Name: Suchithra Raj M USN: 1NT19IS162

Calculator XML code:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   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:layout margin="0dp"
   android:orientation="vertical"
   android:background="#e6b800"
   tools:context=".MainActivity">
   <TextView
       android:id="@+id/Calculator"
       android:layout width="match parent"
       android:layout height="57dp"
       android:layout margin="20dp"
       android:text="Calculator"
       android:fontFamily="casual"
       android:textAlignment="center"
       android:textColor="@color/white"
       android:textSize="30dp" />
   <EditText
       android:id="@+id/res"
       android:layout margin="20dp"
       android:layout width="match parent"
       android:layout height="wrap content"
       android:ems="10"
       android:inputType="textPersonName"
       android:textSize="40sp"
       android:gravity="right"
       android:textColor="@color/white"
       android:text="0" />
   <LinearLayout</pre>
       android:layout width="match parent"
       android:layout height="wrap content"
       android:orientation="horizontal"
       android:layout marginTop="20dp">
       <Button
           android:id="@+id/nine"
           android:layout width="match parent"
           android:layout height="60dp"
           android:textSize="25dp"
           android:layout weight="1"
           android:text="9"
           android:backgroundTint="#332900"/>
           android:id="@+id/eight"
```

```
android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="8"
        android:backgroundTint="#332900"/>
    <Button
        android:id="@+id/seven"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="7"
        android:backgroundTint="#332900"/>
    <Button
       android:id="@+id/plus"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="+"
        android:backgroundTint="#332900"/>
</LinearLayout>
<LinearLayout
    android:layout width="match parent"
    android:layout height="wrap content"
    android:orientation="horizontal"
    android:layout marginTop="20dp">
    <Button
        android:id="@+id/six"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="6"
        android:backgroundTint="#332900"/>
    <Button
        android:id="@+id/five"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="5"
       android:backgroundTint="#332900"/>
    <Button
       android:id="@+id/four"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="4"
        android:backgroundTint="#332900"/>
```

```
<Button
        android:id="@+id/minus"
        android:layout width="match parent"
       android:layout height="60dp"
        android:textSize="25dp"
       android:layout weight="1"
       android:text="-"
        android:backgroundTint="#332900"/>
</LinearLayout>
<LinearLayout
    android:layout width="match parent"
    android:layout height="wrap content"
    android:orientation="horizontal"
   android:layout marginTop="20dp">
    <Button
        android:id="@+id/three"
        android:layout width="match parent"
       android:layout height="60dp"
       android:textSize="25dp"
       android:layout weight="1"
       android:text="3"
       android:backgroundTint="#332900"/>
    <Button
       android:id="@+id/two"
        android:layout_width="match parent"
        android:layout height="60dp"
       android:textSize="25dp"
       android:layout weight="1"
       android:text="2"
       android:backgroundTint="#332900"/>
    <Button
       android:id="@+id/one"
        android:layout width="match parent"
        android:layout height="60dp"
       android:textSize="25dp"
       android:layout weight="1"
       android:text="1"
       android:backgroundTint="#332900"/>
       android:id="@+id/multiply"
       android:layout width="match parent"
       android:layout height="60dp"
        android:textSize="25dp"
       android:layout weight="1"
        android:text="*"
        android:backgroundTint="#332900"/>
</LinearLayout>
<LinearLayout
    android:layout width="match parent"
    android:layout height="wrap content"
```

