

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"
    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
        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"/>
        <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"

```

```

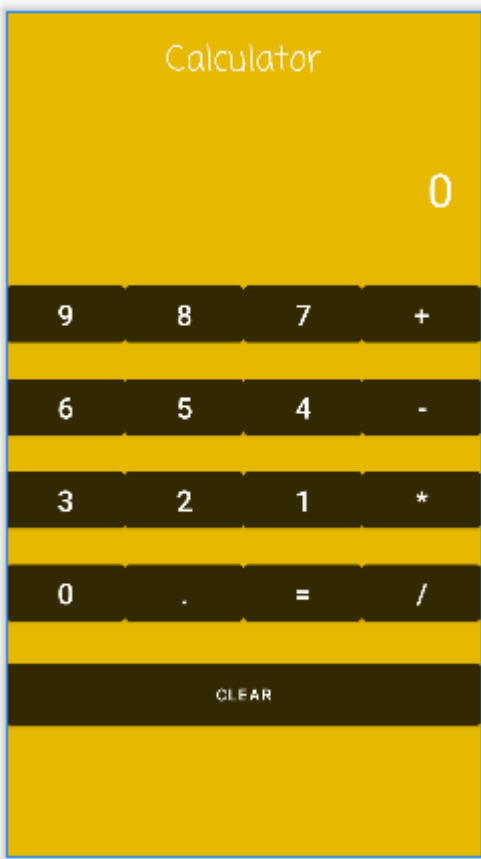
        android:orientation="horizontal"
        android:layout_marginTop="20dp">
        <Button
            android:id="@+id/zero"
            android:layout_width="match_parent"
            android:layout_height="60dp"
            android:textSize="25dp"
            android:layout_weight="1"
            android:text="0"
            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>

```

OUTPUT:



Name: Suchithra Raj M
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Calculator controller code:

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

```

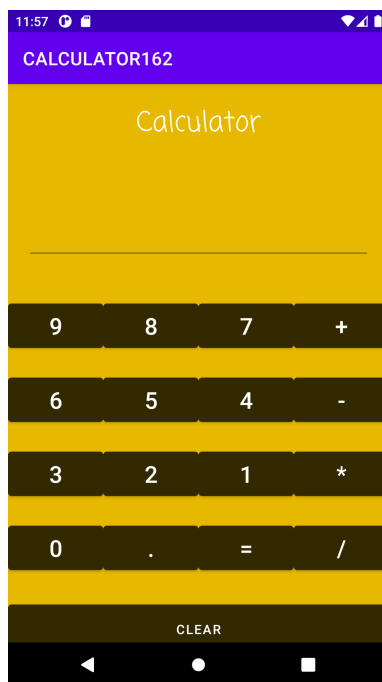
```
switch (view.getId()) {
    case R.id.zero:
        res.append("0");
        break;
    case R.id.one:
        res.append("1");
        break;
    case R.id.two:
        res.append("2");
        break;
    case R.id.three:
        res.append("3");
        break;
    case R.id.four:
        res.append("4");
        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 =
```

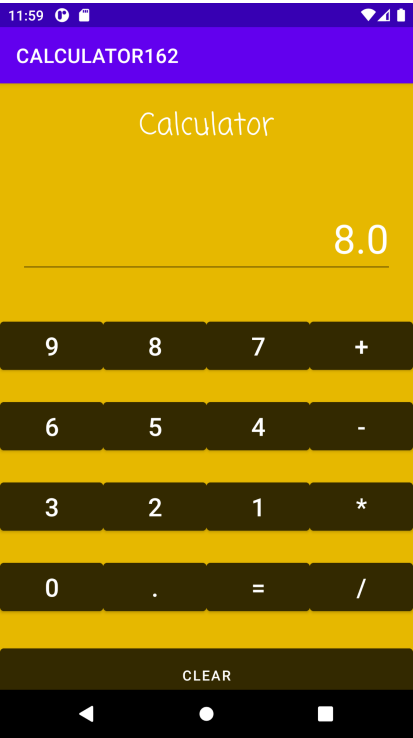
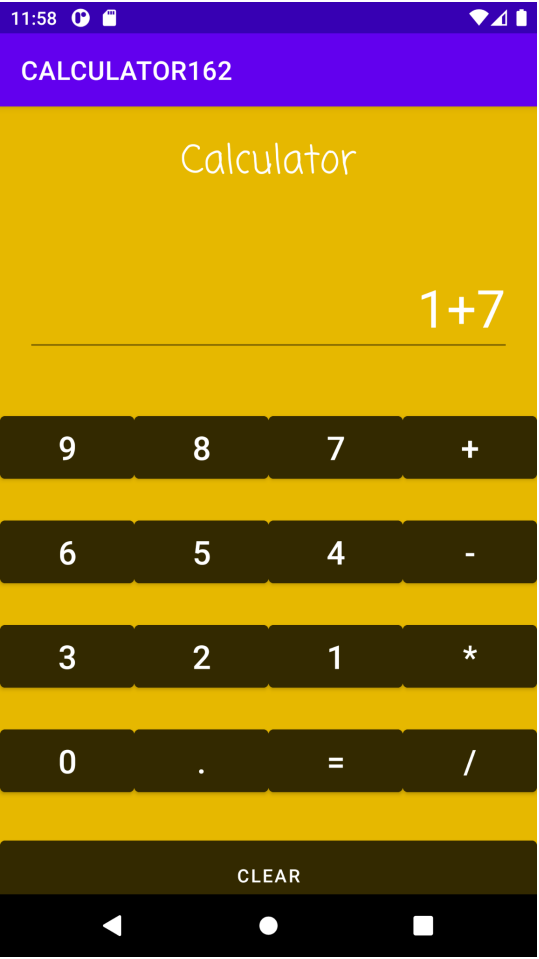
```

        (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"
    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
=mediaPlayer.getDuration())){
            mediaPlayer.seekTo(currentpos+forwardtime);
        }
    }
});
    }
}

```

OUTPUT:

