# MAD LAB CYCLE -1

**1.Design a login page.**

Program code:

**Xml code**

```xml
<LinearLayout android:layout_width="match_parent"
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="24dp"
    android:background="#000"
    >
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="LOGIN"
        android:textColor="#00fff7"
        android:background="@color/colorAccent"
        android:textSize="30sp"
        android:textAlignment="center"
        android:textStyle="bold"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:padding="10dp"
        android:text="username"
        android:textColor="#fffff"
        android:textSize="20dp"
        android:textStyle="bold"
        android:layout_gravity="center"
        />
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="#fff"
        android:text="Enter username"
        android:textColor="#c2c3cf"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:padding="10dp"
        android:text="password"
        android:textColor="#fffff"
        android:textSize="20dp"
        android:textStyle="bold"
        android:layout_gravity="center"
        />
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="#fff"
        android:text="Enter password"
        android:textColor="#c2c3cf"/>
    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="submit"
        android:textStyle="bold"
        android:background="@color/colorAccent"
        android:layout_marginTop="30sp"
        android:textColor="#00fff7"
        android:textSize="20dp"/>
```
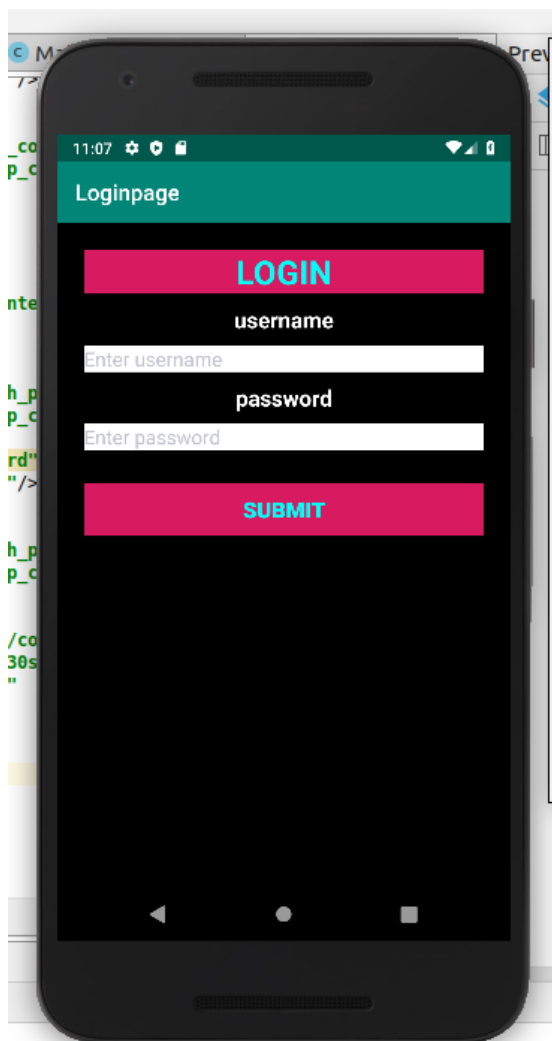
```
    </LinearLayout>
```

## Java

```java
package com.example.sjcet.c3;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

## Output

## 2.Change the content in the text view on a button click
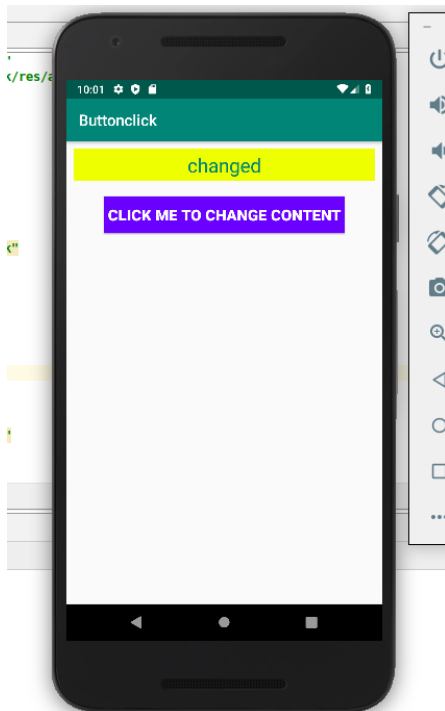
Program code:

**Xml code**

```xml
<LinearLayout android:layout_width="match_parent"
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:padding="10dp"
    android:orientation="vertical"
    >
    <TextView
        android:id="@+id/tv1"
        android:layout_width="match_parent"
        android:layout_height="42dp"
        android:background="#eeff00"
        android:text="change this on button click"
        android:textSize="25dp"
        android:textColor="@color/colorPrimary"
        android:gravity="center"/>
    <Button
        android:id="@+id/bt1"
        android:layout_width="313dp"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="20dp"
        android:background="#6a00ff"
        android:text="click me to change content"
        android:textColor="#fff"
        android:textSize="20dp"
        android:textStyle="bold"
        android:onClick="create"/>
</LinearLayout>
```

**Java**

```java
package com.example.sjcet.buttonclick;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void create(View view) {
        TextView t = (TextView)findViewById(R.id.tv1);
        t.setText("changed");
    }
}
```

# Output



## 3 . Read a value content from edit text and print it in a text view.

Program

## Xml code

```xml
<LinearLayout android:layout_width="match_parent"
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="50dp"
    android:background="#00c0fa">
    <EditText
        android:id="@+id/edtxt"
        android:layout_width="193dp"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:background="#fff"
        android:textColor="#fa0000"
        android:textSize="50dp"
        android:textStyle="bold" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_margin="40dp"
        android:background="#ede900"
        android:text="Click ME"
        android:textColor="#6b00ed"
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="Click"/>
    <TextView
        android:id="@+id/rxtv"
        android:layout_width="199dp"
```

```
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:textColorHighlight="@color/colorAccent"
            android:textSize="50dp"
            android:textStyle="bold"
            android:background="#fff"
            android:textColor="#fa0000">
        </TextView>
</LinearLayout>
```
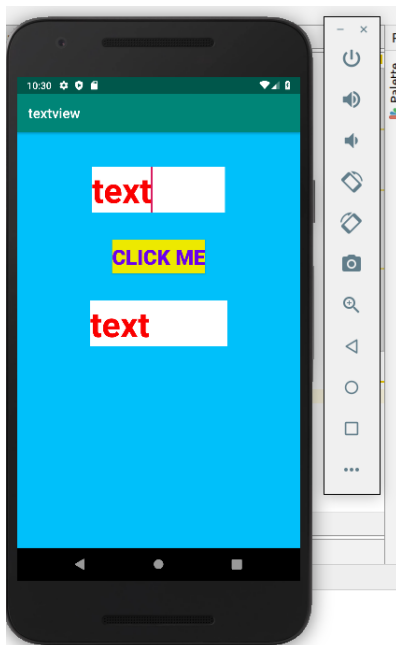
## Java

```java
package com.example.sjcet.textview;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void Click(View view) {
        EditText edit = (EditText)findViewById(R.id.edtxt);
        TextView tview = (TextView)findViewById(R.id.rxtv);
        String result = edit.getText().toString();
        tview.setText(result);
    }
}
```

## OUTPUT



## 4 . Change the backgroud color on a button click

program

## Xml code

```
<LinearLayout android:layout_width="match_parent"
        xmlns:android="http://schemas.android.com/apk/res/android"
```

```xml
        android:layout_height="match_parent"
        android:padding="10dp"
        android:orientation="vertical"
        android:id="@+id/backclr">
        <Button
            android:id="@+id/bt1"
            android:layout_width="313dp"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:layout_marginTop="20dp"
            android:background="#18ed00"
            android:text="click me to change background color"
            android:textColor="#fff"
            android:textSize="20dp"
            android:textStyle="bold"
            android:onClick="click"/>
</LinearLayout>
```
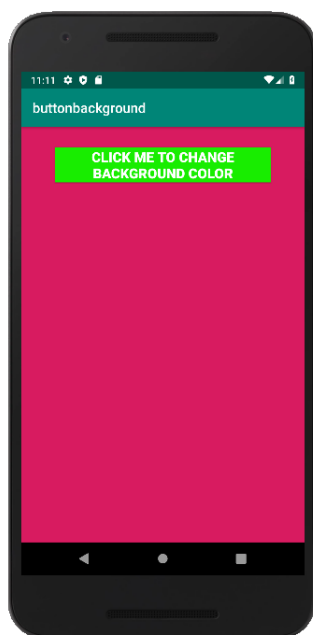
## Java

```java
package com.example.sjcet.buttonbackground;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.text.style.BackgroundColorSpan;
import android.view.View;
import android.widget.Button;
import android.widget.LinearLayout;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void click(View view) {
        LinearLayout layout = (LinearLayout)findViewById(R.id.backclr);
        layout.setBackgroundResource(R.color.colorAccent);
    }
}
```

## OUTPUT



**5. Create a sample calculator.**

```
Program

Xml code

<RelativeLayout android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    android:padding="40dp"
    android:background="#000"
    xmlns:android="http://schemas.android.com/apk/res/android">
    <EditText
        android:id="@+id/edt1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="#fff" />
    <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" />
```

```xml
<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_alignTop="@+id/button3"
    android:layout_alignEnd="@+id/edt1"
    android:layout_alignRight="@+id/edt1"
    android:layout_marginStart="46dp"
    android:layout_marginLeft="3dp"
    android:layout_marginTop="5dp"
    android:layout_marginEnd="43dp"
    android:layout_marginRight="43dp"
    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"
    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_alignEnd="@+id/buttonsub"
    android:layout_alignLeft="@+id/buttonsub"
    android:layout_alignRight="@+id/buttonsub"
    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"
```

```xml
                    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"
                android:textColor="#ff0000"/>
        <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

```java
package com.example.sjcet.simplecalc;


import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import com.example.sjcet.simplecalc.R;
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 = findViewById(R.id.button0);
        button1 = findViewById(R.id.button1);
        button2 = findViewById(R.id.button2);
```

```java
        button3 = findViewById(R.id.button3);
        button4 = findViewById(R.id.button4);
        button5 = findViewById(R.id.button5);
        button6 = findViewById(R.id.button6);
        button7 = findViewById(R.id.button7);
        button8 = findViewById(R.id.button8);
        button9 = findViewById(R.id.button9);
        button10 = findViewById(R.id.button10);
        buttonAdd =findViewById(R.id.buttonadd);
        buttonSub = findViewById(R.id.buttonsub);
        buttonMul = findViewById(R.id.buttonmul);
        buttonDivision = findViewById(R.id.buttondiv);
        buttonC =findViewById(R.id.buttonC);
        buttonEqual =findViewById(R.id.buttoneql);
        crunchifyEditText =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() {
```

```java
            @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() {
```

```java
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + ".");
            }
        });
    }
}
```

**OUTPUT**