

WEEK-1

1a) Aim: Create an android app to illustrate activity life cycle.

activity_main.xml

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

<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context="example.myapplication.com.activitylifecycle.MainActivity">

<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Hello World!"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent" />

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

MainActivity.java

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

import android.app.Activity;
import android.os.Bundle;
import android.util.Log;

public class MainActivity extends Activity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {
```

```
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
Log.d("lifecycle","onCreate invoked");
}

@Override
protected void onStart() {
super.onStart();
Log.d("lifecycle","onStart invoked");
}

@Override
protected void onResume() {
super.onResume();
Log.d("lifecycle","onResume invoked");
}

@Override
protected void onPause() {
super.onPause();
Log.d("lifecycle","onPause invoked");
}

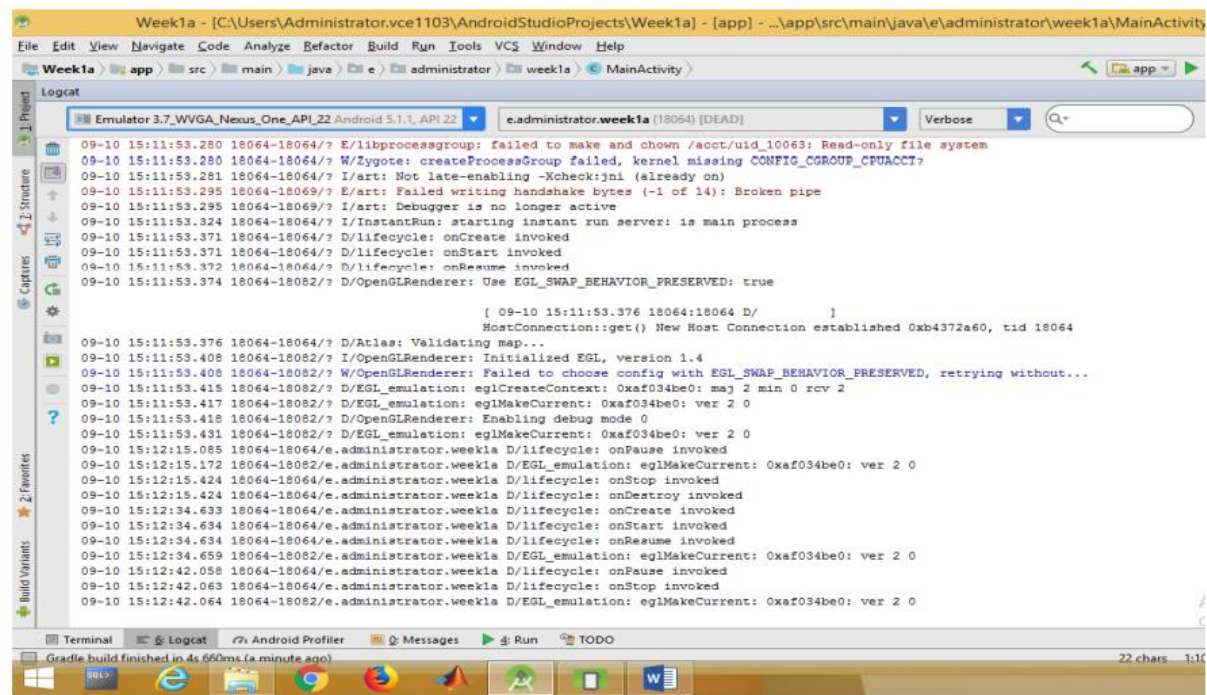
@Override
protected void onStop() {
super.onStop();
Log.d("lifecycle","onStop invoked");
}

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

@Override

```
protected void onDestroy() {  
    super.onDestroy();  
    Log.d("lifecycle","onDestroy invoked");  
}  
}
```

Output



WEEK-2

2a) Aim: Create an android app to visit a specified webpage (Use Implicit Intent).

activity_main.xml

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

<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <EditText

        android:id="@+id/editTextTextPersonName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="Enter URL"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.26" />

    <Button

        android:id="@+id/button"
        android:layout_width="wrap_content"
```

```

        android:layout_height="wrap_content"
        android:text="Button"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.implicitintent;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

    Button button;

    EditText editText;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

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

        EditText editText = (EditText) findViewById(R.id.editTextTextPersonName);

        button.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View V) {

                String url=editText.getText().toString();

```

```

        Intent i=new Intent(Intent.ACTION_VIEW, Uri.parse(url));

        startActivity(i);

    }

});

}

}

```

OUTPUT:



Enter URL

BUTTON

2b) Aim: Create an android app to navigate between activities (Use Explicit Intent).

activity_main.xml

```

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

<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/ap
k/res/android"

xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context="example.myapplication.com.explicitintent.FirstActivity">

```

```

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="8dp"
    android:layout_marginStart="8dp"
    android:layout_marginTop="8dp"
    android:text="First Activity"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.454"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.06" />

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="8dp"
    android:layout_marginStart="8dp"
    android:layout_marginTop="392dp"
    android:onClick="callSecondActivity"
    android:text="Call second activity"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>

```

MainActivityOne.java

```

package example.myapplication.com.explicitintent;

import android.content.Intent;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;

public class FirstActivity extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_first);

    }

    public void callSecondActivity(View view){

        Intent i = new Intent(getApplicationContext(), SecondActivity.class);

        i.putExtra("Value1", "Android By Myapplication");

        i.putExtra("Value2", "Simple ");

        startActivity(i);

    }
}

```

activitytwo_main.xml

```

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

<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/ap
k/res/android"

xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"

android:layout_width="match_parent"
android:layout_height="match_parent"

tools:context="example.myapplication.com.explicitintent.SecondActivity">

<TextView

android:layout_width="wrap_content"

```



```

android:layout_height="wrap_content"
android:layout_marginEnd="8dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:text="Second Activity"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.454"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.06" />
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="8dp"
    android:layout_marginStart="8dp"
    android:layout_marginTop="392dp"
    android:onClick="callFirstActivity"
    android:text="Call first activity"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>

```

ActivityTwo class

MainActivityTwo.java

```

package example.myapplication.com.explicitintent;

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

public class SecondActivity extends AppCompatActivity {

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

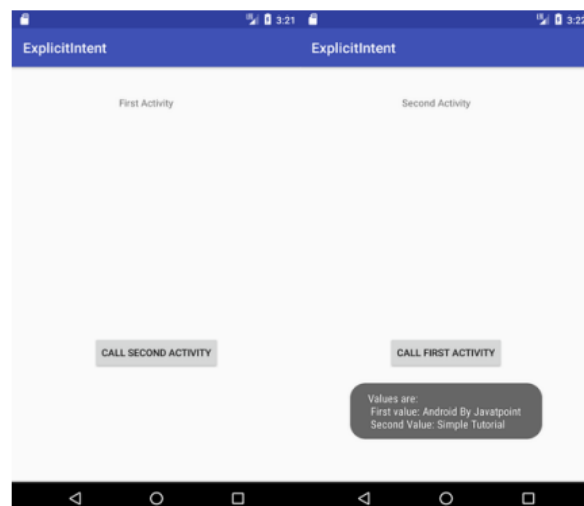
        Bundle extras = getIntent().getExtras();
        String value1 = extras.getString("Value1");
        String value2 = extras.getString("Value2");

        Toast.makeText(getApplicationContext(),"Values are:\n First value: "+value1+
        "\n Second Value: "+value2, Toast.LENGTH_LONG).show(); }

    public void callFirstActivity(View view){
        Intent i = new Intent(getApplicationContext(), FirstActivity.class);
        startActivity(i);
    }
}

```

Output:



3a) Aim: Create an android app to perform mathematical operations(+,-,*,/,%). (Use buttons, edittext, toast controls).

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="example.myapplication.com.sumoftwonumber.MainActivity">

    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="61dp"
        android:ems="10"
        android:inputType="number"
        tools:layout_editor_absoluteX="84dp"
        tools:layout_editor_absoluteY="53dp" />

    <EditText
        android:id="@+id/editText2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/editText1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="32dp"
        android:ems="10"
```

```

        android:inputType="number"
        tools:layout_editor_absoluteX="84dp"
        tools:layout_editor_absoluteY="127dp" />
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/editText2"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="109dp"
    android:text="ADD"
    tools:layout_editor_absoluteX="148dp"
    tools:layout_editor_absoluteY="266dp" />
</RelativeLayout>

```

MainActivity.java

```

package example.myapplication.com.sumoftwonumber;

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

public class MainActivity extends AppCompatActivity {

    private EditText edittext1, edittext2;
    private Button buttonSum;

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

```

```

addListenerOnButton();
}

public void addListenerOnButton() {
    editText1 = (EditText) findViewById(R.id.editText1);
    editText2 = (EditText) findViewById(R.id.editText2);
    buttonSum = (Button) findViewById(R.id.button);
    buttonSum.setOnClickListener(new View.OnClickListener() {

        @Override
        public void onClick(View view) {
            String value1=editText1.getText().toString();
            String value2=editText2.getText().toString();
            int a=Integer.parseInt(value1);
            int b=Integer.parseInt(value2);
            int sum=a+b;
            Toast.makeText(getApplicationContext(),String.valueOf(sum),Toast.LENGTH_LONG).show();
        }
    });
}

