**THE STATE UNIVERSITY OF ZANZIBAR**

**(SUZA)**


**SCHOOL OF BUSINESS**

**DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION TECHNOLOY**

**MOBILE APPLICATION DEVELOPMENT**

**INDIVIDUAL ASSIGNMENT**

**ACADEMIC YEAR**

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**PATH**

**https://github.com/aliseif549/ali.githttps://github.com/aliseif549/ali.git**

Calculator Code

```
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    private Button zero;
    private Button one;
    private Button two;
    private Button three;
    private Button four;
    private Button five;
    private Button six;
    private Button seven;
    private Button eight;
    private Button nine;
    private Button add;
    private Button divide;
    private Button sub;
    private Button multi;
    private Button equal;
    private Button clear;
    private TextView operation ;
    private TextView result;
    private final char ADDITION = '+';
    private final char SUBTRACTION = '-';
    private final char MULTIPLICATION = '*';
    private final char DIVISION = '/';
    private final char EQUAL = 0 ;
    private double val1 = Double.NaN ;
    private double val2;
    private char ACTION;




    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        zero.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                operation.setText(operation.getText().toString() + "0");
```

```
    }
});
one.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        operation.setText(operation.getText().toString() + "1");
    }
});
two.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        operation.setText(operation.getText().toString() + "2");
    }
});
three.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        operation.setText(operation.getText().toString() + "3");
    }
});

four.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        operation.setText(operation.getText().toString() + "4");
    }
});
five.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        operation.setText(operation.getText().toString() + "5");
    }
});
six.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        operation.setText(operation.getText().toString() + "6");
    }
});
seven.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        operation.setText(operation.getText().toString() + "7");
    }
});
eight.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        operation.setText(operation.getText().toString() + "8");
    }
});
nine.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        operation.setText(operation.getText().toString() + "9");
    }
});
add.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        compute();
        ACTION = ADDITION;
```

```
                result.setText(String.valueOf(val1).toString() + "+");
                operation.setText(null);

            }
        });
        sub.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                compute();
                ACTION = SUBTRACTION;
                result.setText(String.valueOf(val1).toString() + "-");
                operation.setText(null);
            }
        });
        multi.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                compute();
                ACTION = MULTIPLICATION;
                result.setText(String.valueOf(val1).toString() + "*");
                operation.setText(null);
            }
        });
        divide.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                compute();
                ACTION = DIVISION;
                result.setText(String.valueOf(val1).toString() + "/");
                operation.setText(null);
            }
        });
        equal.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                compute();
                ACTION = EQUAL;
                result.setText(result.getText().toString().valueOf(val2) + "=" +
String.valueOf(val1));
                operation.setText(null);
            }
        });
        clear.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (operation.getText().length() > 0) {
                    CharSequence name = operation.getText().toString();
                    operation.setText(name.subSequence(0,name.length()-1));
                } else {
                    val1 = Double.NaN;
                    val2 = Double.NaN;
                    operation.setText(null);
                    result.setText(null);
                }
            }
        });
    }

     public void setupUIViews(){
         zero = (Button)findViewById(R.id.btn0);
         one = (Button)findViewById(R.id.btn1);
         two = (Button)findViewById(R.id.btn2);
```

```
        three = (Button)findViewById(R.id.btn3);
        four = (Button)findViewById(R.id.btn4);
        five = (Button)findViewById(R.id.btn5);
        six = (Button)findViewById(R.id.btn6);
        seven = (Button)findViewById(R.id.btn7);
        eight = (Button)findViewById(R.id.btn8);
        nine = (Button)findViewById(R.id.btn9);
        add = (Button)findViewById(R.id.btnsum);
        sub = (Button)findViewById(R.id.btnsu);
        multi = (Button)findViewById(R.id.btnmult);
        divide = (Button)findViewById(R.id.btndiv);
        equal = (Button)findViewById(R.id.btnequal);
        clear = (Button)findViewById(R.id.btnclear);
        operation = (TextView)findViewById(R.id.operation);
        result = (TextView)findViewById(R.id.solution);
}
private void compute(){
    if(!Double.isNaN(val1)) {
        val1 = Double.parseDouble(operation.getText().toString());
        switch (ACTION) {
            case DIVISION:
                val1 = val1 / val2;
                break;
            case MULTIPLICATION:
                val1 = val1 * val2;
                break;
            case ADDITION:
                val1 = val1 + val2;
                break;
            case SUBTRACTION:
                val1 = val1 - val2;
                break;
            case EQUAL:
                break;
        }
    }else{
        val1 = Double.parseDouble((operation.getText().toString()));

        }
    }
}
```