

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));
            } else {
                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
    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" />
<Button
    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" />
<Button
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"

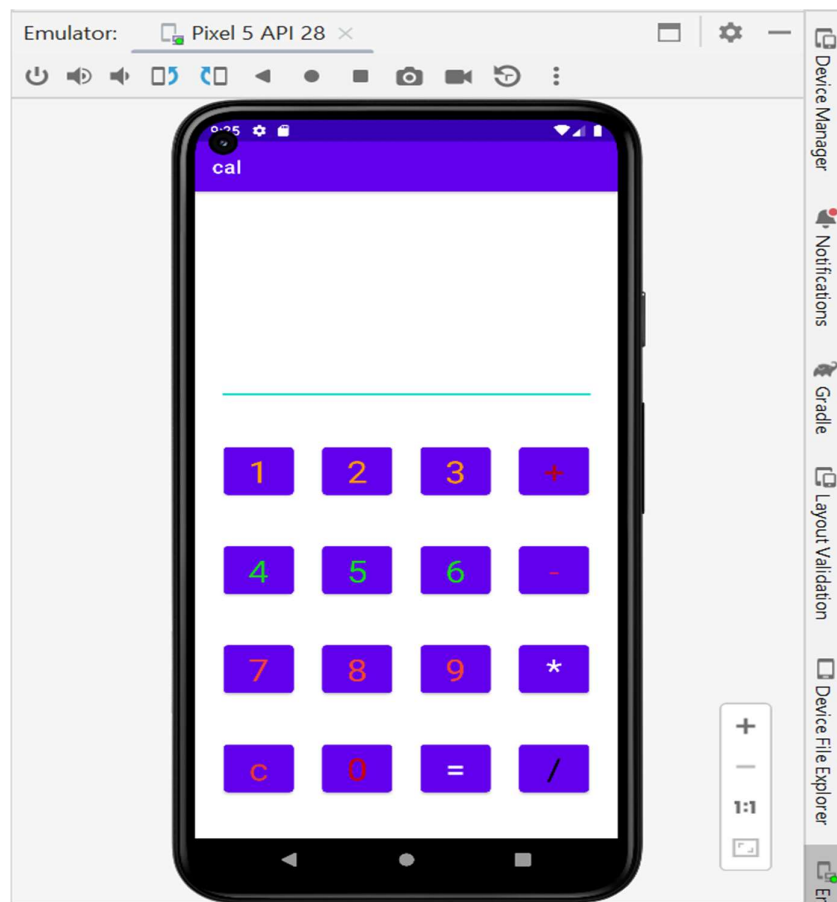
```

```

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>

```

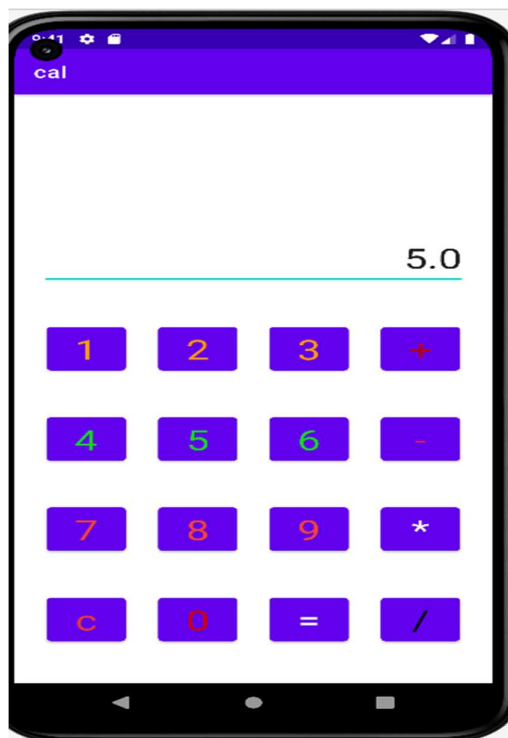
OUTPUT:



Addition $7+6$:



Subtraction: $12-7$



Multiplication: $7*8$



Division:35/5



SUBMITTED BY:

DASARI SRIKANTH-20BCE7076

*****THANK YOU*****