```

OUTPUT:



3b) Aim: Create an android app to display text in bold, italic, normal style with left, right, center alignments (use RadioButton, CheckBox controls)

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">

    <CheckBox
        android:id="@+id/checkBox1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Bold"
        android:textSize="25sp"/>

    <CheckBox
        android:id="@+id/checkBox2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Italic"
        android:textSize="25sp"
        android:layout_below="@+id/checkBox1"/>

    <CheckBox
        android:id="@+id/checkBox3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Normal"
        android:textSize="25sp"
```

```
android:layout_below="@+id/checkbox2"/>
```

```
<RadioGroup
```

```
android:id="@+id/rg1"
```

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

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

```
android:layout_below="@+id/checkbox3"
```

```
<RadioButton
```

```
android:id="@+id/radioButton1"
```

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

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

```
android:checked="true"
```

```
android:text="Left"
```

```
android:textSize="25sp" />
```

```
<RadioButton
```

```
android:id="@+id/radioButton2"
```

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

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

```
android:text="Right"
```

```
android:textSize="25sp"/>
```

```
<RadioButton
```

```
android:id="@+id/radioButton3"
```

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

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

```
android:text="Center"
```

```
android:textSize="25sp" />
```

```
</RadioGroup>
```

```
<TextView
```

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

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

```
android:layout_alignParentBottom="true"
android:layout_centerHorizontal="true"
android:layout_marginBottom="39dp"
android:text="Output!!"
android:textSize="35sp"
android:id="@+id/textView2" />
```

```
<TextView
```

```
android:id="@+id/t1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_above="@+id/textView2"
android:layout_alignParentEnd="true"
android:layout_marginBottom="17dp"
android:text=""
android:textSize="35sp" />
```

```
<TextView
```

```
android:id="@+id/t2"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_above="@+id/t1"
android:layout_alignParentStart="true"
android:layout_marginBottom="14dp"
android:text=""
android:textSize="35sp" />
```

```
<TextView
```

```
android:id="@+id/t3"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_alignParentStart="true"
```



```

        android:layout_centerVertical="true"
        android:text=""
        android:textSize="35sp" />
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignTop="@+id/checkbox3"
        android:layout_marginEnd="46dp"
        android:onClick="show"
        android:text="Check"
        android:textSize="35sp" />
</RelativeLayout>

```

MainActivity.java

```

package com.example.administrator.week;

import android.graphics.Typeface;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.Gravity;
import android.view.View;
import android.widget.CheckBox;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.TextView;
import org.w3c.dom.Text;

public class MainActivity extends AppCompatActivity {

    @Override

```

```

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

public void show(View view) {
    RadioGroup rg = (RadioGroup) findViewById(R.id.rg1);

    String value
    =((RadioButton)findViewById(rg.getCheckedRadioButtonId())).getText().toString();

    CheckBox c1 = (CheckBox)findViewById(R.id.checkBox1);
    CheckBox c2 = (CheckBox)findViewById(R.id.checkBox2);
    CheckBox c3 = (CheckBox)findViewById(R.id.checkBox3);
    TextView t1=(TextView)findViewById(R.id.t1);
    TextView t3=(TextView)findViewById(R.id.t3);
    TextView t2=(TextView)findViewById(R.id.t2);
    if(c1.isChecked()){
        t1.setText("BOLD");
        t1.setTypeface(Typeface.defaultFromStyle(Typeface.BOLD));
        if(value.equals("Left"))
            t1.setGravity(Gravity.LEFT);
        else if(value.equals("Right"))
            t1.setGravity(Gravity.RIGHT);
        else t1.setGravity(Gravity.CENTER);
    }
    else t1.setText("");
    if(c2.isChecked()){
        t2.setText("ITALIC");
        t2.setTypeface(Typeface.defaultFromStyle(Typeface.ITALIC));
        if(value.equals("Left"))
            t2.setGravity(Gravity.LEFT);
        else if(value.equals("Right"))

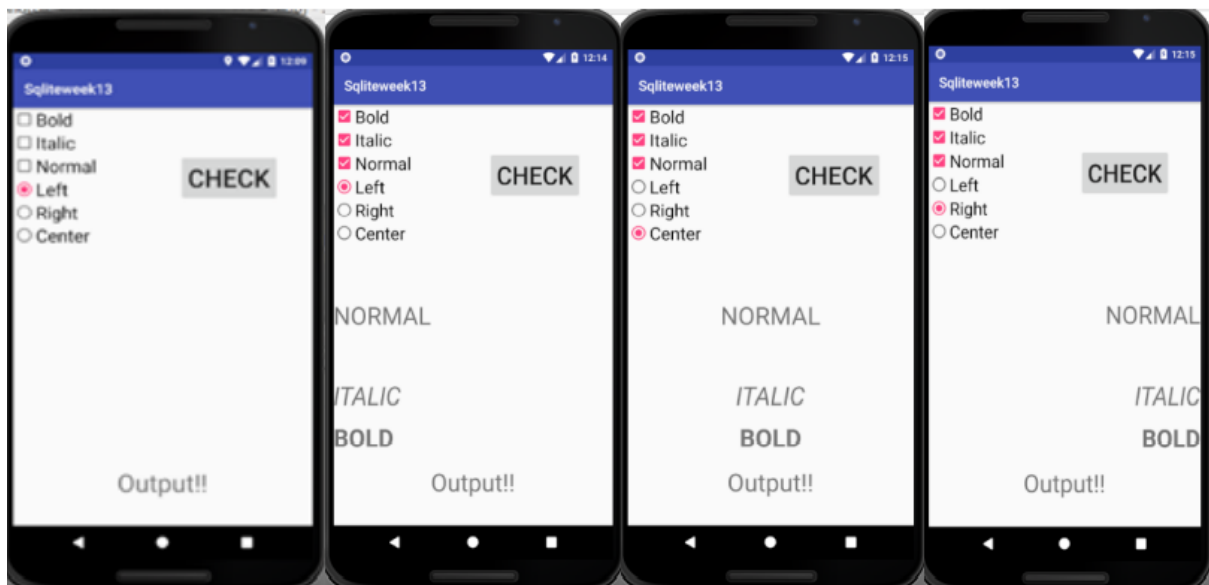
```

```

t2.setGravity(Gravity.RIGHT);
else t2.setGravity(Gravity.CENTER);
}
else t2.setText("");
if(c3.isChecked()){
    t3.setText("NORMAL");
    if(value.equals("Left"))
        t3.setGravity(Gravity.LEFT);
    else if(value.equals("Right"))
        t3.setGravity(Gravity.RIGHT);
    else t3.setGravity(Gravity.CENTER);
}
else t3.setText("");
}
}
}

```

OUTPUT



4a) Aim: Create an android app to display name of the country from the list(Use spinner control)

activity_main.xml

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

<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context="example.vardhaman.com.spinner.MainActivity">

<Spinner
android:id="@+id/spinner"
android:layout_width="149dp"
android:layout_height="40dp"
android:layout_marginBottom="8dp"
android:layout_marginEnd="8dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.502"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.498" />

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

MainActivity.java

```
package example.vardhaman.com.spinner;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity implements
    AdapterView.OnItemClickListener {

    String[] country = { "India", "USA", "China", "Japan", "Other"};

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

        //Getting the instance of Spinner and applying OnItemClickListener on it
        Spinner spin = (Spinner) findViewById(R.id.spinner);
        spin.setOnItemClickListener(this);

        //Creating the ArrayAdapter instance having the country list
        ArrayAdapter aa = new ArrayAdapter(this,android.R.layout.simple_spinner_item,country);
        aa.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);

        //Setting the ArrayAdapter data on the Spinner
        spin.setAdapter(aa);
    }

    //Performing action onItemSelected and onNothing selected
    @Override
    public void onItemClick(AdapterView<?> arg0, View arg1, int position, long id) {
        Toast.makeText(getApplicationContext(),country[position] , Toast.LENGTH_LONG).show();
    }
}
```

