MOBILE APPLICATION DEVELOPMENT

LAB-3

NAME: DASARI SRIKANTH

REG NO: 20BCE7076

CALCULATOR APP

JAVA CODE:

```
package com.example.cal;
import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;
import androidx.appcompat.app.WindowDecorActionBar;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    static double result;
    static char op;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        final EditText e = (EditText) findViewById(R.id.et);
        Button b1=(Button)findViewById(R.id.b1);
        Button b2=(Button)findViewById(R.id.b2);
        Button b3=(Button)findViewById(R.id.b3);
        Button b4=(Button)findViewById(R.id.b4);
        Button b5=(Button)findViewById(R.id.b5);
        Button b6=(Button)findViewById(R.id.b6);
        Button b7=(Button)findViewById(R.id.b7);
        Button b8=(Button)findViewById(R.id.b8);
        Button b9=(Button)findViewById(R.id.b9);
        Button b0=(Button)findViewById(R.id.b0);
        Button be=(Button)findViewById(R.id.be);
        Button bp=(Button)findViewById(R.id.bp);
        Button bs=(Button)findViewById(R.id.bs);
        Button bm=(Button)findViewById(R.id.bm);
        Button bd=(Button)findViewById(R.id.bd);
        Button bc=(Button)findViewById(R.id.bc);
        b0.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v)
        if(!(e.getText().toString().equals("")))
            e.setText(String.valueOf(e.getText().toString()+0));
        b1.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v)
                e.setText(String.valueOf(e.getText().toString()+1));
        });
```

```
b2.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v)
        e.setText(String.valueOf(e.getText().toString()+2));
});
b3.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v)
        e.setText(String.valueOf(e.getText().toString()+3));
});
b4.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v)
        e.setText(String.valueOf(e.getText().toString()+4));
});
b5.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v)
        e.setText(String.valueOf(e.getText().toString()+5));
});
b6.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v)
        e.setText(String.valueOf(e.getText().toString()+6));
});
b7.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v)
        e.setText(String.valueOf(e.getText().toString()+7));
});
b8.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v)
        e.setText(String.valueOf(e.getText().toString()+8));
});
b9.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v)
        e.setText(String.valueOf(e.getText().toString()+9));
});
bc.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v)
        e.setText(String.valueOf(""));
});
bp.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v)
            op='+';
result=Double.parseDouble(e.getText().toString());
e.setText(String.valueOf(""));
```

```
bs.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v)
                    op='-';
        result=Double.parseDouble(e.getText().toString());
        e.setText(String.valueOf(""));
        });
        bm.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v)
                op= '*';
                result=Double.parseDouble(e.getText().toString());
                e.setText(String.valueOf(""));
        });
        bd.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v)
                op='/';
                result=Double.parseDouble(e.getText().toString());
                e.setText(String.valueOf(""));
        });
        be.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v) {
                if (op == '+') {
                    double n = Double.parseDouble(e.getText().toString());
                    e.setText(String.valueOf(result + n));
                } else if (op == '-') {
                    double n = Double.parseDouble(e.getText().toString());
                    e.setText(String.valueOf(result - n));
                } else if (op == '*') {
                    double n = Double.parseDouble(e.getText().toString());
                    e.setText(String.valueOf(result * n));
                    double n = Double.parseDouble(e.getText().toString());
                    e.setText(String.valueOf(result / n));
            });
        }
XML CODE:
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout width="match parent"
```

android:layout height="match parent"

});

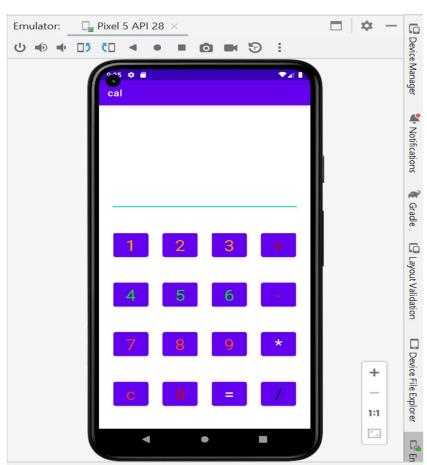
```
tools:context=".MainActivity">
    <Button
        android:id="@+id/bc"
        android:layout width="65dp"
        android:layout height="65dp"
        android:text="c"
        android: textColor="#E53935"
        android: textAppearance="@style/TextAppearance.AppCompat.Display1"
        app:layout constraintBottom toBottomOf="parent"
        app:layout constraintEnd toStartOf="@+id/b0"
        app:layout constraintHorizontal bias="0.5"
        app:layout constraintStart toStartOf="parent"
        app:layout constraintTop toBottomOf="@+id/b7" />
    <Button
    android:id="@+id/bd"
    android:layout width="65dp"
    android:layout height="65dp"
    android:text="/"
        android:textColor="#000000"
    android:textAppearance="@style/TextAppearance.AppCompat.Display1"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/be"
    app:layout constraintTop toBottomOf="@+id/bm" />
<Button
android:id="@+id/be"
android:layout_width="65dp"
android:layout height="65dp"
android:text="="
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toBottomOf="parent"
app:layout_constraintEnd toStartOf="@+id/bd"
app:layout constraintHorizontal bias="0.5"
app:layout constraintStart toEndOf="@+id/b0"
app:layout constraintTop toBottomOf="@+id/b9" />
   android:id="@+id/b0"
android:layout width="65dp"
android:layout height="65dp"
android:text="0"
    android:textColor="@android:color/holo red dark"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toBottomOf="parent"
app:layout constraintEnd toStartOf="@+id/be"
app:layout constraintHorizontal bias="0.5"
app:layout constraintStart toEndOf="@+id/bc"
app:layout constraintTop toBottomOf="@+id/b8" />
<Button
android:id="@+id/b7"
android:layout width="65dp"
android:layout height="65dp"
android:text="7"
    android:textColor="#F44336"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/bc"
app:layout_constraintEnd_toStartOf="@+id/b8"
app:layout constraintHorizontal bias="0.5"
app:layout constraintStart toStartOf="parent"
app:layout constraintTop toBottomOf="@+id/b4" />
<Button
```

```
android:id="@+id/bm"
android:layout width="65dp"
android:layout height="65dp"
android:text="*"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/bd"
app:layout constraintEnd toEndOf="parent"
app:layout_constraintHorizontal bias="0.5"
app:layout constraintStart toEndOf="@+id/b9"
app:layout constraintTop toBottomOf="@+id/bs" />
<Button
android:id="@+id/b9"
android:layout width="65dp"
android:layout height="65dp"
android:text="9"
    android:textColor="#F44336"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/be"
app:layout_constraintEnd_toStartOf="@+id/bm"
app:layout_constraintHorizontal bias="0.5"
app:layout_constraintStart_toEndOf="@+id/b8"
app:layout constraintTop toBottomOf="@+id/b6" />
<Button
android:id="@+id/b8"
android:layout_width="65dp"
android:layout height="65dp"
android:text="8"
    android:textColor="#F44336"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/b0"
app:layout constraintEnd toStartOf="@+id/b9"
app:layout constraintHorizontal bias="0.5"
app:layout_constraintStart toEndOf="@+id/b7"
app:layout_constraintTop_toBottomOf="@+id/b5" />
android:id="@+id/b4"
android:layout width="65dp"
android:layout height="65dp"
android:text="4"
    android:backgroundTint="@color/purple 500"
    android:textColor="#15DA1D"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/b7"
app:layout constraintEnd toStartOf="@+id/b5"
app:layout constraintHorizontal bias="0.5"
app:layout constraintStart toStartOf="parent"
app:layout constraintTop toBottomOf="@+id/b1" />
<Button
android:id="@+id/bs"
android:layout width="65dp"
android:layout height="65dp"
android:text="-"
    android:textColor="#D81B60"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/bm"
app:layout constraintEnd toEndOf="parent"
app:layout_constraintHorizontal_bias="0.5"
app:layout constraintStart toEndOf="@+id/b6"
app:layout_constraintTop_toBottomOf="@+id/bp" />
<Button
android:id="@+id/b6"
```

```
android:layout width="65dp"
android:layout height="65dp"
android:text="6"
    android:textColor="#15DA1D"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/b9"
app:layout constraintEnd toStartOf="@+id/bs"
app:layout constraintHorizontal bias="0.5"
app:layout constraintStart toEndOf="@+id/b5"
app:layout constraintTop toBottomOf="@+id/b3" />
<Button
android:id="@+id/b5"
android:layout width="65dp"
android:layout height="65dp"
android:text="5"
    android:textColor="#15DA1D"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/b8"
app:layout_constraintEnd_toStartOf="@+id/b6"
app:layout_constraintHorizontal bias="0.5"
app:layout_constraintStart_toEndOf="@+id/b4"
app:layout constraintTop toBottomOf="@+id/b2" />
<Button
android:id="@+id/bp"
android:layout_width="65dp"
android:layout height="65dp"
android:text="+"
    android:textColor="@color/design default color error"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/bs"
app:layout constraintEnd toEndOf="parent"
app:layout constraintHorizontal bias="0.5"
app:layout constraintStart toEndOf="@+id/b3"
app:layout_constraintTop_toBottomOf="@+id/et" />
<EditText
android:id="@+id/et"
android:layout width="350dp"
android:layout height="64dp"
android:ems="10"
android:inputType="number"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toBottomOf="parent"
app:layout constraintEnd toEndOf="parent"
    android: textAlignment="textEnd"
app:layout constraintStart toStartOf="parent"
app:layout constraintTop toTopOf="parent"
app:layout constraintVertical bias="0.259" />
<Button
android:id="@+id/b1"
android:layout width="65dp"
android:layout height="65dp"
android:text="1"
    android:textColor="#FF9800"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout_constraintBottom_toTopOf="@+id/b4"
app:layout constraintEnd toStartOf="@+id/b2"
app:layout constraintHorizontal bias="0.5"
app:layout constraintStart toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/et" />
<Button
android:id="@+id/b2"
```

```
android:layout width="65dp"
android:layout height="65dp"
android:text="2"
    android:textColor="#FF9800"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/b5"
app:layout constraintEnd toStartOf="@+id/b3"
app:layout constraintHorizontal bias="0.5"
app:layout constraintStart toEndOf="@+id/b1"
app:layout constraintTop toBottomOf="@+id/et" />
<Button
android:id="@+id/b3"
android:layout width="65dp"
android:layout height="65dp"
android:text="3"
    android:textColor="#FF9800"
android: textAppearance="@style/TextAppearance.AppCompat.Display1"
app:layout constraintBottom toTopOf="@+id/b6"
app:layout_constraintEnd_toStartOf="@+id/bp"
app:layout_constraintHorizontal_bias="0.5"
app:layout_constraintStart_toEndOf="@+id/b2"
app:layout_constraintTop_toBottomOf="@+id/et" />
    </androidx.constraintlayout.widget.ConstraintLayout>
```

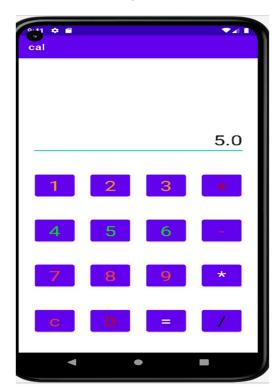
OUTPUT:



Addition 7+6:



Subtraction: 12-7



Multiplication:7*8



Division:35/5



SUBMITTED BY:

DASARI SRIKANTH-20BCE7076