# PROGRAM NO :2

**AIM:** Design a simple Calculator using GridLayout and Cascaded LinearLayout.

## PROGRAM CODE:

| Mainactivity.java | |
|---|---|
| | ```java
package com.example.gridcalc;


import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;



public class MainActivity extends AppCompatActivity {


    Button button0, button1, button2, button3, button4, button5, button6,

            button7, button8, button9, buttonAdd, buttonSub, buttonDivision,

            buttonMul, buttond, buttonC, buttonEqual,buttonperc;

    EditText cEditText;



    float mValueOne, mValueTwo;



    boolean cAddition, mSubtract, cMultiplication, cDivision,cperc;
``` |

```java
@Override

protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);


    button0 = (Button) findViewById(R.id.button15);

    button1 = (Button) findViewById(R.id.button8);

    button2 = (Button) findViewById(R.id.button14);

    button3 = (Button) findViewById(R.id.button18);

    button4 = (Button) findViewById(R.id.button7);

    button5 = (Button) findViewById(R.id.button13);

    button6 = (Button) findViewById(R.id.button16);

    button7 = (Button) findViewById(R.id.button6);

    button8 = (Button) findViewById(R.id.button10);

    button9 = (Button) findViewById(R.id.button11);

    buttond = (Button) findViewById(R.id.button19);

    buttonAdd = (Button) findViewById(R.id.button20);

    buttonSub = (Button) findViewById(R.id.button17);

    buttonMul = (Button) findViewById(R.id.button12);

    buttonDivision = (Button) findViewById(R.id.button5);

    buttonC = (Button) findViewById(R.id.button2);

    buttonperc = (Button) findViewById(R.id.button4);

    buttonEqual = (Button) findViewById(R.id.button21);

    cEditText = (EditText) findViewById(R.id.edt1);




    button1.setOnClickListener(new View.OnClickListener() {
```

```java
            @Override

            public void onClick(View v) {

                cEditText.setText(cEditText.getText() + "1");

            }

        });


        button2.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                cEditText.setText(cEditText.getText() + "2");

            }

        });


        button3.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                cEditText.setText(cEditText.getText() + "3");

            }

        });


        button4.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                cEditText.setText(cEditText.getText() + "4");

            }

        });
```

```java
button5.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        cEditText.setText(cEditText.getText() + "5");

    }

});


button6.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        cEditText.setText(cEditText.getText() + "6");

    }

});


button7.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        cEditText.setText(cEditText.getText() + "7");

    }

});


button8.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        cEditText.setText(cEditText.getText() + "8");

    }

});
```

```java
            button9.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View v) {

                    cEditText.setText(cEditText.getText() + "9");

                }

            });


            button0.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View v) {

                    cEditText.setText(cEditText.getText() + "0");

                }

            });


            buttonAdd.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View v) {


                    if (cEditText == null) {

                        cEditText.setText("");

                    } else {

                        mValueOne =
Float.parseFloat(cEditText.getText() + "");

                        cAddition = true;

                        cEditText.setText(null);

                    }
```

```java
                }

            });


        buttonSub.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                mValueOne = Float.parseFloat(cEditText.getText() +
"");

                mSubtract = true;

                cEditText.setText(null);

            }

        });


        buttonMul.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                mValueOne = Float.parseFloat(cEditText.getText() +
"");

                cMultiplication = true;

                cEditText.setText(null);

            }

        });


        buttonDivision.setOnClickListener(new
View.OnClickListener() {

            @Override

            public void onClick(View v) {

                mValueOne = Float.parseFloat(cEditText.getText() +
"");
```

```java
                            cDivision = true;

                            cEditText.setText(null);

                    }

            });


            buttonperc.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View v) {

                        mValueOne = Float.parseFloat(cEditText.getText() +
"");

                        cperc = true;

                        cEditText.setText(null);

                    }

            });

            buttonEqual.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View v) {

                        mValueTwo = Float.parseFloat(cEditText.getText() +
"");

                        if (cAddition == true) {

                            cEditText.setText(mValueOne + mValueTwo + "");

                            cAddition = false;

                        }


                        if (mSubtract == true) {

                            cEditText.setText(mValueOne - mValueTwo + "");

                            mSubtract = false;
```

```java
                }


            if (cMultiplication == true) {

                cEditText.setText(mValueOne * mValueTwo + "");

                cMultiplication = false;

            }


            if (cDivision == true) {

                cEditText.setText(mValueOne / mValueTwo + "");

                cDivision = false;

            }

            if (cperc == true) {

                cEditText.setText((mValueOne / mValueTwo)*100 +
"");

                cperc = false;

            }

        }

    });


    buttonC.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {
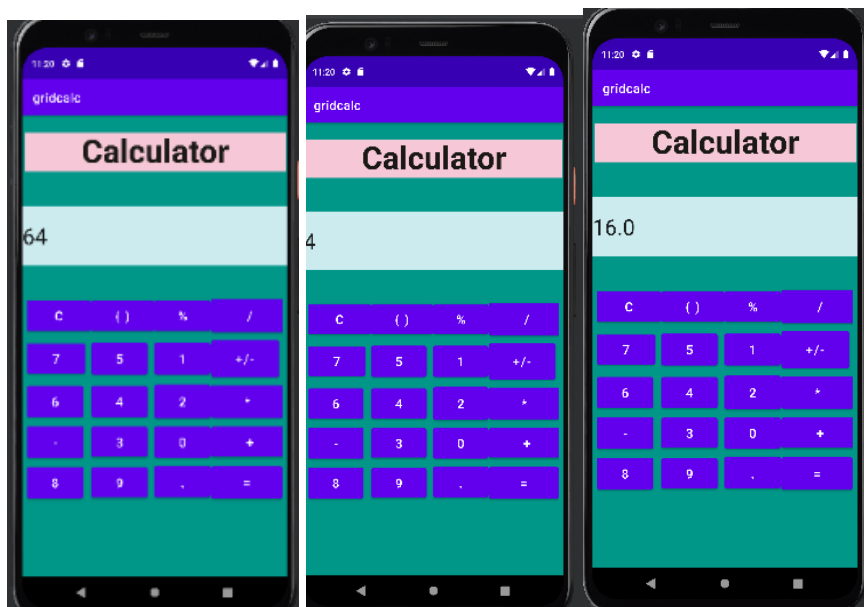
            cEditText.setText("");

        }

    });


    buttond.setOnClickListener(new View.OnClickListener() {
```

```
            @Override

            public void onClick(View v) {

                cEditText.setText(cEditText.getText() + ".");

            }

        });

    }

}
```

## OUTPUT:



(The above performed operation is division of two numbers)

<u>RESULT</u>

Program Has Been Succesfully Executed And Output Is Obtained.