```

}

@Override

public void onNothingSelected(AdapterView<?> arg0) {

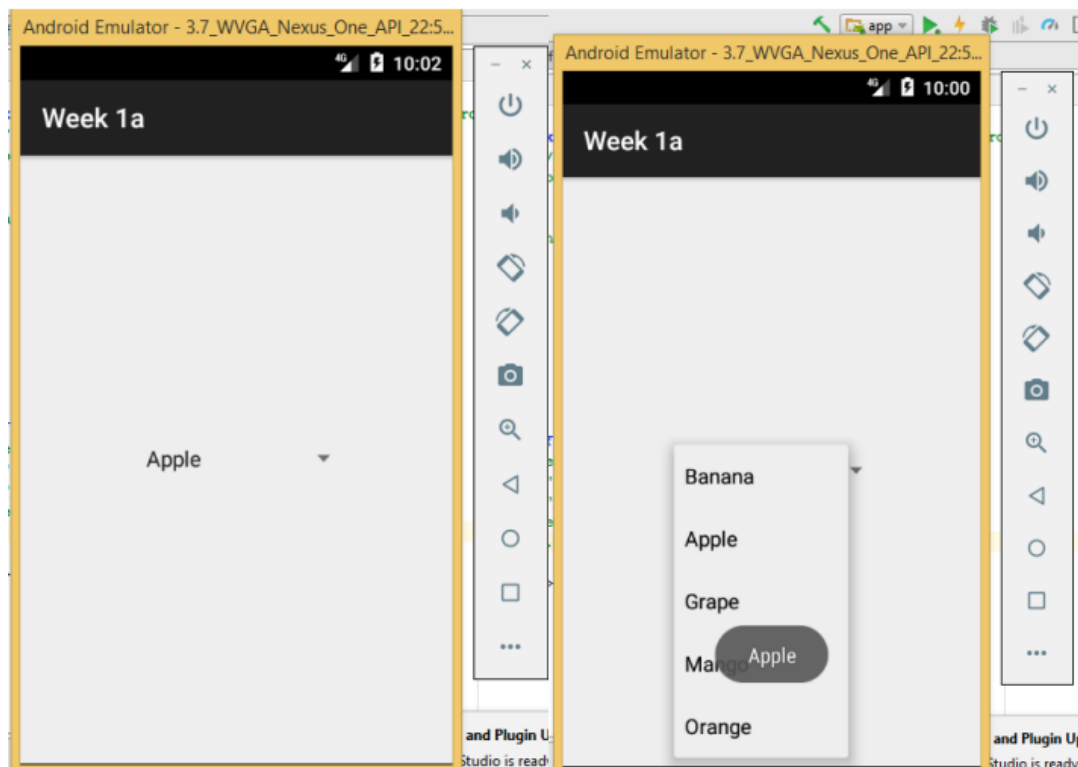
// TODO Auto-generated method stub

}

}

```

OUTPUT:



4b) Aim: Create an android app to calculate age of a person (Use DatePicker control)

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="com.example.administrator.datepicker.MainActivity">

```

```

<TextView
    android:id="@+id/textview1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignEnd="@+id/button1"
    android:layout_alignParentTop="true"
    android:text="Pick your DOB"
    android:textSize="30sp"
    android:layout_above="@+id/dp"/>
<DatePicker
    android:id="@+id/dp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_above="@+id/button1"
    android:layout_centerHorizontal="true">
</DatePicker>
<Button
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:text="Calculate AGE" />
</RelativeLayout>

```

MainActivity.java

```

package com.example.administrator.datepicker;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;

```

```
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.TextView;
import android.util.StringBuilderPrinter;

public class MainActivity extends AppCompatActivity {

    @Override

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

        final DatePicker picker1;

        Button displayDate;

        final TextView textview1;

        textview1=(TextView)findViewById(R.id.textview1);
        picker1=(DatePicker)findViewById(R.id.dp);
        displayDate=(Button)findViewById(R.id.button1);

        final int i=picker1.getYear();

        textview1.setText("pick your dob:");

        displayDate.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View view) {

                int j=picker1.getYear();

                textview1.setText(String.valueOf(i-j)+"years");

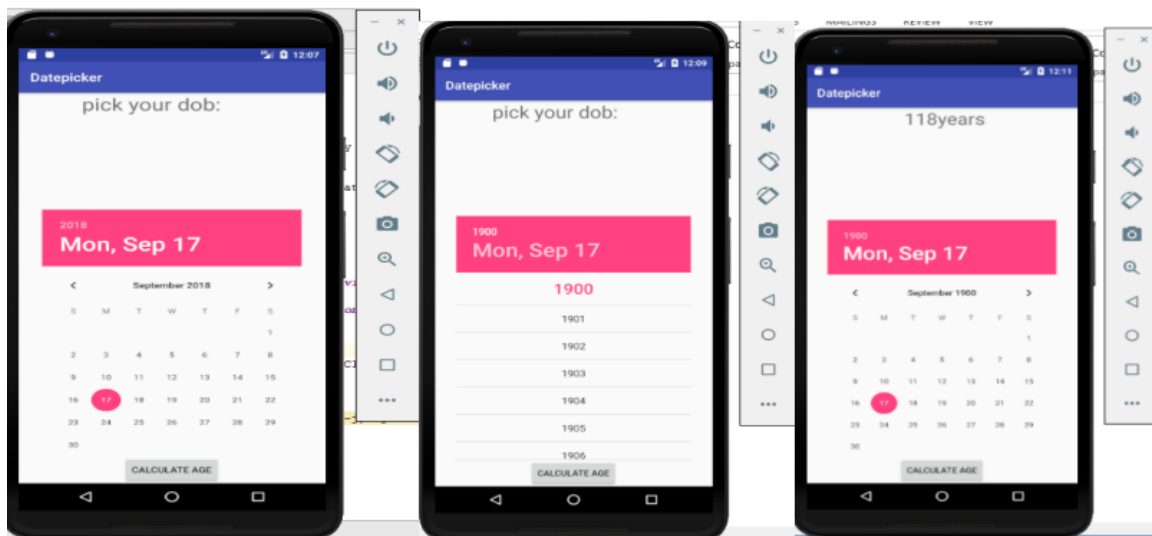
            }

        });

    }

}
```


OUTPUT:



4c) Aim: Create an android app for login control and validate login details .

activity_main.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="e.administrator.week1a.MainActivity">

<EditText
android:id="@+id/editText"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginEnd="8dp"
android:layout_marginStart="8dp"
android:layout_marginTop="136dp"
android:ems="10"
```

```
android:hint="user ID"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.575"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
<EditText
    android:id="@+id/editText2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="8dp"
    android:layout_marginStart="8dp"
    android:layout_marginTop="204dp"
    android:ems="10"
    android:hint="Password"
    android:inputType="textPassword"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.575"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="120dp"
    android:text="Visit"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/editText" />
</android.support.constraint.ConstraintLayout>
```

MainActivity.java

```
package e.administrator.week1a;

import android.content.Intent;
import android.net.Uri;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends Activity {

    Button button;

    EditText editText,editText1;

    String w="vardhaman";

    String q="cse";

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        button = findViewById(R.id.button);

        editText = findViewById(R.id.editText);

        editText1 = findViewById(R.id.editText2);

        button.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View view) {

                String url = editText.getText().toString();

                String pwd = editText1.getText().toString();

                if (w.equals(url)&&q.equals(pwd)) {
```

```

Toast.makeText(getApplicationContext(), "success" + url, Toast.LENGTH_LONG).show();
Intent i=new Intent(getApplicationContext(),HomeActivity.class);
startActivity(i);
}
else{
    Toast.makeText(getApplicationContext(), "! Authentication Failed" + url,
Toast.LENGTH_LONG).show();
}
}
});
}
}

```

Android Manifest.xml

```

<activity
    android:name=".HomeActivity"
    android:label="@string/title_activity_home"></activity>
</application>

activity_home.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="e.administrator.week1a.HomeActivity"
    android:background="#00ff00">
    <TextView
        android:layout_width="wrap_content"

```

```
android:layout_height="wrap_content"
android:text="WELCOME TO HOME"/>
</android.support.constraint.ConstraintLayout>
```

HomeActivity.java

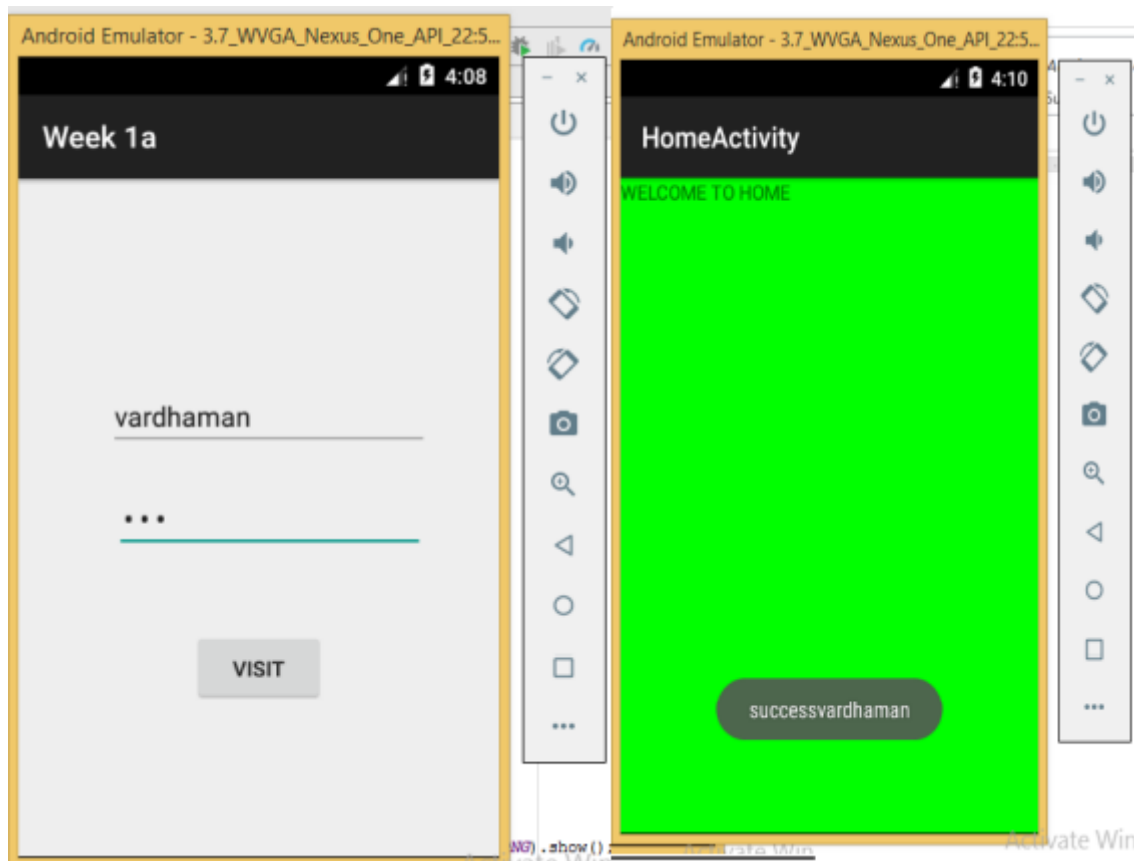
```
package e.administrator.week1a;

import android.os.Bundle;
import android.app.Activity;

public class HomeActivity extends Activity {

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

OUTPUT:



Week 5a: app to demonstrate AlertDialog.

activity_main.xml

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

<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context="example.vardhaman.com.alertdialog.MainActivity">

<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/button"
android:text="Close app"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>
```

strings.xml

```
<resources>

<string name="app_name">AlertDialog</string>
<string name="dialog_message">Welcome </string>
<string name="dialog_title">vardhaman</string>
</resources>
```

MainActivity.java

```

package example.vardhaman.com.alertdialog;

import android.content.DialogInterface;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.app.AlertDialog;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    Button closeButton;

    AlertDialog.Builder builder;

    @Override

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        closeButton = (Button) findViewById(R.id.button);
        builder = new AlertDialog.Builder(this);
        closeButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                //Uncomment the below code to Set the message and title from the strings.xml file
                builder.setMessage(R.string.dialog_message) .setTitle(R.string.dialog_title);
                //Setting message manually and performing action on button click
                builder.setMessage("Do you want to close this application ?")
                    .setCancelable(false)
                    .setPositiveButton("Yes", new DialogInterface.OnClickListener() {
                        public void onClick(DialogInterface dialog, int id) {
                            finish();
                            Toast.makeText(getApplicationContext(),"you choose yes action for alertbox",

```

```

Toast.LENGTH_SHORT).show();
}
})

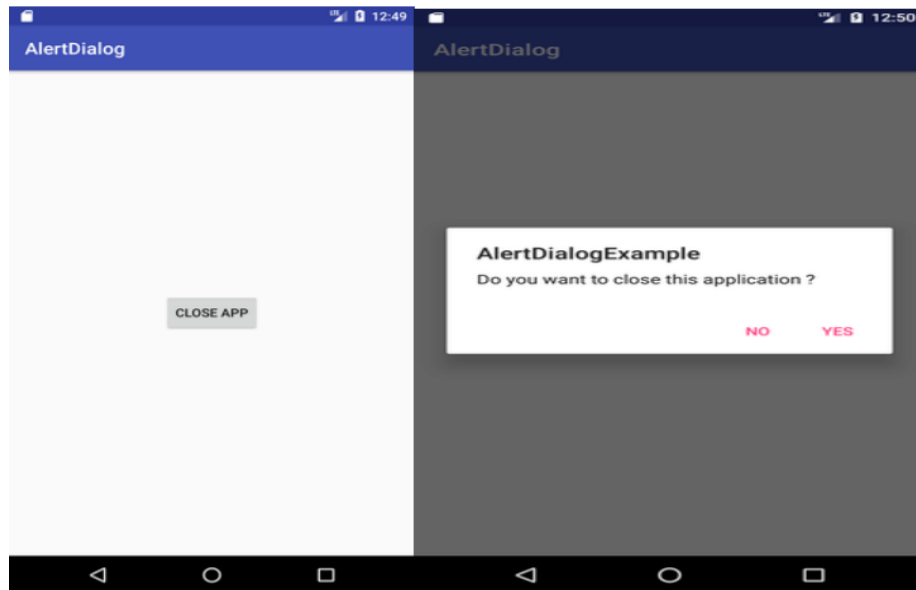
.setNegativeButton("No", new DialogInterface.OnClickListener() {
    public void onClick(DialogInterface dialog, int id) {
        // Action for 'NO' Button
        dialog.cancel();
        Toast.makeText(getApplicationContext(),"you choose no action for alertbox",
        Toast.LENGTH_SHORT).show();
    }
});

//Creating dialog box
AlertDialog alert = builder.create();

//Setting the title manually
alert.setTitle("AlertDialogExample");
alert.show();
}
});
}
}

```

OUTPUT:



Week 5b: App to demonstrate WebView

activity_main.xml

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

<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <WebView
        android:id="@+id/WV"
        android:layout_width="656dp"
        android:layout_height="1509dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.webview;

import androidx.appcompat.app.AppCompatActivity;
import android.annotation.SuppressLint;
import android.os.Bundle;
import android.webkit.WebSettings;
import android.webkit.WebView;
import android.webkit.WebViewClient;

public class MainActivity extends AppCompatActivity {

    WebView web;

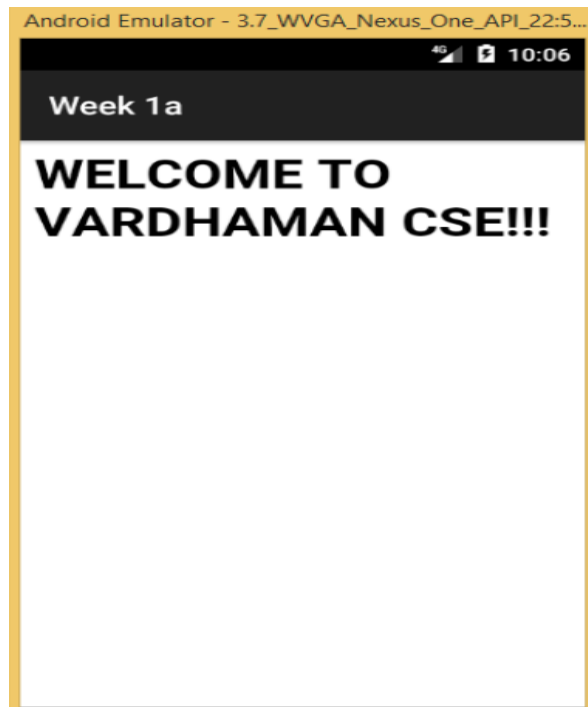
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        web = (WebView)findViewById(R.id.WV);
        web.setWebViewClient(new WebViewClient());

        String Data("<html><head><title>WebView</title></head><body><h1>welcome to  
VCE</h1></body></html>");
        web.loadData(Data,"text/html","UTF-8");
        //web.loadUrl("https://www.vardhaman.org");
    }
}
```

Manifest Code

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

OUTPUT:



Week 6a: App to show Analog and Digital Clock

activity_main.xml

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

<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/ap
k/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context="example.vardhaman.com.analogdigital.MainActivity">

<AnalogClock
android:id="@+id/analogClock1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentTop="true"
android:layout_centerHorizontal="true"
android:layout_marginLeft="136dp"
```

```

android:layout_marginTop="296dp"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
<DigitalClock
android:id="@+id/digitalClock1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@+id/analogClock1"
android:layout_centerHorizontal="true"
android:layout_marginLeft="176dp"
android:layout_marginTop="84dp"
android:text="DigitalClock"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>

```

MainActivity.java

```

package example.vardhaman.com.analogdigital;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;

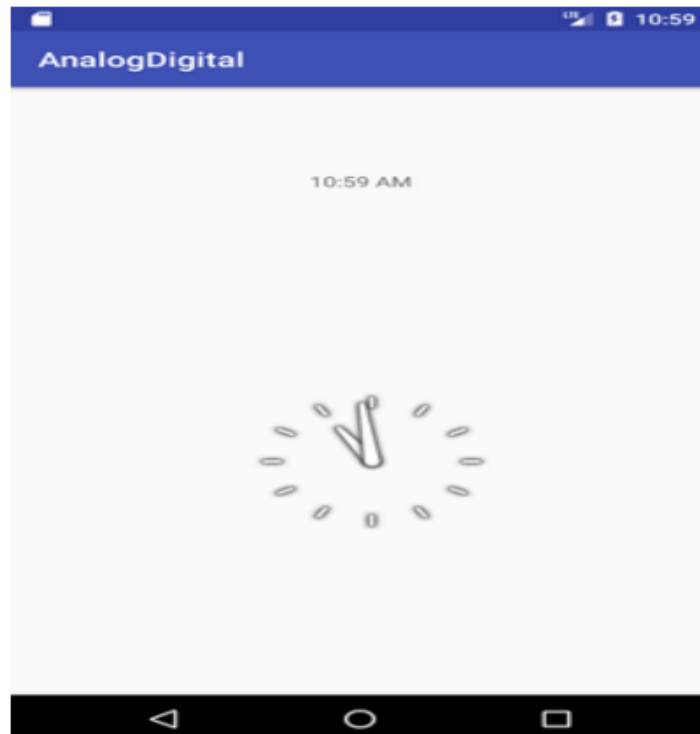
public class MainActivity extends AppCompatActivity {

    @Override

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

```

OUTPUT:



Week 6b: App to illustrate Progress bar

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: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=".MainActivity">
    <ProgressBar
        android:id="@+id/simpleProgressBar"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:visibility="invisible"
        android:layout_centerHorizontal="true"/>
```

```
<Button
    android:id="@+id/startButton"
    android:layout_width="200dp"
    android:layout_height="wrap_content"
    android:text="Start"
    android:textSize="20sp"
    android:textStyle="bold"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="100dp"
    android:padding="10dp"
    android:background="#0f0"
    android:textColor="#fff"/>
</RelativeLayout>
```

MainActivity.java

```
package example.gb.progressbarexample;

import android.graphics.Color;
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.ProgressBar;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        // initiate progress bar and start button
    }
}
```

```
final ProgressBar simpleProgressBar = (ProgressBar) findViewById(R.id.simpleProgressBar);  
Button startButton = (Button) findViewById(R.id.startButton);  
// perform click event on button  
startButton.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        // visible the progress bar  
        simpleProgressBar.setVisibility(View.VISIBLE);  
    }  
});  
}}
```

OUTPUT:



7a) Aim: Create an android app to demonstrate list fragment.

Strings.xml

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string name="app_name">ListFragmentDemo</string>
    <string name="action_settings">Settings</string>
    <string name="hello_world">Hello world!</string>
    <string name="imgdesc">imgdesc</string>
    <string-array name="Planets">
        <item>Sun</item>
        <item>Mercury</item>
        <item>Venus</item>
        <item>Earth</item>
        <item>Mars</item>
        <item>Jupiter</item>
        <item>Saturn</item>
        <item>Uranus</item>
```



```
<item>Neptune</item>
```

```
</string-array>
```

```
</resources>
```

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" >
```

```
<fragment
```

```
android:id="@+id/fragment1"
```

```
android:name="com.example.app.myapplication.MyListFragment"
```

```
android:layout_width="match_parent"
```

```
android:layout_height="match_parent" />
```

```
</LinearLayout>
```

ListFragment.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" >
```

```
<ListView
```

```
android:id="@android:id/list"
```

```
android:layout_width="match_parent"
```

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

```
</ListView>
```

```
<TextView
```

```
android:id="@android:id/empty"
android:layout_width="match_parent"
android:layout_height="wrap_content" >
</TextView>
</LinearLayout>
```

ListFragment.java

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

import android.annotation.SuppressLint;
import android.app.ListFragment;
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Toast;

public class MyListFragment extends ListFragment implements OnItemClickListener {

    @Override
    public View onCreateView(LayoutInflater inflater,
        ViewGroup container, Bundle savedInstanceState) {
        View view = inflater.inflate(R.layout.list_fragment, container, false);
        return view;
    }

    @Override
    public void onActivityCreated(Bundle savedInstanceState) {
        super.onActivityCreated(savedInstanceState);

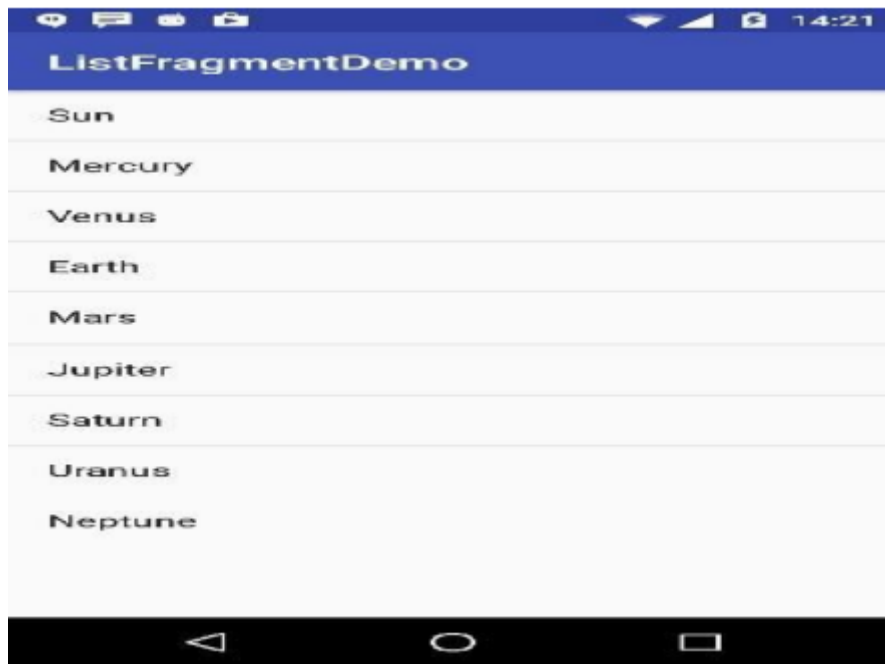
        ArrayAdapter adapter = ArrayAdapter.createFromResource(getActivity(),
            R.array.Planets, android.R.layout.simple_list_item_1);
```

```
setListAdapter(adapter);  
getListView().setOnClickListener(this);  
}  
  
@Override  
  
public void onItemClick(AdapterView<?> parent, View view, int position, long id) {  
    //String value=adapter.getItem(position);  
    //Toast.makeText(getActivity(), "Item: " +value, Toast.LENGTH_SHORT).show();  
    Toast.makeText(getActivity(), "Item: " + position, Toast.LENGTH_SHORT).show();  
}  
}
```

MainActivity.java

```
package com.example.app.myapplication;  
  
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:



7b) Aim: Create an android app to demonstrate dialog fragment
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" >
    <Button
        android:id="@+id/dfragbutton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:text="@string/dialogfragment" />
    <Button
        android:id="@+id/alertdfragbutton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/dfragbutton"
```

```
android:layout_centerInParent="true"
android:text="@string/alertdialogfragment" />
</RelativeLayout>
```

MainActivity.java

```
import android.os.Bundle;
import android.support.v4.app.FragmentActivity;
import android.support.v4.app.FragmentManager;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class MainActivity extends FragmentActivity {

    Button dfragbutton;

    Button alertdfragbutton;

    FragmentManager fm = getSupportFragmentManager();

    @Override

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

        dfragbutton = (Button) findViewById(R.id.dfragbutton);
        alertdfragbutton = (Button) findViewById(R.id.alertdfragbutton);
        dfragbutton.setOnClickListener(new OnClickListener() {
            public void onClick(View arg0) {
                DFragment dFragment = new DFragment();
                dFragment.show(fm, "Dialog Fragment");
            }
        });

        alertdfragbutton.setOnClickListener(new OnClickListener() {
            public void onClick(View arg0) {
                AlertDFragment alertdFragment = new AlertDFragment();
```

```
alertdFragment.show(fm, "Alert Dialog Fragment");  
}    });    }
```

DialogFragment.java

```
package com.androidbegin.dialogfragment;  
  
import android.os.Bundle;  
import android.support.v4.app.DialogFragment;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
  
public class DFragment extends DialogFragment {  
  
    @Override  
  
    public View onCreateView(LayoutInflater inflater, ViewGroup container,  
        Bundle savedInstanceState) {  
  
        View rootView = inflater.inflate(R.layout.dialogfragment, container,  
            false);  
  
        getDialog().setTitle("DialogFragment ");  
  
        return rootView;  
    }  
}
```

dialogfragment.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" >  
    <TextView  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_centerInParent="true"  
        android:padding="10dp"  
        android:text="@string/welcome" />
```

```
</RelativeLayout>
```

strings.xml

```
<?xml version="1.0" encoding="utf-8"?>  
<resources>  
  <string name="app_name">DialogFragment </string>  
  <string name="action_settings">Settings</string>  
  <string name="hello_world">Hello world!</string>  
  <string name="welcome">This is a DialogFragment.</string>  
  <string name="dialogfragment">Open DialogFragment</string>  
  <string name="alrtdialogfragment">Open Alert DialogFragment</string>  
</resources>
```

OUTPUT:



8a) Aim: Create an android app to demonstrate option menu with handling listeners

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>  
<android.support.design.widget.CoordinatorLayout  
  xmlns:android="http://schemas.android.co  
m/apk/res/android"  
  xmlns:app="http://schemas.android.com/apk/res-auto"  
  xmlns:tools="http://schemas.android.com/tools"  
  android:layout_width="match_parent"  
  android:layout_height="match_parent"
```

```

tools:context="example.myapplication.com.optionmenu.MainActivity">
<android.support.design.widget.AppBarLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:theme="@style/AppTheme.AppBarOverlay">
<android.support.v7.widget.Toolbar
android:id="@+id/toolbar"
android:layout_width="match_parent"
android:layout_height="?attr/actionBarSize"
android:background="?attr/colorPrimary"
app:popupTheme="@style/AppTheme.PopupOverlay" />
</android.support.design.widget.AppBarLayout>
<include layout="@layout/content_main" />
</android.support.design.widget.CoordinatorLayout>