```
android:orientation="horizontal"
       android:layout marginTop="20dp">
       <Button
           android:id="@+id/zero"
           android:layout width="match parent"
           android:layout height="60dp"
           android:textSize="25dp"
           android:layout weight="1"
           android:text="0"
           android:backgroundTint="#332900"/>
       <Button
           android:id="@+id/dot"
           android:layout width="match parent"
           android:layout height="60dp"
           android:textSize="25dp"
           android:layout weight="1"
           android:text="."
           android:backgroundTint="#332900"/>
       <But.ton
           android:id="@+id/equal"
           android:layout width="match parent"
           android:layout height="60dp"
           android:textSize="25dp"
           android:layout weight="1"
           android:text="="
           android:backgroundTint="#332900"/>
       <Button
           android:id="@+id/division"
           android:layout width="match parent"
           android:layout height="60dp"
           android:textSize="25dp"
           android:layout weight="1"
           android:text="/"
           android:backgroundTint="#332900"/>
   </LinearLayout>
   <Button
       android:id="@+id/clear"
       android:layout width="match parent"
       android:layout height="65dp"
       android:backgroundTint="#332900"
       android:layout marginTop="25dp"
       android:text="clear" />
</LinearLayout>
```

OUTPUT:

Calculator			
			0
9	8	7	+
6	5	4	- 1
3	2	1	*
0		=	1
CLEAR			

Name: Suchithra Raj M USN: 1NT19IS162

Calculator controller code:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   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:layout margin="0dp"
   android:orientation="vertical"
   android:background="#e6b800"
   tools:context=".MainActivity">
   <TextView
       android:id="@+id/Calculator"
       android:layout width="match parent"
       android:layout height="57dp"
       android:layout margin="20dp"
       android:text="Calculator"
       android:fontFamily="casual"
       android:textAlignment="center"
       android:textColor="@color/white"
      android:textSize="30dp" />
   <EditText
      android:id="@+id/res"
       android:layout margin="20dp"
       android:layout width="match parent"
       android:layout height="wrap content"
       android:ems="10"
       android:inputType="textPersonName"
       android:textSize="40sp"
       android:gravity="right"
       android:textColor="@color/white"
       android:text="0" />
   <LinearLayout
       android:layout width="match parent"
       android:layout height="wrap content"
       android:orientation="horizontal"
       android:layout marginTop="20dp">
       <Button
           android:id="@+id/nine"
           android:layout width="match parent"
           android:layout height="60dp"
           android:textSize="25dp"
           android:layout weight="1"
           android:text="9"
           android:backgroundTint="#332900"/>
       <Button
```

```
android:id="@+id/eight"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="8"
        android:backgroundTint="#332900"/>
    <Button
       android:id="@+id/seven"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="7"
        android:backgroundTint="#332900"/>
    <Button
        android:id="@+id/plus"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="+"
        android:backgroundTint="#332900"/>
</LinearLayout>
<LinearLayout
    android:layout width="match parent"
    android:layout height="wrap content"
    android:orientation="horizontal"
   android:layout marginTop="20dp">
    <Button
       android:id="@+id/six"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="6"
       android:backgroundTint="#332900"/>
    <Button
       android:id="@+id/five"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="5"
        android:backgroundTint="#332900"/>
    <Button
        android:id="@+id/four"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="4"
```

```
android:backgroundTint="#332900"/>
    <Button
       android:id="@+id/minus"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="-"
        android:backgroundTint="#332900"/>
</LinearLayout>
<LinearLayout</pre>
    android:layout width="match parent"
    android:layout height="wrap content"
    android:orientation="horizontal"
   android:layout marginTop="20dp">
    <Button
        android:id="@+id/three"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="3"
        android:backgroundTint="#332900"/>
    <But.ton
        android:id="@+id/two"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="2"
        android:backgroundTint="#332900"/>
    <Button
       android:id="@+id/one"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="1"
        android:backgroundTint="#332900"/>
    <Button
        android:id="@+id/multiply"
        android:layout width="match parent"
        android:layout height="60dp"
        android:textSize="25dp"
        android:layout weight="1"
        android:text="*"
        android:backgroundTint="#332900"/>
</LinearLayout>
<LinearLayout
    android:layout width="match parent"
```

```
android:layout height="wrap content"
       android:orientation="horizontal"
       android:layout marginTop="20dp">
       <Button
           android:id="@+id/zero"
           android:layout width="match parent"
           android:layout height="60dp"
           android:textSize="25dp"
           android:layout weight="1"
           android:text="0"
           android:backgroundTint="#332900"/>
       <Button
          android:id="@+id/dot"
           android:layout width="match parent"
           android:layout height="60dp"
           android:textSize="25dp"
           android:layout weight="1"
           android:text="."
           android:backgroundTint="#332900"/>
       <Button
           android:id="@+id/equal"
           android:layout width="match parent"
           android:layout height="60dp"
           android:textSize="25dp"
           android:layout weight="1"
           android:text="="
           android:backgroundTint="#332900"/>
       <Button
           android:id="@+id/division"
           android:layout width="match parent"
           android:layout height="60dp"
           android:textSize="25dp"
           android:layout weight="1"
           android:text="/"
           android:backgroundTint="#332900"/>
   </LinearLayout>
   <Button
       android:id="@+id/clear"
       android:layout width="match parent"
       android:layout height="65dp"
       android:backgroundTint="#332900"
       android:layout marginTop="25dp"
       android:text="clear" />
</LinearLayout>
Java code:
package com.example.calculator162;
import androidx.appcompat.app.AppCompatActivity;
```

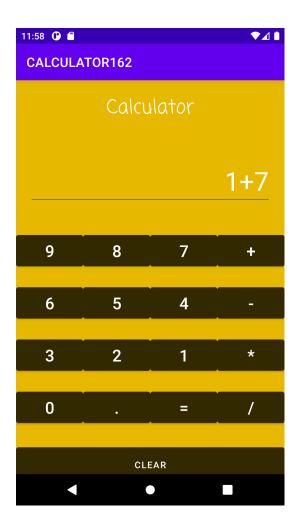
```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity implements
View.OnClickListener {
   Button nine, eight, seven, six, five, four, three, two, one, plus, minus,
multiply, division, equal, zero, dot, clear;
   EditText res;
   String operatorPressed = " ";
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity main);
       res = findViewById(R.id.res);
       zero = findViewById(R.id.zero);
       one = findViewById(R.id.one);
       two = findViewById(R.id.two);
       three = findViewById(R.id.three);
       four = findViewById(R.id.four);
       five = findViewById(R.id.five);
       six = findViewById(R.id.six);
       seven = findViewById(R.id.seven);
       eight = findViewById(R.id.eight);
       nine = findViewById(R.id.nine);
       plus = findViewById(R.id.plus);
       minus = findViewById(R.id.minus);
       multiply = findViewById(R.id.multiply);
      division = findViewById(R.id.division);
       dot = findViewById(R.id.dot);
       equal = findViewById(R.id.equal);
       clear = findViewById(R.id.clear);
       zero.setOnClickListener(this);
       one.setOnClickListener(this);
       two.setOnClickListener(this);
       three.setOnClickListener(this);
       four.setOnClickListener(this);
       five.setOnClickListener(this);
       six.setOnClickListener(this);
       seven.setOnClickListener(this);
       eight.setOnClickListener(this);
       nine.setOnClickListener(this);
       plus.setOnClickListener(this);
      minus.setOnClickListener(this);
      multiply.setOnClickListener(this);
       division.setOnClickListener(this);
       dot.setOnClickListener(this);
       equal.setOnClickListener(this);
       clear.setOnClickListener(this);
   }
   @Override
   public void onClick(View view) {
      double finalRes = 0.0;
```

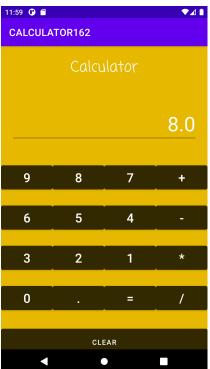
```
switch (view.getId()) {
    case R.id.zero:
       res.append("0");
       break;
   case R.id.one:
       res.append("1");
       break;
   case R.id.two:
       res.append("2");
        break;
    case R.id.three:
       res.append("3");
       break;
    case R.id.four:
       res.append("4");
       break;
    case R.id.five:
       res.append("5");
       break;
    case R.id.six:
       res.append("6");
       break;
    case R.id.seven:
       res.append("7");
       break;
    case R.id.eight:
       res.append("8");
       break;
    case R.id.nine:
       res.append("9");
       break;
   case R.id.plus:
        res.append("+");
        operatorPressed = "+";
        break;
    case R.id.minus:
        res.append("-");
        operatorPressed = "-";
        break;
    case R.id.multiply:
       res.append("*");
        operatorPressed = "*";
       break;
    case R.id.division:
        res.append("/");
        operatorPressed = "/";
       break;
    case R.id.dot:
       res.append(".");
       break;
   case R.id.equal:
        finalRes =
```

```
(double) evaluate(res.getText().toString(),
operatorPressed);
              res.setText(String.valueOf(finalRes));
              break;
           case R.id.clear:
              res.setText(" ");
               break;
       }
  }
  private Object evaluate(String toString, String operatorPressed) {
       String[] tokens;
       tokens = toString.split("\+|-|\+|-|\+|;
      double firstOperand = Double.parseDouble(tokens[0]);
      double secondOperand = Double.parseDouble(tokens[1]);
       switch (operatorPressed) {
           case "+":
               return firstOperand + secondOperand;
           case "-":
              return firstOperand - secondOperand;
           case "*":
              return firstOperand * secondOperand;
           case "/":
               return firstOperand / secondOperand;
           default:
              return 0;
       }
  }
}
```

OUTPUT:







Name: Suchithra Raj M USN: 1NT19IS162

Media Player

Xml code:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   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"
   android:orientation="vertical"
   android:background="#7712">
   <TextView
       android:layout width="match parent"
       android:layout height="wrap content"
       android:text="Harry Potter"
       android:id="@+id/songname"
       android:layout margin="30dp"
       android:fontFamily="cursive"
       android:textSize="40dp"
       android:gravity="center"
       android:textStyle="bold"
       />
   <Button
       android:layout width="match parent"
       android:layout height="wrap content"
       android:layout marginLeft="30dp"
       android:layout marginRight="30dp"
       android:text="Play"
       android:id="@+id/play"/>
   <Button
       android:layout width="match parent"
       android:layout height="wrap content"
       android:layout marginLeft="30dp"
       android:layout marginRight="30dp"
       android:text="Pause"
       android:id="@+id/pause"/>
   <Button
       android:layout width="match parent"
       android:layout height="wrap content"
       android:layout marginLeft="30dp"
       android:layout marginRight="30dp"
       android:text="Forward"
       android:id="@+id/forward"/>
   <Button
       android:layout width="match parent"
```

```
android:layout height="wrap content"
       android:layout marginLeft="30dp"
       android:layout marginRight="30dp"
       android:text="Rewind"
       android:id="@+id/rewind"/>
   <Button
       android:layout width="match parent"
       android:layout height="wrap content"
       android:layout marginLeft="30dp"
       android:layout marginRight="30dp"
       android:text="Restart"
       android:id="@+id/restart"/>
   <Button
       android:layout width="match parent"
       android:layout height="wrap content"
       android:layout marginLeft="30dp"
       android:layout marginRight="30dp"
       android:text="Stop"
       android:id="@+id/stop"/>
</LinearLayout>
```

Java code:

```
package com.example.mediaplayer162;
import androidx.appcompat.app.AppCompatActivity;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
   Button play, forward, rewind, pause, stop, restart;
  MediaPlayer mediaPlayer;
  int starttime = 0 ;
  int stopttime = 0;
   int forwardtime = 5000 ;
   int backwardtime = 5000 ;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity main);
       play=findViewById(R.id.play);
       forward=findViewById(R.id.forward);
       rewind=findViewById(R.id.rewind);
       pause=findViewById(R.id.pause);
       stop=findViewById(R.id.stop);
       restart=findViewById(R.id.restart);
       play.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
```

```
Toast.makeText (MainActivity.this, "Playing Media now",
                       Toast.LENGTH SHORT).show();
               mediaPlayer = MediaPlayer.create(MainActivity.this,
R.raw.harry) ;
               mediaPlayer.start();
           }
       });
       restart.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               mediaPlayer.seekTo(starttime);
               mediaPlayer.start();
           }
       });
       pause.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               mediaPlayer.pause();
       });
       stop.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               mediaPlayer.stop();
           }
       });
       forward.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               int currentpos = mediaPlayer.getCurrentPosition();
               if((currentpos+forwardtime) <= (stopttime</pre>
=mediaPlayer.getDuration())){
                   mediaPlayer.seekTo(currentpos+forwardtime);
           }
      });
  }
}
```

OUTPUT:

