

MAD LAB CYCLE -1

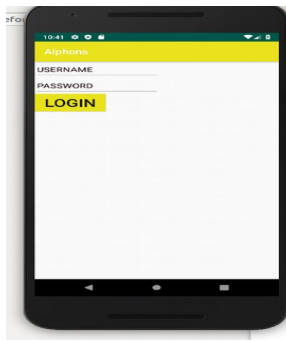
1.Design a login page.

PROGRAM CODE:

Xml code

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent" android:orientation="vertical">
        <EditText
            android:id="@+id/editText"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPersonName"
            android:text="USERNAME"
            android:textColor="@color/colorAccent"
            tools:layout_editor_absoluteX="85dp"
            tools:layout_editor_absoluteY="54dp" />
        <EditText
            android:id="@+id/editText2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPersonName"
            android:text="PASSWORD"
            android:textColor="@color/colorAccent"
            tools:layout_editor_absoluteX="85dp"
            tools:layout_editor_absoluteY="175dp" />
        <Button
            android:id="@+id/button"
            android:layout_width="120dp"
            android:layout_height="wrap_content"
            android:background="@color/colorPrimary"
            android:text="LOGIN"
            android:textSize="30sp"
            tools:layout_editor_absoluteX="148dp"
            tools:layout_editor_absoluteY="303dp" />
    </LinearLayout>
</android.support.constraint.ConstraintLayout>
```

OUTPUT



2, Change the content in the text view on a button click

PROGRAM:

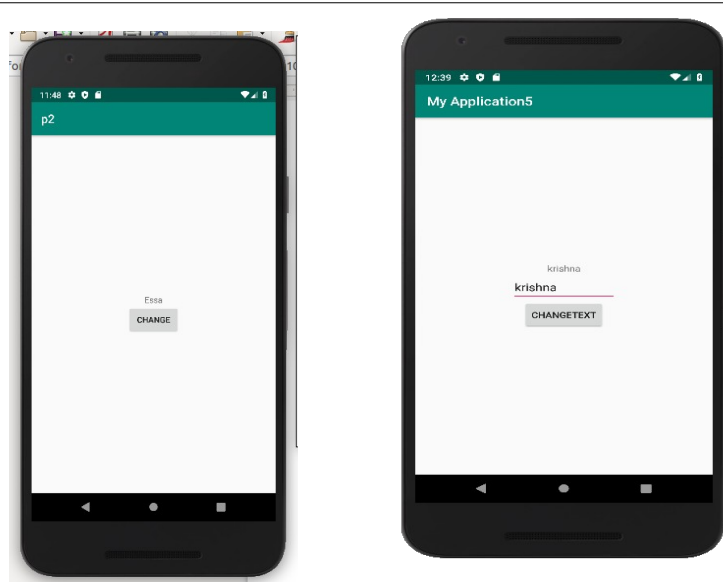
XML CODE:

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    xmlns:android="http://schemas.android.com/apk/res/android">
    <TextView
        android:id="@+id/tv"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="change button"/>
    <Button
        android:id="@+id/btn1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Change"
        android:onClick="change"/>
</LinearLayout>
```

JAVACODE:

```
package com.example.sjcet.p2;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    TextView tv;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        tv = findViewById(R.id.tv);
    }
    public void change(View view) {
        tv.setText("Essa");
    }
}
```

OUTPUT



3, READ A VALUE FROM EDIT TEXT AND PRINT IT IN A TEXT VIEW.

PROGRAM:

XML CODE :

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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:background="#FFFF8D"
    tools:context="com.example.akshay.studytonightandroid.MainActivity">
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:text="NAME"
        android:textSize="20sp"
        android:layout_margin="20dp" />
    <EditText
        android:id="@+id/editName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_marginTop="21dp"
        android:layout_marginEnd="40dp"
        android:layout_marginRight="40dp"
        android:ems="10"
        android:hint="Enter Name"
        android:inputType="textPersonName" />
    <Button
        android:id="@+id/buttonSubmit"
```

```

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_marginStart="32dp"
        android:layout_marginLeft="32dp"
        android:layout_marginTop="20dp"
        android:text="SUBMIT" />
<TextView
    android:id="@+id/tvResult"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_marginBottom="143dp"
    android:textSize="30sp" />
</RelativeLayout>

```

JAVA CODE:

```

package com.example.sjcet.c3;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    // These are the global variables
    EditText editName;
    TextView result;
    Button buttonSubmit;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        editName = (EditText) findViewById(R.id.editName);
        result = (TextView) findViewById(R.id.tvResult);
        buttonSubmit = (Button) findViewById(R.id.buttonSubmit);
        buttonSubmit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String name = editName.getText().toString();
                result.setText("Name:\t" + name );
            }
        });
    }
}

```

OUTPUT



4.Change the backgroud color on a button click

PROGRAM:

XML CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/rlVar1"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/green"
    tools:context=".MainActivity">
    <TextView
        android:id="@+id/tvVar1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="240dp"
        android:text="Do you know?"
        android:textSize="30dp"
        android:textStyle="bold" />
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/tvVar1"
        android:layout_centerInParent="true"
        android:layout_marginTop="60dp"
        android:orientation="horizontal"
        android:padding="10dp">
        <Button
            android:id="@+id/btVar1"
            android:layout_width="150dp"
            android:layout_height="wrap_content"
            android:padding="20dp"
            android:text="hi"
            android:textSize="25dp" />
        <Button
            android:id="@+id/btVar2"
            android:layout_width="150dp"
            android:layout_height="wrap_content"
            android:padding="20dp"
            android:text="hello"
            android:textSize="25dp" />
    </LinearLayout>
</RelativeLayout>
```

JAVA CODE:

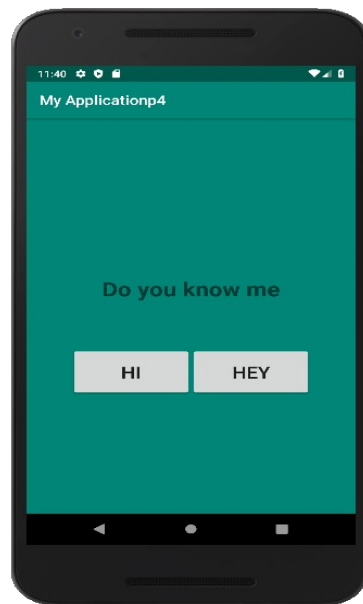
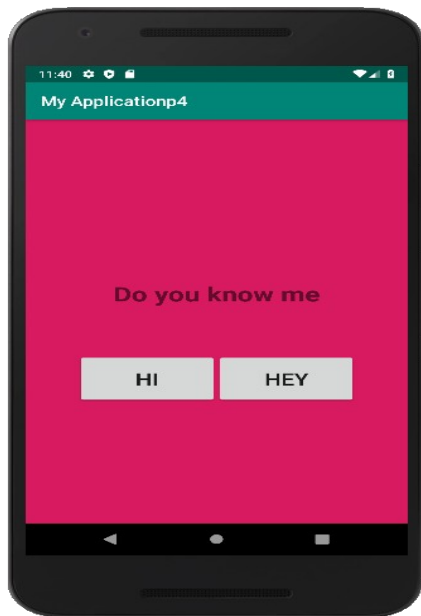
```
package com.example.sjcet.background;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RelativeLayout;
public class MainActivity extends AppCompatActivity {
    @Override
```

```

protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    Button button1, button2;
    final RelativeLayout relativeLayout;
    button1 = findViewById(R.id.btVar1);
    button2 = findViewById(R.id.btVar2);
    relativeLayout = findViewById(R.id.rlVar1);
    button1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            relativeLayout.setBackgroundResource(R.color.colorPrimary);
        }
    });
    button2.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            relativeLayout.setBackgroundResource(R.color.colorAccent);
        }
    });
}
}

```

OUTPUT:



5, Create a sample calculator.

PROGRAM:

XML CODE:

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/relative1"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <EditText
        android:id="@+id/edt1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />

```

```

<Button
    android:id="@+id/button1"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignEnd="@+id/button4"
    android:layout_alignRight="@+id/button4"
    android:layout_below="@+id/edt1"
    android:layout_marginTop="94dp"
    android:text="1" />
<Button
    android:id="@+id/button2"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignTop="@+id/button1"
    android:layout_toLeftOf="@+id/button3"
    android:layout_toStartOf="@+id/button3"
    android:text="2" />
<Button
    android:id="@+id/button3"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignTop="@+id/button2"
    android:layout_centerHorizontal="true"
    android:text="3" />
<Button
    android:id="@+id/button4"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/button1"
    android:layout_toLeftOf="@+id/button2"
    android:text="4" />
<Button
    android:id="@+id/button5"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBottom="@+id/button4"
    android:layout_alignLeft="@+id/button2"
    android:layout_alignStart="@+id/button2"
    android:text="5" />
<Button
    android:id="@+id/button6"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button3"
    android:layout_alignStart="@+id/button3"
    android:layout_below="@+id/button3"
    android:text="6" />
<Button
    android:id="@+id/button7"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/button4"
    android:layout_toLeftOf="@+id/button2"
    android:text="7" />
<Button
    android:id="@+id/button8"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button5"
    android:layout_alignStart="@+id/button5"

```

```

        android:layout_below="@+id/button5"
        android:text="8" />
<Button
    android:id="@+id/button9"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button6"
    android:layout_alignStart="@+id/button6"
    android:layout_below="@+id/button6"
    android:text="9" />
<Button
    android:id="@+id/buttonadd"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignEnd="@+id/edt1"
    android:layout_alignRight="@+id/edt1"
    android:layout_alignTop="@+id/button3"
    android:layout_marginLeft="46dp"
    android:layout_marginStart="46dp"
    android:layout_toRightOf="@+id/button3"
    android:text="+" />
<Button
    android:id="@+id/buttonsub"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    public void onClick(View v) {
        crunchifyEditText.setText(crunchifyEditText.getText() + "6");
    }
});
button7.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        crunchifyEditText.setText(crunchifyEditText.getText() + "7");
    }
});
button8.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        crunchifyEditText.setText(crunchifyEditText.getText() + "8");
    }
});
button9.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        crunchifyEditText.setText(crunchifyEditText.getText() + "9");
    }
});
button0.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        crunchifyEditText.setText(crunchifyEditText.getText() + "0");
    }
});
buttonAdd.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if (crunchifyEditText == null) {
            crunchifyEditText.setText("");
        } else {
            mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
            crunchifyAddition = true;
            crunchifyEditText.setText(null);
        }
    }
});
buttonSub.setOnClickListener(new View.OnClickListener() {

```



```

        @Override
        public void onClick(View v) {
            mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
            mSubtract = true;
            crunchifyEditText.setText(null);
        }
    });
    buttonMul.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
            crunchifyMultiplication = true;
            crunchifyEditText.setText(null);
        }
    });
    buttonDivision.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
            crunchifyDivision = true;
            crunchifyEditText.setText(null);
        }
    });
    buttonEqual.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            mValueTwo = Float.parseFloat(crunchifyEditText.getText() + "");
            if (crunchifyAddition == true) {
                crunchifyEditText.setText(mValueOne + mValueTwo + "");
                crunchifyAddition = false;
            }
            if (mSubtract == true) {
                crunchifyEditText.setText(mValueOne - mValueTwo + "");
                mSubtract = false;
            }
            if (crunchifyMultiplication == true) {
                crunchifyEditText.setText(mValueOne * mValueTwo + "");
                crunchifyMultiplication = false;
            }
            if (crunchifyDivision == true) {
                crunchifyEditText.setText(mValueOne / mValueTwo + "");
                crunchifyDivision = false;
            }
        }
    });
    buttonC.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            crunchifyEditText.setText("");
        }
    });
    button10.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            crunchifyEditText.setText(crunchifyEditText.getText() + ".");
        }
    });
}

    android:layout_alignEnd="@+id/buttonadd"
    android:layout_alignLeft="@+id/buttonadd"
    android:layout_alignRight="@+id/buttonadd"
    android:layout_alignStart="@+id/buttonadd"
    android:layout_below="@+id/buttonadd"
    android:text="-" />
<Button

```

```

        android:id="@+id/buttonmul"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/buttonsub"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignStart="@+id/buttonsub"
        android:layout_below="@+id/buttonsub"
        android:text="*" />
<Button
    android:id="@+id/button10"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/button7"
    android:layout_toLeftOf="@+id/button2"
    android:text="." />
<Button
    android:id="@+id/button0"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button8"
    android:layout_alignStart="@+id/button8"
    android:layout_below="@+id/button8"
    android:text="0" />
<Button
    android:id="@+id/buttonC"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button9"
    android:layout_alignStart="@+id/button9"
    android:layout_below="@+id/button9"
    android:text="C" />
<Button
    android:id="@+id/buttondiv"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignEnd="@+id/buttonmul"
    android:layout_alignLeft="@+id/buttonmul"
    android:layout_alignRight="@+id/buttonmul"
    android:layout_alignStart="@+id/buttonmul"
    android:layout_below="@+id/buttonmul"
    android:text="/" />
<Button
    android:id="@+id/buttoneql"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignEnd="@+id/buttondiv"
    android:layout_alignLeft="@+id/button10"
    android:layout_alignRight="@+id/buttondiv"
    android:layout_alignStart="@+id/button10"
    android:layout_below="@+id/button0"
    android:layout_marginTop="37dp"
    android:text="=" />
</RelativeLayout>

```

JAVA CODE:

```

package com.example.sjcet.calculator;
import android.os.Bundle;
import android.support.v7.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, button10, buttonC, buttonEqual;
    EditText crunchifyEditText;
    float mValueOne, mValueTwo;
    boolean crunchifyAddition, mSubtract, crunchifyMultiplication, crunchifyDivision;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button0 = (Button) findViewById(R.id.button0);
        button1 = (Button) findViewById(R.id.button1);
        button2 = (Button) findViewById(R.id.button2);
        button3 = (Button) findViewById(R.id.button3);
        button4 = (Button) findViewById(R.id.button4);
        button5 = (Button) findViewById(R.id.button5);
        button6 = (Button) findViewById(R.id.button6);
        button7 = (Button) findViewById(R.id.button7);
        button8 = (Button) findViewById(R.id.button8);
        button9 = (Button) findViewById(R.id.button9);
        button10 = (Button) findViewById(R.id.button10);
        buttonAdd = (Button) findViewById(R.id.buttonadd);
        buttonSub = (Button) findViewById(R.id.buttonsub);
        buttonMul = (Button) findViewById(R.id.buttonmul);
        buttonDivision = (Button) findViewById(R.id.buttondiv);
        buttonC = (Button) findViewById(R.id.buttonC);
        buttonEqual = (Button) findViewById(R.id.buttonequal);
        crunchifyEditText = (EditText) findViewById(R.id.edt1);
        button1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "1");
            }
        });
        button2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "2");
            }
        });
        button3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "3");
            }
        });
        button4.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "4");
            }
        });
        button5.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "5");
            }
        });
        button6.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "6");
            }
        });
        button7.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

```

```

        crunchifyEditText.setText(crunchifyEditText.getText() + "7");
    }
});
button8.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        crunchifyEditText.setText(crunchifyEditText.getText() + "8");
    }
});
button9.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        crunchifyEditText.setText(crunchifyEditText.getText() + "9");
    }
});
button0.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        crunchifyEditText.setText(crunchifyEditText.getText() + "0");
    }
});
buttonAdd.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if (crunchifyEditText == null) {
            crunchifyEditText.setText("");
        } else {
            mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
            crunchifyAddition = true;
            crunchifyEditText.setText(null);
        }
    }
});
buttonSub.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
        mSubtract = true;
        crunchifyEditText.setText(null);
    }
});
buttonMul.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
        crunchifyMultiplication = true;
        crunchifyEditText.setText(null);
    }
});
buttonDivision.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
        crunchifyDivision = true;
        crunchifyEditText.setText(null);
    }
});
buttonEqual.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mValueTwo = Float.parseFloat(crunchifyEditText.getText() + "");
        if (crunchifyAddition == true) {
            crunchifyEditText.setText(mValueOne + mValueTwo + "");
            crunchifyAddition = false;
        }
        if (mSubtract == true) {
            crunchifyEditText.setText(mValueOne - mValueTwo + "");
            mSubtract = false;
        }
    }
});

```

```

    }
    if (crunchifyMultiplication == true) {
        crunchifyEditText.setText(mValueOne * mValueTwo + "");
        crunchifyMultiplication = false;
    }
    if (crunchifyDivision == true) {
        crunchifyEditText.setText(mValueOne / mValueTwo + "");
        crunchifyDivision = false;
    }
}
});
buttonC.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        crunchifyEditText.setText("");
    }
});
button10.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        crunchifyEditText.setText(crunchifyEditText.getText() + ".");
    }
});
}
}

```

OUTPUT