```

context_main.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"
app:layout_behavior="@string/appbar_scrolling_view_behavior"
tools:context="example.myapplication.com.optionmenu.MainActivity"
tools:showIn="@layout/activity_main">
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Hello World!"
app:layout_constraintBottom_toBottomOf="parent"

```



```
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>
```

menu_main.xml

```
<menu xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
tools:context="example.myapplication.com.optionmenu.MainActivity">
<item android:id="@+id/item1"
android:title="Item 1"/>
<item android:id="@+id/item2"
android:title="Item 2"/>
<item android:id="@+id/item3"
android:title="Item 3"
app:showAsAction="withText"/>
</menu>
```

MainActivity.java

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

import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

```
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
setSupportActionBar(toolbar);
}

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

@Override
public boolean onOptionsItemSelected(MenuItem item) {
int id = item.getItemId();
switch (id){
case R.id.item1:
Toast.makeText(getApplicationContext(),"Item 1 Selected",Toast.LENGTH_LONG).show(
);
return true;
case R.id.item2:
Toast.makeText(getApplicationContext(),"Item 2 Selected",Toast.LENGTH_LONG).show(
);
return true;
case R.id.item3:
Toast.makeText(getApplicationContext(),"Item 3 Selected",Toast.LENGTH_LONG).show(
);
return true;
default:
return super.onOptionsItemSelected(item);
}
```

```
}      }      }
```

OUTPUT:



8b) Aim: Create an android app to scroll list of images and display details of images (name, size etc) using ImageSwitcher control.

activity_main.xml

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

<android.support.design.widget.CoordinatorLayout
    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:fitsSystemWindows="true"
    tools:context="com.example.test.imageswitcher.MainActivity">

    <android.support.design.widget.AppBarLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:theme="@style/AppTheme.AppBarOverlay">

        <android.support.v7.widget.Toolbar
            android:id="@+id/toolbar"
```

```
android:layout_width="match_parent"
android:layout_height="?attr/actionBarSize"
android:background="?attr/colorPrimary"
app:popupTheme="@style/AppTheme.PopupOverlay" />
</android.support.design.widget.AppBarLayout>
<include layout="@layout/content_main" />
</android.support.design.widget.CoordinatorLayout>
```

content_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"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="com.example.test.imageswitcher.MainActivity"
    tools:showIn="@layout/activity_main">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Image Switcher Example"
        android:id="@+id/textView"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true" />
    <ImageSwitcher
```

```

        android:id="@+id/imageSwitcher"
        android:layout_width="match_parent"
        android:layout_height="250dp"
        android:layout_marginBottom="28dp"
        android:layout_marginTop="40dp" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Next"
        android:id="@+id/button"
        android:layout_marginBottom="47dp"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true" />
</RelativeLayout>

```

MainActivity.java

```

package com.example.test.imageswitcher;

import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.widget.Button;
import android.widget.ImageSwitcher;
import android.widget.ImageView;
import android.widget.ViewSwitcher;
import android.app.ActionBar;
import android.view.animation.Animation;
import android.view.animation.AnimationUtils;

public class MainActivity extends AppCompatActivity {

    ImageSwitcher imageSwitcher;

```

```

Button nextButton;

int imageSwitcherImages[] = {R.drawable.cpp, R.drawable.c_sarp, R.drawable.jsp,
R.drawable.mysql, R.drawable.hadoop};

int switcherImageLength = imageSwitcherImages.length;

int counter = -1;

@Override

protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);

setContentView(R.layout.activity_main);

Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
setSupportActionBar(toolbar);

imageSwitcher = (ImageSwitcher) findViewById(R.id.imageSwitcher);
nextButton = (Button) findViewById(R.id.button);

imageSwitcher.setFactory(new ViewSwitcher.ViewFactory() {
@Override

public View makeView() {
ImageView switcherImageView = new ImageView(getApplicationContext());
switcherImageView.setLayoutParams(new ImageSwitcher.LayoutParams(
ActionBar.LayoutParams.FILL_PARENT, ActionBar.LayoutParams.FILL_PARENT ));
switcherImageView.setScaleType(ImageView.ScaleType.FIT_CENTER);
switcherImageView.setImageResource(R.drawable.hadoop);
//switcherImageView.setMaxHeight(100);
return switcherImageView;
}
});

Animation aniOut = AnimationUtils.loadAnimation(this, android.R.anim.slide_out_right);
Animation aniIn = AnimationUtils.loadAnimation(this, android.R.anim.slide_in_left);

imageSwitcher.setOutAnimation(aniOut);

imageSwitcher.setInAnimation(aniIn);

nextButton.setOnClickListener(new View.OnClickListener() {

```

```

@Override

public void onClick(View v) {

    counter++;

    if (counter == switcherImageLength){

        counter = 0;

        imageSwitcher.setImageResource(imageSwitcherImages[counter]); }

    else{

        imageSwitcher.setImageResource(imageSwitcherImages[counter]);

    } } }); } }

```

OUTPUT:



9a) Aim: Create an android app to demonstrate sending e-mail

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"
    tools:context=".MainActivity" >
    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"

```

```
android:layout_height="wrap_content"
android:layout_alignParentRight="true"
android:layout_alignParentTop="true"
android:layout_marginRight="22dp"
android:layout_marginTop="16dp"
android:ems="10" />
<EditText
android:id="@+id/editText2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignLeft="@+id/editText1"
android:layout_below="@+id/editText1"
android:layout_marginTop="18dp"
android:ems="10" >
<requestFocus />
</EditText>
<EditText
android:id="@+id/editText3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignLeft="@+id/editText2"
android:layout_below="@+id/editText2"
android:layout_marginTop="28dp"
android:ems="10"
android:inputType="textMultiLine" />
<TextView
android:id="@+id/textView1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
```



```
android:layout_alignBaseline="@+id/editText1"
android:layout_alignBottom="@+id/editText1"
android:layout_alignParentLeft="true"
android:text="To:" />
<TextView
android:id="@+id/textView2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignBaseline="@+id/editText2"
android:layout_alignBottom="@+id/editText2"
android:layout_alignParentLeft="true"
android:text="Subject:" />
<TextView
android:id="@+id/textView3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignBaseline="@+id/editText3"
android:layout_alignBottom="@+id/editText3"
android:layout_alignParentLeft="true"
android:text="Message:" />
<Button
android:id="@+id/button1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignLeft="@+id/editText3"
android:layout_below="@+id/editText3"
android:layout_marginLeft="76dp"
android:layout_marginTop="20dp"
android:text="Compose an email" />
```

</RelativeLayout>

MainActivity.java

```
package com.example.sendemail;

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

public class MainActivity extends Activity {

    EditText editTextTo,editTextSubject,editTextMessage;

    Button send;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        editTextTo=(EditText)findViewById(R.id.editText1);
        editTextSubject=(EditText)findViewById(R.id.editText2);
        editTextMessage=(EditText)findViewById(R.id.editText3);
        send=(Button)findViewById(R.id.button1);
        send.setOnClickListener(new OnClickListener(){

            @Override

            public void onClick(View arg0) {

                String to=editTextTo.getText().toString();

                String subject=editTextSubject.getText().toString();

                String message=editTextMessage.getText().toString();

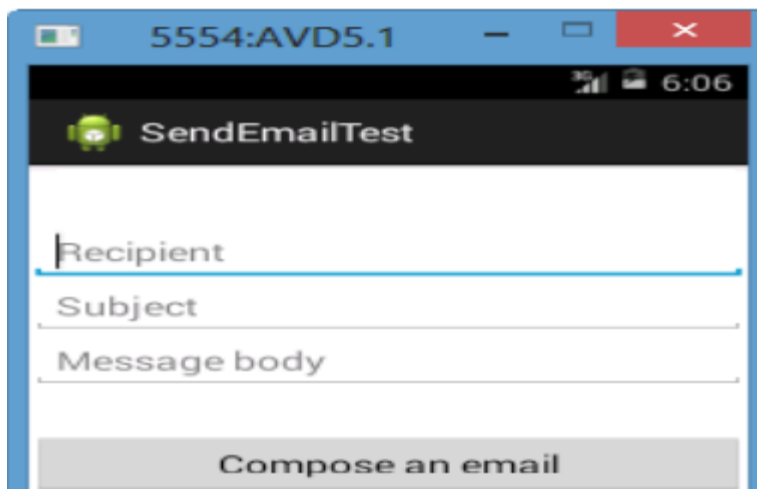
                Intent email = new Intent(Intent.ACTION_SEND);
```

```

email.putExtra(Intent.EXTRA_EMAIL, new String[]{ to});
email.putExtra(Intent.EXTRA_SUBJECT, subject);
email.putExtra(Intent.EXTRA_TEXT, message);
//need this to prompts email client only
email.setType("message/rfc822");
startActivity(Intent.createChooser(email, "Choose an Email client :"));
}    });    }    }

```

OUTPUT:



9b) Aim: Create an android app to demonstrate sending SMS

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"
    tools:context=".MainActivity" >
    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentRight="true"

```

```
android:layout_alignParentTop="true"
android:layout_marginRight="20dp"
android:ems="10" />
<EditText
android:id="@+id/editText2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignLeft="@+id/editText1"
android:layout_below="@+id/editText1"
android:layout_marginTop="26dp"
android:ems="10"
android:inputType="textMultiLine" />
<TextView
android:id="@+id/textView1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignBaseline="@+id/editText1"
android:layout_alignBottom="@+id/editText1"
android:layout_toLeftOf="@+id/editText1"
android:text="Mobile No:" />
<TextView
android:id="@+id/textView2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignBaseline="@+id/editText2"
android:layout_alignBottom="@+id/editText2"
android:layout_alignLeft="@+id/textView1"
android:text="Message:" />
<Button
```

```

android:id="@+id/button1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignLeft="@+id/editText2"
android:layout_below="@+id/editText2"
android:layout_marginLeft="34dp"
android:layout_marginTop="48dp"
android:text="Send SMS" />
</RelativeLayout>

```

Android-Manifest.xml

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

MainActivity.java

```

package com.example.sendsms;

import android.os.Bundle;
import android.app.Activity;
import android.app.PendingIntent;
import android.content.Intent;
import android.telephony.SmsManager;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends Activity {

    EditText mobileno,message;

    Button sendsms;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

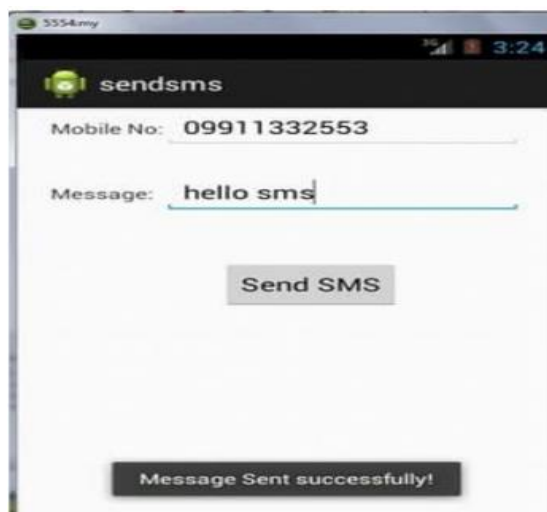
```

```

super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
mobilenno=(EditText)findViewById(R.id.editText1);
message=(EditText)findViewById(R.id.editText2);
sendsms=(Button)findViewById(R.id.button1);
//Performing action on button click
sendsms.setOnClickListener(new OnClickListener() {
@Override
public void onClick(View arg0) {
String no=mobilenno.getText().toString();
String msg=message.getText().toString();
//Getting intent and PendingIntent instance
Intent intent=new Intent(getApplicationContext(),MainActivity.class);
PendingIntent pi=PendingIntent.getActivity(getApplicationContext(), 0, intent,0);
//Get the SmsManager instance and call the sendTextMessage method to send message
SmsManager sms=SmsManager.getDefault();
sms.sendTextMessage(no, null, msg, pi,null);
Toast.makeText(getApplicationContext(), "Message Sent successfully!",
Toast.LENGTH_LONG).show();    } }); } }

```

OUTPUT:



10) Aim: Create an android app to show details of phone contacts and implement calling, receiving

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"
    tools:context=".MainActivity" >

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="118dp"
        android:text="Call" />

    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="25dp"
        android:ems="10" />

</RelativeLayout>
```

Android Manifest.xml

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

MainActivity.java

```
package com.example.phonecall;

import android.net.Uri;
import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends Activity {

    EditText edittext1;

    Button button1;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        edittext1=(EditText)findViewById(R.id.editText1);

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

        button1.setOnClickListener(new OnClickListener(){

            @Override

            public void onClick(View arg0) {

                String number=edittext1.getText().toString();

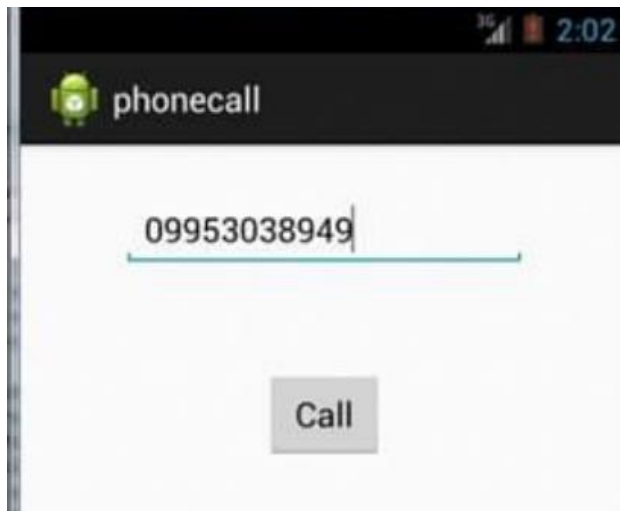
                Intent callIntent = new Intent(Intent.ACTION_CALL);

                callIntent.setData(Uri.parse("tel:"+number));

                startActivity(callIntent);

            } }); } }
```

OUTPUT:



11a) Aim: Create an android app to demonstrate camera.

By the help of 2 constants of MediaStore class, we can capture picture and video without using

the instance of Camera class.

1. ACTION_IMAGE_CAPTURE
2. ACTION_VIDEO_CAPTURE

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"
tools:context=".MainActivity" >
<Button
android:id="@+id/button1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentBottom="true"
android:layout_centerHorizontal="true"
android:text="Take a Photo" >
</Button>
<ImageView
android:id="@+id/imageView1"
android:layout_width="fill_parent"
android:layout_height="fill_parent"
android:layout_above="@+id/button1"
android:layout_alignParentTop="true"
android:src="@drawable/ic_launcher" >
</ImageView>
</RelativeLayout>
```

MainActivity.java

```
package com.example.camera;
import android.app.Activity;
import android.content.Intent;
import android.graphics.Bitmap;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
```

```

public class MainActivity extends Activity {

    private static final int CAMERA_REQUEST = 1888;

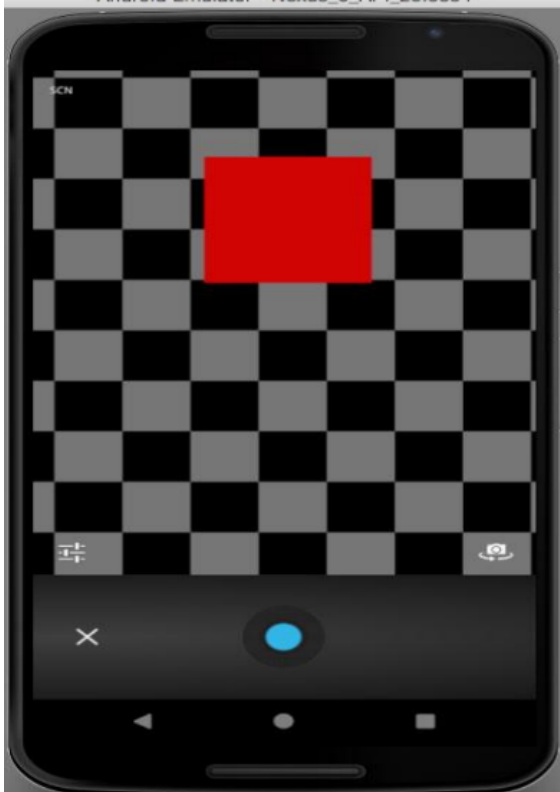
    ImageView imageView;

    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        imageView = (ImageView) this.findViewById(R.id.imageView1);
        Button photoButton = (Button) this.findViewById(R.id.button1);
        photoButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent cameraIntent = new Intent(android.provider.MediaStore.ACTION_IMAGE_CAPTURE);
                startActivityForResult(cameraIntent, CAMERA_REQUEST);
            }
        });
    }

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

```

OUTPUT:



11b) Aim: Create an android app to demonstrate mediaplayer

MainActivity.java

```
package com.example.audioplay;

import android.media.MediaPlayer;
import android.os.Bundle;
import android.os.Environment;
import android.app.Activity;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class MainActivity extends Activity {
    Button start,pause,stop;

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

```

super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
start=(Button)findViewById(R.id.button1);
pause=(Button)findViewById(R.id.button2);
stop=(Button)findViewById(R.id.button3);
final MediaPlayer mp=new MediaPlayer();
try{
mp.setDataSource(Environment.getExternalStorageDirectory().getPath()+"/Music/main.m
p3");
mp.prepare();
}catch(Exception e){e.printStackTrace();}
start.setOnClickListener(new OnClickListener() {
@Override
public void onClick(View v) {
mp.start();
}
});
pause.setOnClickListener(new OnClickListener() {
@Override
public void onClick(View v) {
mp.pause();
}
});
stop.setOnClickListener(new OnClickListener() {
@Override
public void onClick(View v) {
mp.stop();
}
});

```

```
}  
}
```

activity_main.xml

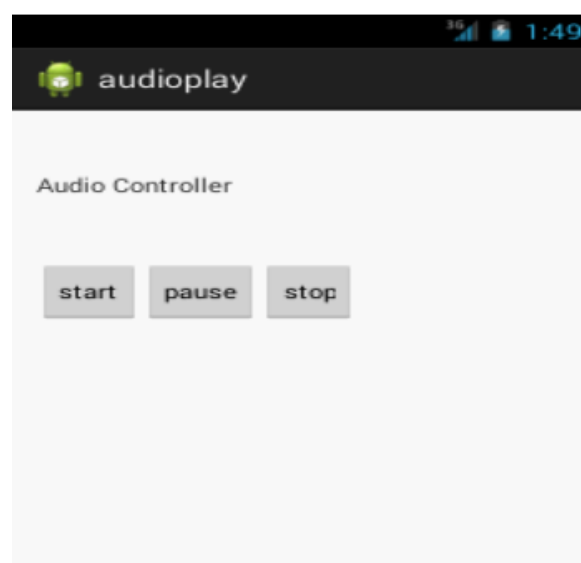
```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:paddingBottom="@dimen/activity_vertical_margin"  
    android:paddingLeft="@dimen/activity_horizontal_margin"  
    android:paddingRight="@dimen/activity_horizontal_margin"  
    android:paddingTop="@dimen/activity_vertical_margin"  
    tools:context=".MainActivity" >  
    <TextView  
        android:id="@+id/textView1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_alignParentTop="true"  
        android:layout_marginTop="30dp"  
        android:text="Audio Controller" />  
    <Button  
        android:id="@+id/button1"  
        style="?android:attr/buttonStyleSmall"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_alignLeft="@+id/textView1"  
        android:layout_below="@+id/textView1"  
        android:layout_marginTop="48dp"  
        android:text="start" />
```

```
<Button
android:id="@+id/button2"
style="?android:attr/buttonStyleSmall"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignTop="@+id/button1"
android:layout_toRightOf="@+id/button1"
android:text="pause" />

<Button
android:id="@+id/button3"
style="?android:attr/buttonStyleSmall"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignTop="@+id/button2"
android:layout_toRightOf="@+id/button2"
android:text="stop" />

</RelativeLayout>
```

OUTPUT:



12 a,b) Aim: Create an android app to store details of students in SQLite and display the details perform insert, update, delete operations on student database

activity_main.xml

```
<AbsoluteLayoutxmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_x="50dp"
        android:layout_y="20dp"
        android:text="Student Details"
        android:textSize="30sp" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_x="20dp"
        android:layout_y="110dp"
        android:text="Enter Rollno:"
        android:textSize="20sp" />
    <EditText
        android:id="@+id/Rollno"
        android:layout_width="150dp"
        android:layout_height="wrap_content"
        android:layout_x="175dp"
        android:layout_y="100dp"
        android:inputType="number"
        android:textSize="20sp" />
    <TextView
        android:layout_width="wrap_content"
```



```
android:layout_height="wrap_content"
android:layout_x="20dp"
android:layout_y="160dp"
android:text="Enter Name:"
android:textSize="20sp" />
<EditText
android:id="@+id/Name"
android:layout_width="150dp"
android:layout_height="wrap_content"
android:layout_x="175dp"
android:layout_y="150dp"
android:inputType="text"
android:textSize="20sp" />
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_x="20dp"
android:layout_y="210dp"
android:text="Enter Marks:"
android:textSize="20sp" />
<EditText
android:id="@+id/Marks"
android:layout_width="150dp"
android:layout_height="wrap_content"
android:layout_x="175dp"
android:layout_y="200dp"
android:inputType="number"
android:textSize="20sp" />
<Button
```

```
android:id="@+id/Insert"  
android:layout_width="150dp"  
android:layout_height="wrap_content"  
android:layout_x="25dp"  
android:layout_y="300dp"  
android:text="Insert"  
android:textSize="30dp" />
```

```
<Button
```

```
android:id="@+id/Delete"  
android:layout_width="150dp"  
android:layout_height="wrap_content"  
android:layout_x="200dp"  
android:layout_y="300dp"  
android:text="Delete"  
android:textSize="30dp" />
```

```
<Button
```

```
android:id="@+id/Update"  
android:layout_width="150dp"  
android:layout_height="wrap_content"  
android:layout_x="25dp"  
android:layout_y="400dp"  
android:text="Update"  
android:textSize="30dp" />
```

```
<Button
```

```
android:id="@+id/View"  
android:layout_width="150dp"  
android:layout_height="wrap_content"  
android:layout_x="200dp"  
android:layout_y="400dp"
```

```

android:text="View"
android:textSize="30dp" />
<Button
android:id="@+id/ViewAll"
android:layout_width="200dp"
android:layout_height="wrap_content"
android:layout_x="100dp"
android:layout_y="500dp"
android:text="View All"
android:textSize="30dp" />
</AbsoluteLayout>

```

MainActivity.java

```

import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity implements
    android.view.View.OnClickListener {

    EditText RollNo, Name, Marks;

    Button Insert, Delete, Update, View, ViewAll;

    SQLiteDatabase db;

    @Override

    public void onCreate(Bundle savedInstanceState)

```

```

{
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
Rollno=(EditText)findViewById(R.id.Rollno);
Name=(EditText)findViewById(R.id.Name);
Marks=(EditText)findViewById(R.id.Marks);
Insert=(Button)findViewById(R.id.Insert);
Delete=(Button)findViewById(R.id.Delete);
Update=(Button)findViewById(R.id.Update);
View=(Button)findViewById(R.id.View);
ViewAll=(Button)findViewById(R.id.ViewAll);
Insert.setOnClickListener(this);
Delete.setOnClickListener(this);
Update.setOnClickListener(this);
View.setOnClickListener(this);
ViewAll.setOnClickListener(this);
// Creating database and table
db=openOrCreateDatabase("StudentDB", Context.MODE_PRIVATE, null);
db.execSQL("CREATE TABLE IF NOT EXISTS student(rollnoVARCHAR,nameVARCHAR,marks
VARCHAR);");
}
public void onClick(View view)
{
if(view==Insert) {
if(Rollno.getText().toString().trim().length()==0 ||
Name.getText().toString().trim().length()==0 ||
Marks.getText().toString().trim().length()==0)
{
showMessage("Error", "Please enter all values");
}
}
}

```

```

return;

}

db.execSQL("INSERT INTO student VALUES('"+Rollno.getText()+"','"+Name.getText()+"',"+Marks.getText()+");");

showMessage("Success", "Record added");

clearText();

}

if(view==Delete) {

    if(Rollno.getText().toString().trim().length()==0) {

        showMessage("Error", "Please enter Rollno");

        return;

    }

    Cursor c=db.rawQuery("SELECT * FROM student WHERE rollno='"+Rollno.getText()+"'",

        null);

    if(c.moveToFirst()) {

        db.execSQL("DELETE FROM student WHERE rollno='"+Rollno.getText()+"'");

        showMessage("Success", "Record Deleted");

    }

    Else {

        showMessage("Error", "Invalid Rollno");

    }

    clearText();

}

if(view==Update) {

    if(Rollno.getText().toString().trim().length()==0) {

        showMessage("Error", "Please enter Rollno");

        return;

    }

    Cursor c=db.rawQuery("SELECT * FROM student WHERE rollno='"+Rollno.getText()+"'",

```

```

null);

if(c.moveToFirst()) {

db.execSQL("UPDATE student SET name='" + Name.getText() + "',marks='" + Marks.getText()
+
    "' WHERE rollno='"+Rollno.getText()+"'");
showMessage("Success", "Record Modified");

}

else {

showMessage("Error", "Invalid Rollno");

}

clearText();

}

if(view==View) {

if(Rollno.getText().toString().trim().length()==0) {

showMessage("Error", "Please enter Rollno");

return;

}

Cursor c=db.rawQuery("SELECT * FROM student WHERE rollno='"+Rollno.getText()+"'",
null);

if(c.moveToFirst()) {

Name.setText(c.getString(1));

Marks.setText(c.getString(2));

}

else {

showMessage("Error", "Invalid Rollno");

clearText();

} }

if(view==ViewAll) {

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());

} }

public void showMessage(String title,String message)

{

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

builder.setCancelable(true);

builder.setTitle(title);

builder.setMessage(message);

builder.show();

}

public void clearText() {

Rollno.setText("");

Name.setText("");

Marks.setText("");

Rollno.requestFocus();

}

}
```

OUTPUT:

