### MAD LAB CYCLE -1

### 1.Design a login page.

```
PROGRAM CODE:
```

```
Xml code
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLavout</pre>
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">
    <LinearLavout
         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="1\overline{0}"
             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" />
             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
```

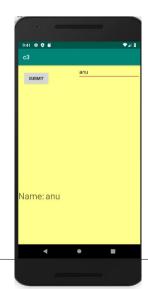




# 3, READ A VALUE FROM EDIT TEXT AND PRINT IT IN A TEXT VIEW.

```
PROGRAM:
XML CODE:
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
    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"
```

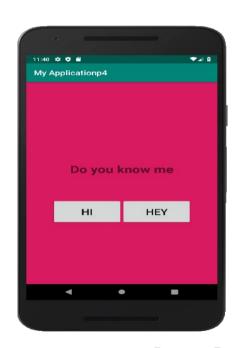
```
android:layout_width="wrap_content"
         android:layout_height="wrap_content"
         android:layout_alignParentStart="true"
         android:layout alignParentLeft="true"
         android: layout marginStart="32dp"
         android:layout marginLeft="32dp"
         android:layout_marginTop="20dp"
         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/relativel"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <EditText</pre>
```

android:id="@+id/edt1"
android:layout\_width="match\_parent"
android:layout\_height="wrap\_content" />

```
<Rutton
    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:lavout 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" />
<Rutton
    android:id="@+id/buttonadd"
    stvle="?android:attr/buttonStvleSmall"
    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) {
                      crunchifvEditText.setText(mValueOne / mValueTwo + "");
                      crunchifyDivision = false;
                  }
             }
         });
         buttonC.setOnClickListener(new View.OnClickListener() {
             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) findViewBvId(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.buttoneql);
         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() {
         public void onClick(View v) {
              crunchifyEditText.setText("");
    });
    button10.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
              crunchifyEditText.setText(crunchifyEditText.getText() + ".");
    });
}
```

#### OUTPUT



