio and sdk.

#### **CODING:**

##### **1.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"  
    android:paddingLeft="@dimen/activity_horizontal_margin"  
    android:paddingRight="@dimen/activity_horizontal_margin"  
    android:paddingTop="@dimen/activity_vertical_margin"  
    android:paddingBottom="@dimen/activity_vertical_margin"  
    tools:context=".MainActivity">  
  
<TimePicker  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:id="@+id/alarmTimePicker"  
    android:layout_alignParentTop="true"  
    android:layout_centerHorizontal="true" />  
  
<ToggleButton  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Alarm On/Off"  
    android:id="@+id/alarmToggle"  
    android:layout_centerHorizontal="true"  
    android:layout_below="@+id/alarmTimePicker"  
    android:onClick="onToggleClicked" />  
  
<TextView  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:textAppearance="?android:attr/textAppearanceLarge"  
    android:text=""
```

```
        android:id="@+id/alarmText"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"
        android:layout_below="@+id/alarmToggle" />
    </RelativeLayout>
```

## 2. AlarmActivity.java

```
package com.example.aishu.alarmclock;
import android.app.Activity;
import android.app.AlarmManager;
import android.app.PendingIntent;
import android.content.Intent;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.TextView;
import android.widget.TimePicker;
import android.widget.ToggleButton;
import java.util.Calendar;
public class AlarmActivity extends Activity {
    AlarmManager alarmManager;
    private PendingIntent pendingIntent;
    private TimePicker alarmTimePicker;
    private static AlarmActivity inst;
    private TextView alarmTextView;
    public static AlarmActivity instance() {
        return inst;
    }
    @Override
    public void onStart() {
        super.onStart();
        inst = this;
    }
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        alarmTimePicker = (TimePicker)
            findViewById(R.id.alarmTimePicker);
        alarmTextView = (TextView) findViewById(R.id.alarmText);
        ToggleButton alarmToggle = (ToggleButton)
            findViewById(R.id.alarmToggle);
```

```

        alarmManager = (AlarmManager)
getSystemService(ALARM_SERVICE);
    }
    public void onToggleClicked(View view) {
        if (((ToggleButton) view).isChecked()) {
            Log.d("MyActivity", "Alarm On");
            Calendar calendar = Calendar.getInstance();
            calendar.set(Calendar.HOUR_OF_DAY,
alarmTimePicker.getCurrentHour());
            calendar.set(Calendar.MINUTE,
alarmTimePicker.getCurrentMinute());
            Intent myIntent = new Intent(AlarmActivity.this,
AlarmReceiver.class);
            pendingIntent = PendingIntent.getBroadcast(AlarmActivity.this,
0, myIntent, 0);
            alarmManager.set(AlarmManager.RTC,
calendar.getTimeInMillis(), pendingIntent);
        } else {
            alarmManager.cancel(pendingIntent);
            setAlarmText("");
            Log.d("MyActivity", "Alarm Off");
        }
    }
    public void setAlarmText(String alarmText) {
        alarmTextView.setText(alarmText);
    }
}

```

### **3.AlamReceiver.java**

```

package com.example.aishu.alarmclock;
import android.app.Activity;
import android.content.ComponentName;
import android.content.Context;
import android.content.Intent;
import android.media.Ringtone;
import android.media.RingtoneManager;
import android.net.Uri;
import android.support.v4.content.WakefulBroadcastReceiver;
public class AlarmReceiver extends WakefulBroadcastReceiver {
    @Override
    public void onReceive(final Context context, Intent intent) {
        AlarmActivity inst = AlarmActivity.instance();
        inst.setAlarmText("Alarm! Wake up! Wake up!");
    }
}

```

```

        Uri alarmUri =
RingtoneManager.getDefaultUri(RingtoneManager.TYPE_ALARM);
        if (alarmUri == null) {
            alarmUri =
RingtoneManager.getDefaultUri(RingtoneManager.TYPE_NOTIFICATION)
;
        }
        Ringtone ringtone = RingtoneManager.getRingtone(context,
alarmUri);
        ringtone.play();
        ComponentName comp = new
ComponentName(context.getPackageName(),
            AlarmService.class.getName());
        startWakefulService(context, (intent.setComponent(comp)));
        setResultCode(Activity.RESULT_OK);
    }
}

```

#### **4.AlarmService.java**

```

package com.example.aishu.alarmclock;
import android.app.IntentService;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;
import android.support.v4.app.NotificationCompat;
import android.util.Log;
public class AlarmService extends IntentService {
    private NotificationManager alarmNotificationManager;
    public AlarmService() {
        super("AlarmService");
    }
    @Override
    public void onHandleIntent(Intent intent) {
        sendNotification("Wake Up! Wake Up!");
    }
    private void sendNotification(String msg) {
        Log.d("AlarmService", "Preparing to send notification...: " + msg);
        alarmNotificationManager = (NotificationManager) this
                .getSystemService(Context.NOTIFICATION_SERVICE);
        PendingIntent contentIntent = PendingIntent.getActivity(this, 0,
            new Intent(this, AlarmActivity.class), 0);

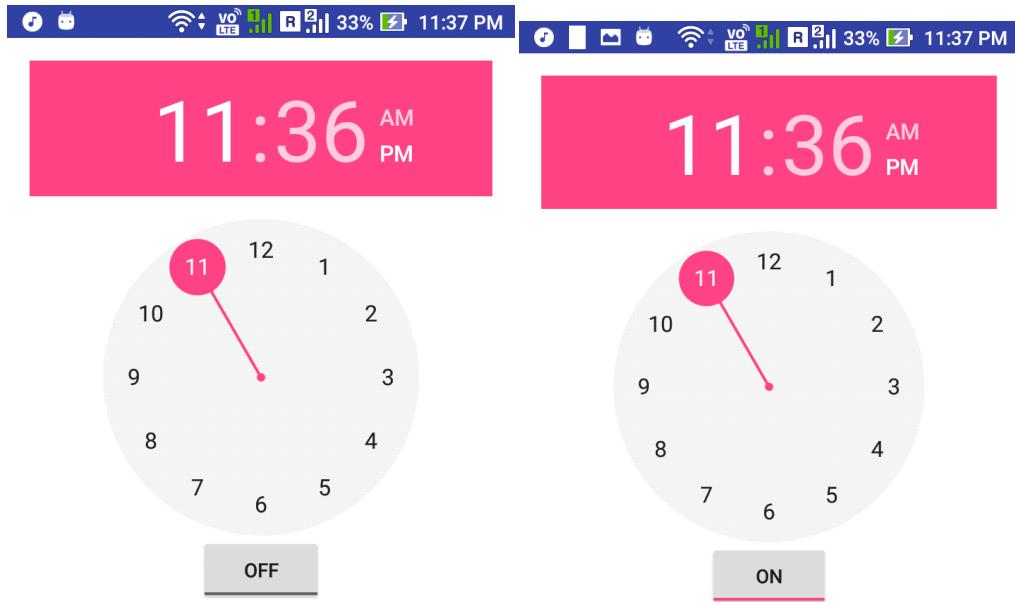
```

```
    NotificationCompat.Builder alarmNotificationBuilder = new
NotificationCompat.Builder(
this).setContentTitle("Alarm").setSmallIcon(R.drawable.images)
.setStyle(new
NotificationCompat.BigTextStyle().bigText(msg))
.setContentText(msg);
alarmNotificationBuilder.setContentIntent(contentIntent);
alarmNotificationManager.notify(1,
alarmNotificationBuilder.build());
Log.d("AlarmService", "Notification sent.");
}
}
```

## 5.AndroidManifest.java

```
<?xml version="1.0" encoding="utf-8" ?>
<manifest
xmlns:android="http://schemas.android.com/apk/res/android"
package="com.example.aishu.alarmclock">
<uses-permission
android:name="android.permission.WAKE_LOCK" />
<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=".AlarmActivity">
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />
            <category
                android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
    <service
        android:name=".AlarmService"
        android:enabled="true" />
        <receiver android:name=".AlarmReceiver" />
    </application>
</manifest>
```

## OUTPUT:



Alarm! Wake up! Wake up!

## **RESULT:**

Thus an android application that creates alarm clock using android studio and sdk was developed successfully.

## **EXPT NO:12**

## **TORCH LIGHT APP**

**DATE:****AIM:**

To develop an android application turning on and off the torch light using android studio and sdk.

**REQUIREMENTS:** Android Studio and sdk.

**CODING:****1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="16dp"
    android:paddingTop="16dp"
    android:paddingLeft="16dp"
    android:paddingRight="16dp"
    android:background="@color/colorBackground"
    tools:context=".MainActivity" >

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Flashlight App"
        android:textSize="38dp"
        android:textColor="@color/colorPrimary"
        android:gravity="center"
        android:layout_marginTop="40dp"
        android:textStyle="bold"/>

    <ImageButton
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/off"
        android:layout_centerVertical="true"
        android:scaleType="fitCenter"
        android:background="@color/colorBackground"
        android:id="@+id/imageButton"/>
</RelativeLayout>
```

## **2.AndroidManifest.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<manifest
    xmlns:android="http://schemas.android.com/apk/res/android"
        package="com.example.aishu.torchlight">
        <uses-permission android:name="android.permission.CAMERA"/>
        <uses-permission
            android:name="android.permission.FLASHLIGHT"/>
        <uses-feature android:name="android.hardware.camera"/>
        <uses-feature android:name="android.hardware.camera.flash"/>
        <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>
            </activity>
        </application>
    </manifest>
```

## **3.MainActivity.java**

```
package com.example.aishu.torchlight;
import android.app.Activity;
import android.app.AlertDialog;
import android.content.Context;
import android.content.DialogInterface;
import android.content.pm.PackageManager;
import android.hardware.camera2.CameraAccessException;
import android.hardware.camera2.CameraManager;
import android.media.MediaPlayer;
import android.os.Build;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;
```

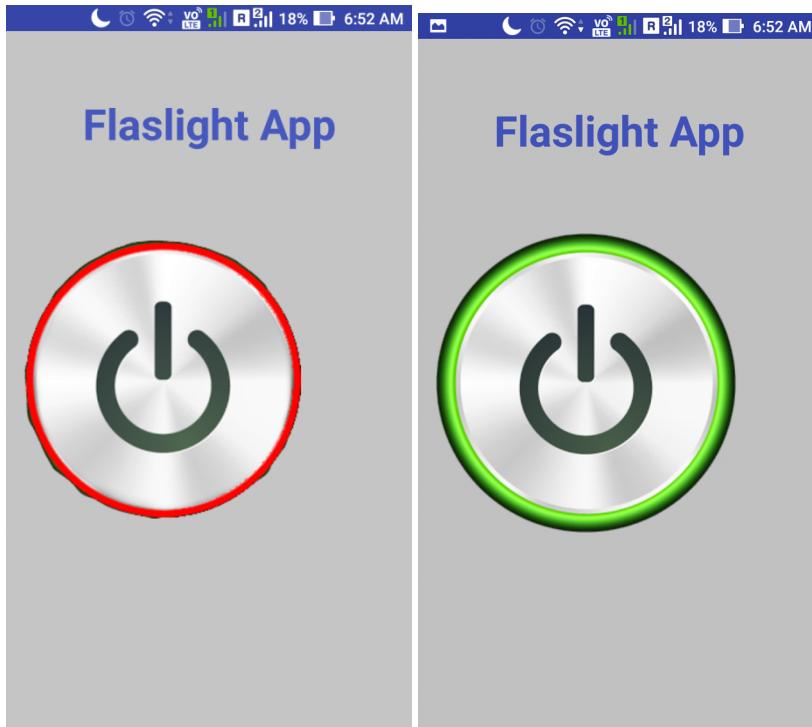
```
public class MainActivity extends Activity {
    private CameraManager objCameraManager;
    private String mCamerald;
    private ImageView ivOnOFF;
    private MediaPlayer objMediaPlayer;
    private Boolean isTorchOn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ivOnOFF = (ImageView) findViewById(R.id.imageButton);
        isTorchOn = false;
        Boolean isFlashAvailable =
getApplicationContext().getPackageManager().hasSystemFeature(Pack
ageManager.FEATURE_CAMERA_FLASH);
        if (!isFlashAvailable) {
            AlertDialog alert = new
AlertDialog.Builder(MainActivity.this).create();
            alert.setTitle(getString(R.string.app_name));
            alert.setMessage(getString(R.string.msg_error));
            alert.setPositiveButton(DialogInterface.BUTTON_POSITIVE,
getString(R.string.lbl_ok), new DialogInterface.OnClickListener() {
                public void onClick(DialogInterface dialog, int which) {
                    finish();
                }
            });
            alert.show();
            return;
        }
        objCameraManager = (CameraManager)
getSystemService(Context.CAMERA_SERVICE);
        try {
            mCamerald = objCameraManager.getCameraIdList()[0];
        } catch (CameraAccessException e) {
            e.printStackTrace();
        }
        ivOnOFF.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                try {
                    if (isTorchOn) {
                        turnOffLight();
                    } else {
                        turnOnLight();
                    }
                } catch (Exception e) {
                    e.printStackTrace();
                }
            }
        });
    }
}
```

```
        isTorchOn = false;
    } else {
        turnOnLight();
        isTorchOn = true;
    }
} catch (Exception e) {
    e.printStackTrace();
}
}
});
}

public void turnOnLight() {
    try {
        if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.M) {
            objCameraManager.setTorchMode(mCamerald, true);
            playOnOffSound();
            ivOnOFF.setImageResource(R.drawable.on);
        }
    } catch (Exception e) {
        e.printStackTrace();
    }
}
public void turnOffLight() {
    try {
        if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.M) {
            objCameraManager.setTorchMode(mCamerald, false);
            playOnOffSound();
            ivOnOFF.setImageResource(R.drawable.off);
        }
    } catch (Exception e) {
        e.printStackTrace();
    }
}
private void playOnOffSound() {
    objMediaPlayer = MediaPlayer.create(MainActivity.this,
R.raw.flash_sound);
    objMediaPlayer.setOnCompletionListener(new
MediaPlayer.OnCompletionListener() {
        @Override
        public void onCompletion(MediaPlayer mp) {
            mp.release();
        }
    });
}
```

```
        }
    });
    objMediaPlayer.start();
}
@Override
protected void onStop() {
    super.onStop();
    if (isTorchOn) {
        turnOffLight();
    }
}
@Override
protected void onPause() {
    super.onPause();
    if (isTorchOn) {
        turnOffLight();
    }
}
@Override
protected void onResume() {
    super.onResume();
    if (isTorchOn) {
        turnOnLight();
    }
}
}
```

**OUTPUT:**

**RESULT:**

Thus an android application for torch light using android studio and sdk was developed successfully.

**EXPT NO: 13****SPIN BOTTLE GAME APP****DATE:****AIM:**

To develop an android application that spins the bottle game using android studio and sdk.

**REQUIREMENTS:** Android studio and sdk.

**CODING:****1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity" >

    <ImageButton
```

```
    android:layout_width="200dp"
    android:layout_height="200dp"
    android:id="@+id/imageButton"
    android:scaleType="centerInside"
    android:src="@drawable/green_bottle"
    android:layout_centerVertical="true"
    android:layout_centerHorizontal="true" />

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_alignParentBottom="true"
    android:text="GO" />
</RelativeLayout>
```

## 2.MainActivity.java

```
package com.example.aishu.spinbottlegame;
import android.app.Activity;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.AccelerateDecelerateInterpolator;
import android.view.animation.RotateAnimation;
import android.widget.Button;
import android.widget.ImageView;
import java.util.Random;
public class MainActivity extends Activity {
    ImageView iv_bottle;
    Button b_go;
    Random r;
    int angle;
    boolean restart = false;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        iv_bottle = (ImageView) findViewById(R.id.imageButton);
        b_go = (Button) findViewById(R.id.button);
        r = new Random();
        b_go.setOnClickListener(new View.OnClickListener() {
            @Override
```

```
    public void onClick(View view) {
        if(restart) {
            angle = angle % 360;
            RotateAnimation rotate = new RotateAnimation(angle,
360,
                RotateAnimation.RELATIVE_TO_SELF, 0.5f,
            RotateAnimation.RELATIVE_TO_SELF, 0.5f);
                rotate.setFillAfter(true);
                rotate.setDuration(1000);
                rotate.setInterpolator(new
AccelerateDecelerateInterpolator());
                iv_bottle.startAnimation(rotate);
                b_go.setText("GO");
                restart = false;
        } else {
            angle = r.nextInt(3600) + 360;
            RotateAnimation rotate = new RotateAnimation(0, angle,
                RotateAnimation.RELATIVE_TO_SELF, 0.5f,
            RotateAnimation.RELATIVE_TO_SELF, 0.5f);
                rotate.setFillAfter(true);
                rotate.setDuration(3600);
                rotate.setInterpolator(new
AccelerateDecelerateInterpolator());
                iv_bottle.startAnimation(rotate);
                restart = true;
                b_go.setText("RESET");
            }
        }
    });
}
```

## **OUTPUT :**



GO



RESET



RESET

GO

**RESULT:**

Thus an android application that makes use of RSS feed of any website using android studio and sdk was developed successfully.

**EXPT NO: 14****SCREEN LOCK APP****DATE:****AIM:**

To develop an android application that locks the screen using android studio and sdk.

**REQUIREMENTS:**Android Studio and sdk.

**CODING:****1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/lock"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="50dp"
        android:text="Lock the Phone"
        android:layout_centerHorizontal="true" />

    <Button
        android:id="@+id/enableBtn"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="50dp"
```

```
    android:text="Enable"
    android:layout_centerHorizontal="true"
    android:layout_below="@+id/lock"/>

<Button
    android:id="@+id/disableBtn"
    android:layout_width="200dp"
    android:layout_height="wrap_content"
    android:layout_marginTop="50dp"
    android:text="Disable"
    android:layout_centerHorizontal="true"
    android:layout_below="@+id/enableBtn"/>
</RelativeLayout>
```

## 2.AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<manifest
    xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.administrator.scrennlock">
    <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>
        </activity>
        <receiver android:name=".MyAdmin"
            android:permission="android.permission.BIND_DEVICE_ADMIN">
            <meta-data android:name="android.app.device_admin"
                android:resource="@xml/policies" />
            <intent-filter>
                <action
                    android:name="android.app.action.DEVICE_ADMIN_ENABLED" />
            </intent-filter>
        </receiver>
```

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

### **3.MyAdmin.java**

```
package com.example.administrator.scrennlock;  
import android.app.admin.DeviceAdminReceiver;  
import android.content.Context;  
import android.content.Intent;  
import android.widget.Toast;  
public class MyAdmin extends DeviceAdminReceiver {  
    @Override  
    public void onEnabled(Context context, Intent intent) {  
        Toast.makeText(context, "Device Admin : enabled",  
        Toast.LENGTH_SHORT).show();  
    }  
  
    @Override  
    public void onDisabled(Context context, Intent intent) {  
        Toast.makeText(context, "Device Admin : disabled",  
        Toast.LENGTH_SHORT).show();  
    }  
}
```

### **4.policies.xml**

```
<?xml version="1.0" encoding="utf-8"?>  
<device-admin  
    xmlns:android="http://schemas.android.com/apk/res/android">  
    <uses-policies>  
        <force-lock />  
    </uses-policies>  
</device-admin>
```

### **5.MainActivity.java**

```
package com.example.administrator.scrennlock;  
import android.app.Activity;  
import android.app.ActivityManager;  
import android.app.admin.DevicePolicyManager;  
import android.content.ComponentName;  
import android.content.Intent;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;
```

```
import android.widget.Toast;
public class MainActivity extends AppCompatActivity implements
View.OnClickListener{
    private Button lock, disable, enable;
    public static final int RESULT_ENABLE = 11;
    private DevicePolicyManager devicePolicyManager;
    private ActivityManager activityManager;
    private ComponentName componentName;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        devicePolicyManager = (DevicePolicyManager)
getSystemService(DEVICE_POLICY_SERVICE);
        activityManager = (ActivityManager)
getSystemService(ACTIVITY_SERVICE);
        componentName = new ComponentName(this, MyAdmin.class);
        lock = (Button) findViewById(R.id.lock);
        enable = (Button) findViewById(R.id.enableBtn);
        disable = (Button) findViewById(R.id.disableBtn);
        lock.setOnClickListener(this);
        enable.setOnClickListener(this);
        disable.setOnClickListener(this);
    }
    @Override
    protected void onResume() {
        super.onResume();
        boolean isActive =
devicePolicyManager.isAdminActive(componentName);
    }
    @Override
    public void onClick(View view) {
        if(view == lock) {
            boolean active =
devicePolicyManager.isAdminActive(componentName);
            if (active) {
                devicePolicyManager.lockNow();
            } else {
                Toast.makeText(this, "You need to enable the Admin Device
Features", Toast.LENGTH_SHORT).show();
            }
        } else if (view == enable) {
```

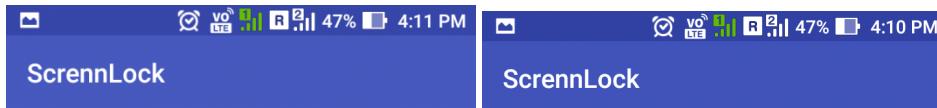
```

        Intent intent = new
Intent(DevicePolicyManager.ACTION_ADD_DEVICE_ADMIN);
        intent.putExtra(DevicePolicyManager.EXTRA_DEVICE_ADMIN,
componentName);

intent.putExtra(DevicePolicyManager.EXTRA_ADD_EXPLANATION,
"Additional text explainig why we need this permission");
        startActivityForResult(intent, RESULT_ENABLE);
    } else if (view == disable) {
        devicePolicyManager.removeActiveAdmin(componentName);
        disable.setVisibility(View.GONE);
        enable.setVisibility(View.VISIBLE);
    }
}
@Override
protected void onActivityResult(int requestCode, int resultCode,
Intent data) {
    switch(requestCode) {
        case RESULT_ENABLE:
            if(resultCode == Activity.RESULT_OK) {
                Toast.makeText(MainActivity.this, "You have enabled the
Admin Device Features", Toast.LENGTH_SHORT).show();
            } else {
                Toast.makeText(MainActivity.this, "Problem to enable the
Admin Device Features", Toast.LENGTH_SHORT).show();
            }
            break;
    }
    super.onActivityResult(requestCode,resultCode,data);
}
}

```

## **OUTPUT:**



LOCK THE PHONE

LOCK THE PHONE

ENABLE

ENABLE

DISABLE

DISABLE

You need to enable the Admin Device Features



Activate device administrator?



ScrennLock

Additional text explaining why we need this permission

Activating this administrator will allow the app ScrennLock to perform the following operations:

**Lock the screen**

Control how and when the screen locks.

Cancel

Activate



LOCK THE PHONE

ENABLE

DISABLE

Device Admin : enabled



LOCK THE PHONE

ENABLE

Device Admin : disabled

**RESULT:**

Thus an android application for screen lock using android studio and sdk was developed successfully.

**EXPT NO: 15****SEND SMS APP****DATE: 24-02-18****AIM:**

To develop an android application that sends sms using android studio and sdk.

**REQUIREMENTS:**Android Studio and sdk.**CODING:****1.activity\_main.xml**

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

    <EditText
        android:id="@+id/editText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="phone"
        android:ems="10"
        android:hint="number"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"/>

    <EditText
        android:id="@+id/editText2"
        android:layout_width="match_parent"
```

```
        android:layout_height="200dp"
        android:inputType="textPersonName"
        android:ems="10"
        android:hint="text"
        android:layout_below="@+id/editText"
        android:layout_centerHorizontal="true"
        android:gravity="left" />

    <Button
        android:id="@+id/button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@+id/editText2"
        android:layout_centerHorizontal="true"
        android:text="Send" />
</LinearLayout>
```

## 2. MainActivity.java

```
package com.example.aishu.sendsms;
import android.Manifest;
import android.app.Activity;
import android.content.pm.PackageManager;
import android.provider.Telephony;
import android.support.annotation.NonNull;
import android.support.v4.app.ActivityCompat;
import android.support.v4.content.ContextCompat;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.telephony.SmsManager;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends Activity {
    EditText editText;
    EditText editText2;
    Button button;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        if(ContextCompat.checkSelfPermission(MainActivity.this,
```

```
        Manifest.permission.SEND_SMS) !=  
PackageManager.PERMISSION_GRANTED) {  
    if  
(ActivityCompat.shouldShowRequestPermissionRationale(MainActivity.t  
his,  
        Manifest.permission.SEND_SMS)) {  
    ActivityCompat.requestPermissions(MainActivity.this,  
        new String[]{Manifest.permission.SEND_SMS}, 1);  
} else {  
    ActivityCompat.requestPermissions(MainActivity.this,  
        new String[]{Manifest.permission.SEND_SMS}, 1);  
}  
} else {  
    //do nothing  
}  
button = (Button) findViewById(R.id.button);  
editText = (EditText) findViewById(R.id.editText);  
editText2 = (EditText) findViewById(R.id.editText2);  
button.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View view) {  
        String number = editText.getText().toString();  
        String sms = editText2.getText().toString();  
        try {  
            SmsManager smsManager = SmsManager.getDefault();  
            smsManager.sendTextMessage(number, null, sms, null,  
null);  
            Toast.makeText(MainActivity.this, "Sent",  
Toast.LENGTH_SHORT).show();  
        } catch (Exception e) {  
            Toast.makeText(MainActivity.this, "Failed",  
Toast.LENGTH_SHORT).show();  
        }  
    }  
});  
}  
@Override  
public void onRequestPermissionsResult(int requestCode, @NonNull  
String[] permissions, @NonNull int [] grantResults) {  
    switch (requestCode) {  
        case 1: {
```

```

        if(grantResults.length>0 && grantResults[0] ==
PackageManager.PERMISSION_GRANTED) {
            if(ContextCompat.checkSelfPermission(MainActivity.this,
                Manifest.permission.SEND_SMS) ==
PackageManager.PERMISSION_GRANTED) {
                Toast.makeText(this, "Permission granted",
Toast.LENGTH_SHORT).show();
            }
        } else {
            Toast.makeText(this, "Permission not granted",
Toast.LENGTH_SHORT).show();
        }
        return;
    }
}
// Function send message sms
private void sendMessage(String phoneNo, String message){
    try {
        SmsManager smsManager = SmsManager.getDefault();
        smsManager.sendTextMessage(phoneNo, null, message, null,
null);
        Toast.makeText(getApplicationContext(), "SMS Sent.",
Toast.LENGTH_LONG).show();
    } catch (Exception e) {
        Toast.makeText(getApplicationContext(), "SMS Fail. Please try
again!", Toast.LENGTH_LONG).show();
        e.printStackTrace();
    }
}
}

```

### **3.AndroidManifest.xml**

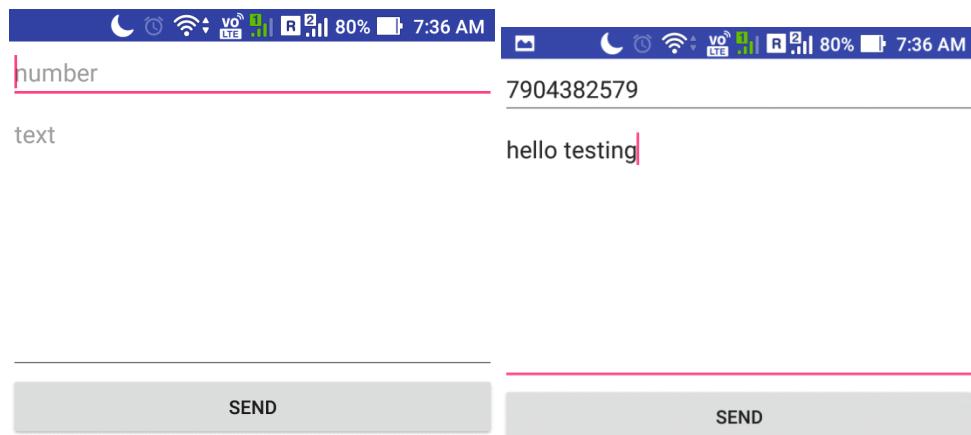
```

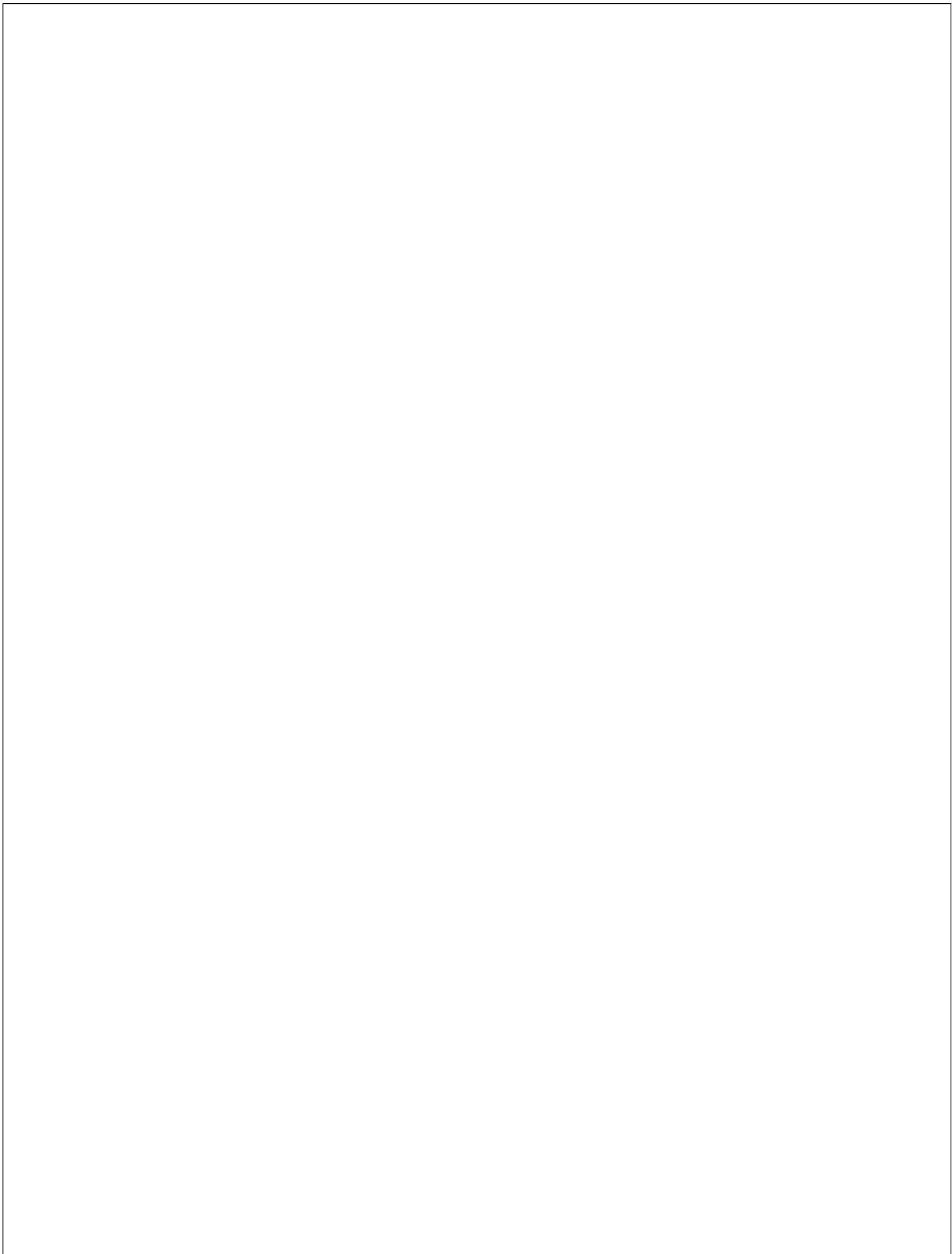
<?xml version="1.0" encoding="utf-8"?>
<manifest
    xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.aishu.sendsms">
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />
    <uses-permission android:name="android.permission.SEND_SMS"/>
    <application

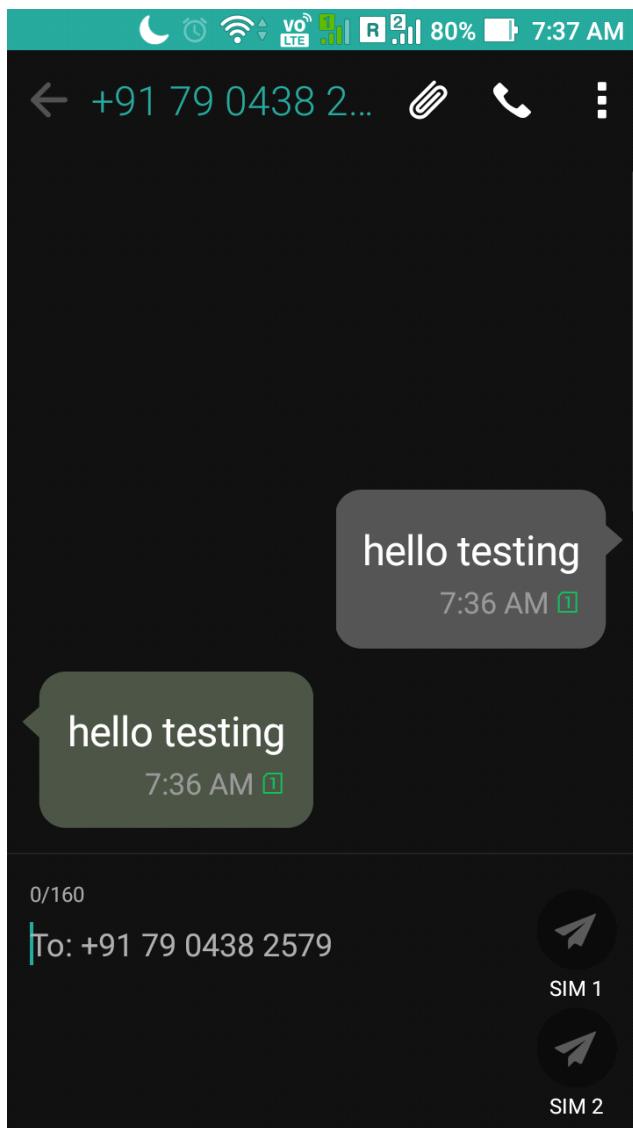
```

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

## OUTPUT:







**RESULT:**

Thus the application to send sms has been build successfully and apk has been build .

**EXPT NO: 16**

## **SPLASH SCREEN APP**

### **DATE:**

### **AIM:**

To develop an android application that splashes random images on screen using android studio and sdk.

**REQUIREMENTS:**Android Studio and sdk.

### **CODING:**

#### **1) splashscreenActivity.java**

```
import android.app.Activity;
import android.content.Intent;
import android.graphics.PixelFormat;
import android.os.Bundle;
import android.view.Window;
import android.view.animation.Animation;
import android.view.animation.AnimationUtils;
import android.widget.ImageView;
import android.widget.LinearLayout;

public class Splashscreen extends Activity {
    public void onAttachedToWindow() {
        super.onAttachedToWindow();
        Window window = getWindow();
        window.setFormat(PixelFormat.RGBA_8888);
    }
    /** Called when the activity is first created. */
    Thread splashTread;
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_splashscreen);
        StartAnimations();
    }
    private void StartAnimations() {
        Animation anim = AnimationUtils.loadAnimation(this,
R.anim.alpha);
        anim.reset();
        LinearLayout l=(LinearLayout) findViewById(R.id.lin_lay);
        l.clearAnimation();
        l.startAnimation(anim);
```

```

anim = AnimationUtils.loadAnimation(this, R.anim.translate);
anim.reset();
ImageView iv = (ImageView) findViewById(R.id.splash);
iv.clearAnimation();
iv.startAnimation(anim);

splashTread = new Thread() {
    @Override
    public void run() {
        try {
            int waited = 0;
            // Splash screen pause time
            while (waited < 3500) {
                sleep(100);
                waited += 100;
            }
            Intent intent = new Intent(Splashscreen.this,
                    MainActivity.class);
            intent.setFlags(Intent.FLAG_ACTIVITY_NO_ANIMATION);
            startActivity(intent);
            Splashscreen.this.finish();
        } catch (InterruptedException e) {
            // do nothing
        } finally {
            Splashscreen.this.finish();
        }
    }
};

splashTread.start();
}
}

```

## **2)Activity\_splashscreen.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:background="#242729"
        android:layout_gravity="center"
        android:id="@+id/lin_lay"
        android:gravity="center"

```

```
        android:orientation="vertical" >

        <ImageView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:id="@+id/splash"
            android:background="@drawable/splash_img" />
    </LinearLayout>
```

### **3)alpha.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<alpha
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:fromAlpha="0.0"
    android:toAlpha="1.0"
    android:duration="3000" />
```

### **4) translate.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<set
    xmlns:android="http://schemas.android.com/apk/res/android">
<translate
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:fromXDelta="0%"
    android:toXDelta="0%"
    android:fromYDelta="200%"
    android:toYDelta="0%"
    android:duration="2000"
    android:zAdjustment="top" />
</set>
```

### **OUTPUT:**



## **RESULT:**

Thus an android application for splash screen using android studio and sdk was developed successfully.

**EXPT NO:17**

**CALENDAR APP**

**DATE:06-03-18**

**AIM:**

To develop an android application to display the calendar using android studio and sdk.

**REQUIREMENTS:** Android Studio and sdk.

**CODING:**

**1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:background="@color/colorPrimaryDark"
    tools:context="com.example.administrator.calendar.MainActivity">

    <TextView
        android:id="@+id/myDate"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Mark Your Date"
        android:textAlignment="center"
        android:textColor="#FFF"
        android:textSize="23sp"
        android:layout_marginLeft="105dp"
        android:layout_marginTop="48dp" />

    <LinearLayout
        android:layout_marginTop="48dp"
        android:background="@drawable/bg_calen"
        android:layout_marginLeft="44dp"
        android:layout_width="300dp"
        android:layout_height="wrap_content">

        <CalendarView
            android:id="@+id/calendarView"
```

```
        android:layout_width="wrap_content"
        android:layout_height="320dp">

    </CalendarView>
</LinearLayout>
<Button
    android:background="@drawable/bg_btn"
    android:layout_marginLeft="120dp"
    android:layout_marginTop="34dp"
    android:text="save My date"
    android:textColor="#FFF"
    android:paddingLeft="20dp"
    android:paddingRight="20dp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" />
</LinearLayout>
```

## **2.bg\_btn.xml**

```
<?xml version="1.0" encoding="utf-8" ?>
<shape
    xmlns:android="http://schemas.android.com/apk/res/android">
    <corners android:radius="10dp" />
    <solid android:color="@color/colorAccent" />
</shape>
```

## **3.bg\_calen.xml**

```
<?xml version="1.0" encoding="utf-8" ?>
<shape
    xmlns:android="http://schemas.android.com/apk/res/android">
    <corners android:radius="10dp" />
    <solid android:color="#FFF" />
</shape>
```

## **4.MainActivityt.java**

```
package com.example.administrator.calendar;
import android.os.ConditionVariable;
import android.support.annotation.NonNull;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.CalendarView;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    CalendarView calendarView;
```

```

TextView myDate;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    calendarView = (CalendarView) findViewById(R.id.calendarView);
    myDate = (TextView) findViewById(R.id.myDate);

    calendarView.setOnDateChangeListener(new
    CalendarView.OnDateChangeListener() {
        @Override
        public void onSelectedDayChange(@NonNull CalendarView
calendarView, int i, int i1, int i2) {
            String date = (i1 + 1) + "/" + i2 + "/" + i;
            myDate.setText(date);
        }
    });
}
}

```

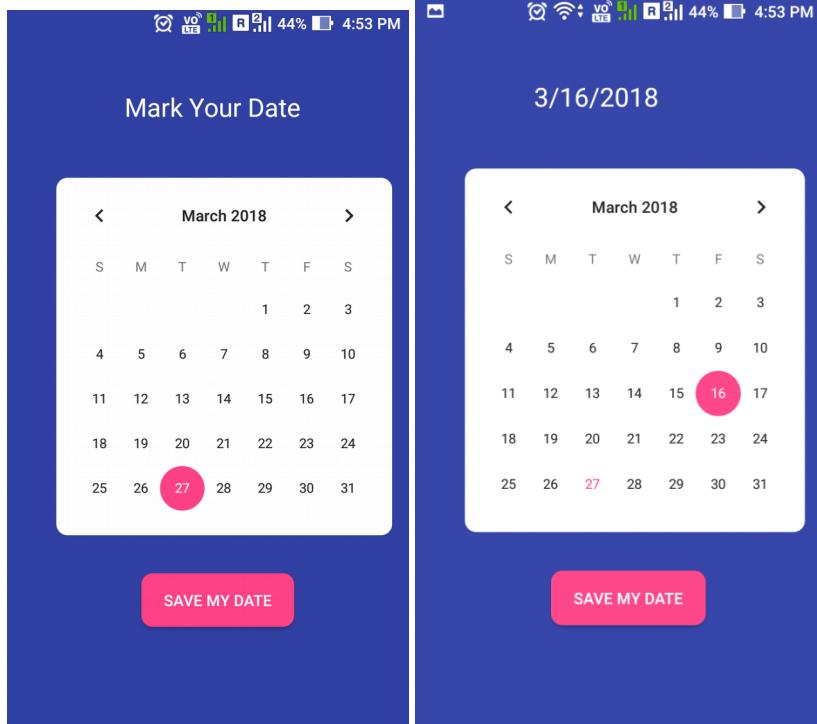
## **5.styles.xml**

```

<resources>
    <style name="AppTheme"
parent="Theme.AppCompat.Light.NoActionBar">
    <!-- Customize your theme here. -->
    <item name="colorPrimary">@color/colorPrimary</item>
    <item
name="colorPrimaryDark">@color/colorPrimaryDark</item>
        <item name="colorAccent">@color/colorAccent</item>
    </style>
</resources>

```

## **OUTPUT:**



## **RESULT:**

Thus an android application to display the calendar using android studio and sdk was developed successfully.

**EXPT NO:18**

## DATA FETCHING APP

**DATE:****AIM:**

To develop an android application to fetch data from button using android studio and sdk.

**REQUIREMENTS:** Android Studio and sdk.

**CODING:****1)Activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Click Me!"
        android:gravity="center"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="10dp"
        android:id="@+id/button"/>
    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_below="@+id/button">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:padding="5dp"
            android:textSize="24sp"
            android:id="@+id/fetcheddata"
            android:gravity="center"
            android:hint="Fetched Text Here!!!"/>
    </ScrollView>
</RelativeLayout>
```

## **2)AndroidManifest.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<manifest
    xmlns:android="http://schemas.android.com/apk/res/android"
        package="com.example.aishu.datafetching">
    <uses-permission android:name="android.permission.INTERNET"/>
    <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>
        </activity>
    </application>
</manifest>
```

## **3)MainActivity.java**

```
package com.example.aishu.datafetching;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    Button click;
    public static TextView data;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        click = (Button) findViewById(R.id.button);
        data = (TextView) findViewById(R.id.fetcheddata);
        click.setOnClickListener(new View.OnClickListener() {
            @Override
```

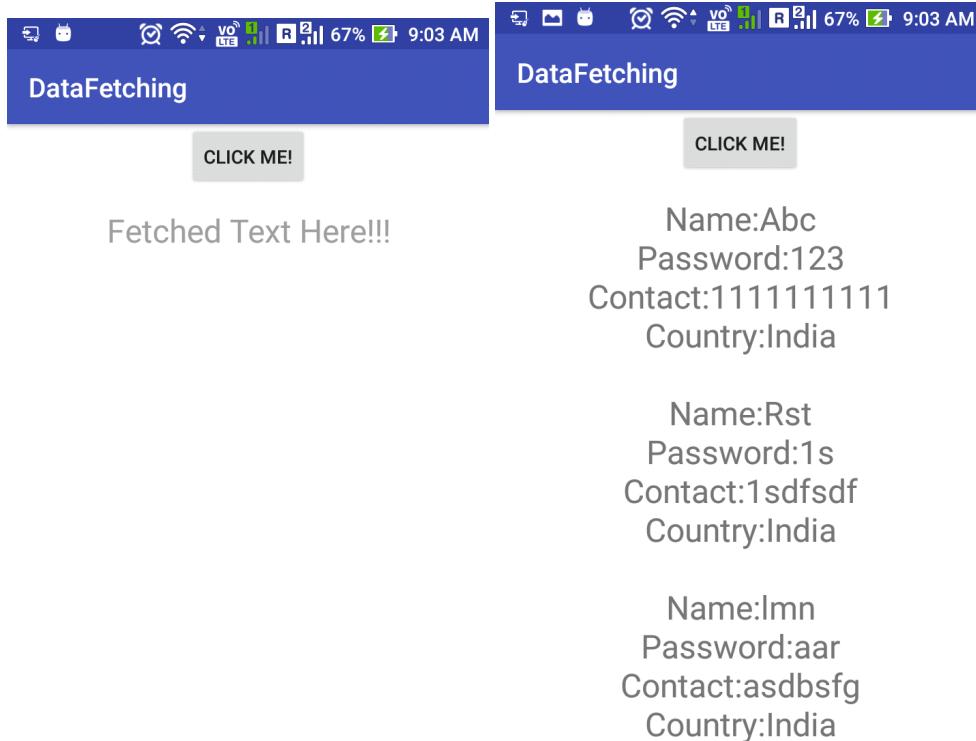
```
        public void onClick(View view) {
            FetchData process = new FetchData();
            process.execute();
        }
    });
}
}
```

#### 4)FetchData.java

```
package com.example.aishu.datafetching;
import android.os.AsyncTask;
import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;
import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStream;
import java.io.InputStreamReader;
import java.net.HttpURLConnection;
import java.net.MalformedURLException;
import java.net.URL;
public class FetchData extends AsyncTask<Void(Void,Void> {
    String data = "";
    String dataParsed = "";
    String singleParsed = "";
    @Override
    protected Void doInBackground(Void... voids) {
        try {
            URL url = new URL("https://api.myjson.com/bins/12eu63");
            HttpURLConnection httpURLConnection = (HttpURLConnection)
url.openConnection();
            InputStream inputStream =
httpURLConnection.getInputStream();
            BufferedReader bufferedReader = new BufferedReader(new
InputStreamReader(inputStream));
            String line = "";
            while(line != null){
                line = bufferedReader.readLine();
                data = data + line;
            }
            JSONArray JA = new JSONArray(data);
            for(int i = 0 ;i <JA.length(); i++){
                JSONObject JO = (JSONObject) JA.get(i);
            }
        } catch (MalformedURLException e) {
            e.printStackTrace();
        } catch (IOException e) {
            e.printStackTrace();
        } catch (JSONException e) {
            e.printStackTrace();
        }
    }
}
```

```
        singleParsed = "Name:" + JO.get("name") + "\n" +
                      "Password:" + JO.get("password") + "\n" +
                      "Contact:" + JO.get("contact") + "\n" +
                      "Country:" + JO.get("country") + "\n";
        dataParsed = dataParsed + singleParsed +"\n" ;
    }
} catch (MalformedURLException e) {
    e.printStackTrace();
} catch (IOException e) {
    e.printStackTrace();
} catch (JSONException e) {
    e.printStackTrace();
}
return null;
}
@Override
protected void onPostExecute(Void aVoid) {
    super.onPostExecute(aVoid);
    MainActivity.data.setText(this.dataParsed);
}
}
```

## **OUTPUT:**



**RESULT:** Thus an android application that fetches data from controls using android studio and sdk was developed successful

**EXPT NO:19**

### TV CHANNEL APP

**DATE:**

**AIM:**

To develop an android application that displays a tv channel using android studio and sdk.

**REQUIREMENTS:**Android Studio and sdk.

**CODING:**

#### 1.Activity\_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/bn"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
```

```

        android:paddingBottom="16dp"
        android:paddingLeft="16dp"
        android:paddingRight="16dp"
        android:paddingTop="16dp"
        tools:context="com.example.hello.puthiyathalaimurai.MainActivity">

    <com.google.android.youtube.player.YouTubePlayerView
        android:id="@+id/youtube_player_view"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/youtube_player_view"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="141dp"
        android:text="play video" />
</RelativeLayout>

```

## **2. Mainactivity.xml**

```

package com.example.hello.puthiyathalaimurai;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import com.google.android.youtube.player.YouTubeBaseActivity;
import com.google.android.youtube.player.YouTubeInitializationResult;
import com.google.android.youtube.player.YouTubePlayer;
import com.google.android.youtube.player.YouTubePlayerView;
public class MainActivity extends YouTubeBaseActivity {
    YouTubePlayerView youTubePlayerView;
    Button button;
    YouTubePlayer.OnInitializedListener onInitializedListener;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button = (Button)findViewById(R.id.button);
        youTubePlayerView =
        (YouTubePlayerView)findViewById(R.id.youtube_player_view);
        onInitializedListener = new YouTubePlayer.OnInitializedListener() {
            @Override

```

```

        public void onInitializationSuccess(YouTubePlayer.Provider provider,
YouTubePlayer youTubePlayer, boolean b) {
            youTubePlayer.loadVideo("WcCDUOL-ZSM");
        }
    @Override
    public void onInitializationFailure(YouTubePlayer.Provider provider,
YouTubeInitializationResult youTubeInitializationResult) {

        }
    };
    button.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {

youTubePlayerView.initialize(PlayerConfig.API_KEY,onInitializedListener);
        }
    });
}
}
}

```

### **3.playerconfig.java**

```

package com.example.hello.puthiyathalaimurai;
public class PlayerConfig {
    PlayerConfig()
    {
    }
    public static final String
API_KEY="AlzaSyCBMfw7l2n0uyXRPjmp_TpeDsGGpyFdwUs";
}

```

### **4.androidmanifest.java**

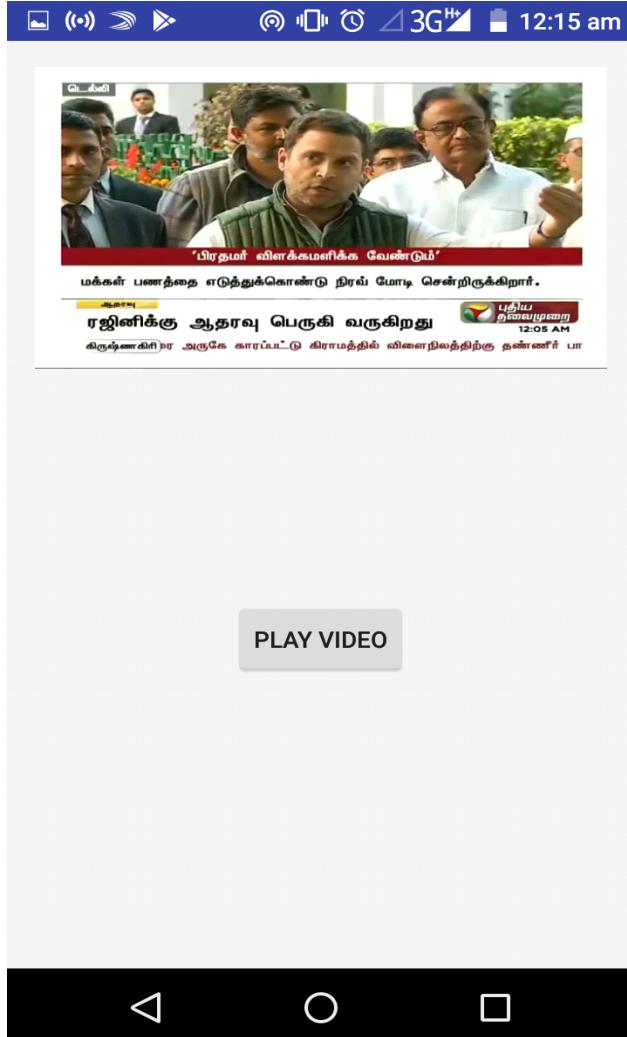
```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.hello.puthiyathalaimurai">
    <uses-permission android:name="android.permission.INTERNET"></uses-
permission>
    <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>
</activity>
</application>
</manifest>
```

## OUTPUT:\



**RESULT:**

Thus an android application that displays a tv channel using android studio and sdk was developed successfully.

**EXPT NO:20****GOOGLE SHEET APP****DATE:****AIM:**

To develop an android application that makes use of google sheet using android studio and sdk.

**REQUIREMENTS:** Android studio and sdk

**CODING:****1.activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin"
    tools:context=".MainActivity">
    <ListView
        android:layout_below="@+id/btnDownload"
        android:id="@+id/listview"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
    <Button
        android:id="@+id/btnDownload" android:enabled="false"
        android:onClick="buttonClickHandler"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="download table" />
</RelativeLayout>
```

## **2.team.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
        android:orientation="horizontal"
        android:layout_width="match_parent"
        android:layout_height="match_parent">
    <TextView
        android:id="@+id/position"
        android:text="1"
        android:layout_width="0dp"
        android:layout_weight=".10"
        android:layout_height="wrap_content" />
    <TextView
        android:id="@+id/name"
        android:text="Preston North End"
        android:layout_width="0dp"
        android:layout_weight=".50"
        android:layout_height="wrap_content" />
    <TextView
        android:id="@+id/wins"
        android:text="18"
        android:layout_width="0dp"
        android:layout_weight=".10"
        android:layout_height="wrap_content" />
    <TextView
        android:id="@+id/draws"
        android:text="4"
        android:layout_width="0dp"
        android:layout_weight=".10"
        android:layout_height="wrap_content" />
    <TextView
        android:id="@+id/losses"
        android:text="0"
        android:layout_width="0dp"
        android:layout_weight=".10"
        android:layout_height="wrap_content" />
    <TextView
        android:id="@+id/points"
        android:text="40"
        android:layout_width="0dp"
        android:layout_weight=".10"
```

```
    android:layout_height="wrap_content" />
</LinearLayout>
```

### 3.MainActivity.java

```
package com.example.aishu.sheet;
import android.app.Activity;
import android.content.Context;
import android.net.ConnectivityManager;
import android.net.NetworkInfo;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ListView;
import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;
import java.util.ArrayList;
public class MainActivity extends Activity {
    private static final String DEBUG_TAG = "HttpExample";
    ArrayList<Team> teams = new ArrayList<Team>();
    ListView listview;
    Button btnDownload;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        listview = (ListView) findViewById(R.id.listview);
        btnDownload = (Button) findViewById(R.id.btnDownload);
        ConnectivityManager connMgr = (ConnectivityManager)
getSystemService(Context.CONNECTIVITY_SERVICE);
        NetworkInfo networkInfo = connMgr.getActiveNetworkInfo();
        if (networkInfo != null && networkInfo.isConnected()) {
            btnDownload.setEnabled(true);
        } else {
            btnDownload.setEnabled(false);
        }
    }
    public void buttonClickHandler(View view) {
        new DownloadWebpageTask(new AsyncResult() {
            @Override
            public void onResult(JSONObject object) {
                processJson(object);
            }
        });
    }
}
```

```

        }
    }).execute("https://spreadsheets.google.com/tq?
key=1yyTcjWA6RAUwlI7sKOevWXAJfpITs_Zb0TwilihDCw");
}
private void processJson(JSONObject object) {
    try {
        JSONArray rows = object.getJSONArray("rows");
        for (int r = 0; r < rows.length(); ++r) {
            JSONObject row = rows.getJSONObject(r);
            JSONArray columns = row.getJSONArray("c");
            int position = columns.getJSONObject(0).getInt("v");
            String name = columns.getJSONObject(1).getString("v");
            int wins = columns.getJSONObject(3).getInt("v");
            int draws = columns.getJSONObject(4).getInt("v");
            int losses = columns.getJSONObject(5).getInt("v");
            int points = columns.getJSONObject(19).getInt("v");
            Team team = new Team(position, name, wins, draws, losses,
points);
            teams.add(team);
        }
        final TeamsAdapter adapter = new TeamsAdapter(this,
R.layout.team, teams);
        listview.setAdapter(adapter);
    } catch (JSONException e) {
        e.printStackTrace();
    }
}
}
}

```

#### **4.Team.java**

```

package com.example.aishu.sheet;
public class Team {
    private int position;
    private String name;
    private int wins, draws, losses;
    private int points;
    public Team(int position, String name, int wins, int draws, int losses,
int points)
    {
        this.setPosition(position);
        this.setName(name);
        this.setWins(wins);
    }
}

```

```
        this.setDraws(draws);
        this.setLosses(losses);
        this.setPoints(points);
    }
    public int getPosition() {
        return position;
    }
    public void setPosition(int position) {
        this.position = position;
    }
    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
    public int getWins() {
        return wins;
    }
    public void setWins(int wins) {
        this.wins = wins;
    }
    public int getDraws() {
        return draws;
    }
    public void setDraws(int draws) {
        this.draws = draws;
    }
    public int getLosses() {
        return losses;
    }
    public void setLosses(int losses) {
        this.losses = losses;
    }
    public int getPoints() {
        return points;
    }
    public void setPoints(int points) {
        this.points = points;
    }
}
```

## **5.AndroidManifest.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<manifest
    xmlns:android="http://schemas.android.com/apk/res/android"
        package="com.example.aishu.sheet">
        <uses-permission android:name="android.permission.INTERNET" />
        <uses-permission
    android:name="android.permission.ACCESS_NETWORK_STATE" />
        <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>
            </activity>
        </application>
    </manifest>
```

## **6.TeamsAdapter.java**

```
package com.example.aishu.sheet;
import java.util.ArrayList;
public class TeamsAdapter extends ArrayAdapter<Team> {
    Context context;
    private ArrayList<Team> teams;
    public TeamsAdapter(Context context, int textViewResourceId,
ArrayList<Team> items) {
        super(context, textViewResourceId, items);
        this.context = context;
        this.teams = items;
    }
    @Override
    public View getView(int position, View convertView, ViewGroup
parent) {
        View v = convertView;
        if (v == null) {
```

```

        LayoutInflater vi = (LayoutInflater)
context.getSystemService(Context.LAYOUT_INFLATER_SERVICE);
        v = vi.inflate(R.layout.team, null);
    }
Team o = teams.get(position);
if (o != null) {
    TextView pos = (TextView) v.findViewById(R.id.position);
    TextView name = (TextView) v.findViewById(R.id.name);
    TextView wins = (TextView) v.findViewById(R.id.wins);
    TextView draws = (TextView) v.findViewById(R.id.draws);
    TextView losses = (TextView) v.findViewById(R.id.losses);
    TextView points = (TextView) v.findViewById(R.id.points);
    pos.setText(String.valueOf(o.getPosition()));
    name.setText(String.valueOf(o.getName()));
    wins.setText(String.valueOf(o.getWins()));
    draws.setText(String.valueOf(o.getDraws()));
    losses.setText(String.valueOf(o.getLosses()));
    points.setText(String.valueOf(o.getPoints()));
}
return v;
}
}
}

```

## **7.DownloadWebpageTask.java**

```

package com.example.aishu.sheet;
import android.os.AsyncTask;
import java.net.HttpURLConnection;
import java.net.URL;
public class DownloadWebpageTask extends AsyncTask<String, Void, String> {
    AsyncResult callback;
    public DownloadWebpageTask(AsyncResult callback) {
        this.callback = callback;
    }
    @Override
    protected String doInBackground(String... urls) {
        try {
            return downloadUrl(urls[0]);
        } catch (IOException e) {
            return "Unable to download the requested page.";
        }
    }
}

```

```
@Override
protected void onPostExecute(String result) {
    int start = result.indexOf("{", result.indexOf("{") + 1);
    int end = result.lastIndexOf("}");
    String jsonResponse = result.substring(start, end);
    try {
        JSONObject table = new JSONObject(jsonResponse);
        callback.onResult(table);
    } catch (JSONException e) {
        e.printStackTrace();
    }
}
private String downloadUrl(String urlString) throws IOException {
    InputStream is = null;
    try {
        URL url = new URL(urlString);
        HttpURLConnection conn = (HttpURLConnection)
url.openConnection();
        conn.setReadTimeout(10000 /* milliseconds */);
        conn.setConnectTimeout(15000 /* milliseconds */);
        conn.setRequestMethod("GET");
        conn.setDoInput(true);
        conn.connect();
        int responseCode = conn.getResponseCode();
        is = conn.getInputStream();
        String contentAsString = convertStreamToString(is);
        return contentAsString;
    } finally {
        if (is != null) {
            is.close();
        }
    }
}
private String convertStreamToString(InputStream is) {
    BufferedReader reader = new BufferedReader(new
InputStreamReader(is));
    StringBuilder sb = new StringBuilder();
    String line = null;
    try {
        while ((line = reader.readLine()) != null) {
            sb.append(line + "\n");
        }
    }
```

```
        } catch (IOException e) {
            e.printStackTrace();
        } finally {
            try {
                is.close();
            } catch (IOException e) {
                e.printStackTrace();
            }
        }
        return sb.toString();
    }
}
```

### 8.AsyncResult.java

```
package com.example.aishu.sheet;
import org.json.JSONObject;
interface AsyncResult
{
    void onResult(JSONObject object);
}
```

OUTPUT:



#### DOWNLOAD TABLE

1	Preston North End	18	4	0	40
2	Aston Villa	12	5	5	29
3	Wolverhampton Wndrs	12	4	6	28
4	Blackburn Rovers	10	6	6	26
5	Bolton Wanderers	10	2	10	22
6	West Bromwich Albion	10	2	10	22
7	Accrington	6	8	8	20
8	Everton	9	2	11	20
9	Burnley	7	3	12	17
10	Derby County	7	2	13	16
11	Notts County	5	2	15	12
12	Stoke City	4	4	14	12

## RESULT:

Thus an android application that makes google sheet using android studio and sdk was developed successfully