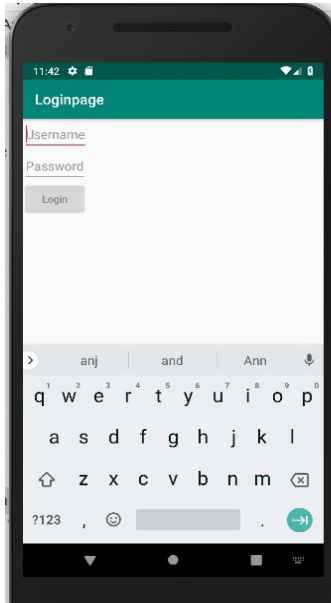# MAD LAB CYCLE-1

1.Design a login page

XML Code

```xml
<LinearLayout
    android:layout_height="match_parent"
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:orientation="vertical">
    <EditText
        android:hint="Username"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/txt2"
        android:inputType="text"/>
    <EditText
        android:hint="Password"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/txt1"/>
    <Button
        android:hint="Login"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/button1"
        android:onClick="Login"/>
</LinearLayout>
```

Java Code

```java
package com.example.sjcet.loginpage;
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);
    }
}
```

2.Change the conent in the textview on a button click
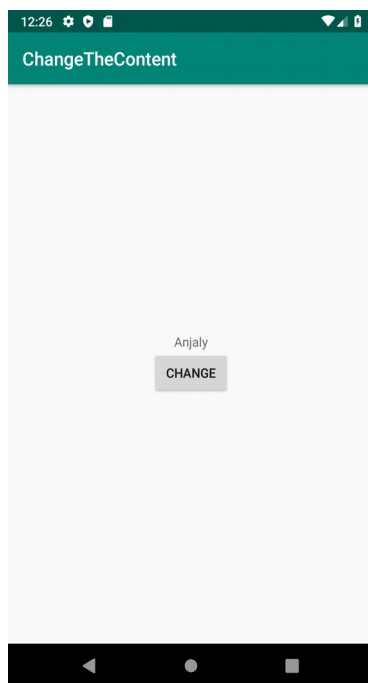
Xml Code

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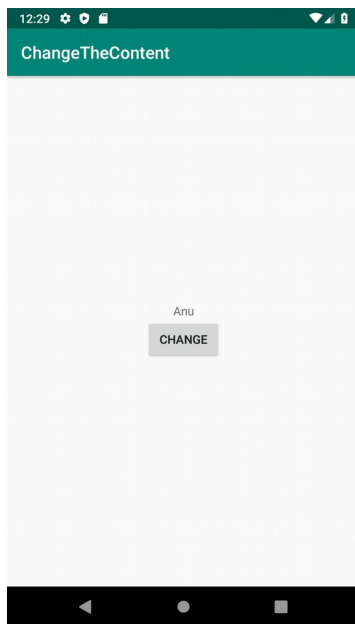
Java Code

```java
package com.example.sjcet.changethecontent;
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("Anu");


    }
}
```

Output

3. Read a content from EditText and print it in a TextView

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">
    <TextView android:layout_width="wrap_content" android:layout_height="wrap_content"
        android:id="@+id/tv1"
        android:text="text1"/>
    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/et1"
        android:hint="enter the text" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/b1"
        android:text="text"
        android:onClick="change"/>
</LinearLayout>
```
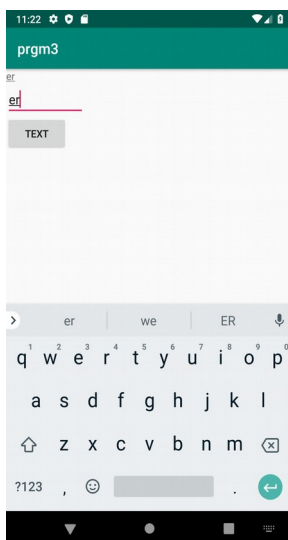
```java
package com.example.sjcet.prgm3;

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 {
TextView tv1;
EditText et1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

    public void change(View view) {
        tv1=(TextView)findViewById(R.id.tv1);
        et1=(EditText)findViewById(R.id.et1);
        tv1.setText(et1.getText());
    }
}
```

Output

4.Change the background color on a button click

Xml Code

```xml
<?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/colorPrimaryDark"
    tools:context=".MainActivity">
```

```xml
    <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 me"
        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="hey"
            android:textSize="25dp" />
    </LinearLayout>
</RelativeLayout>
```
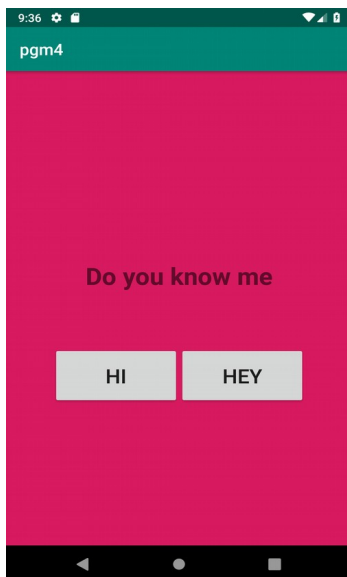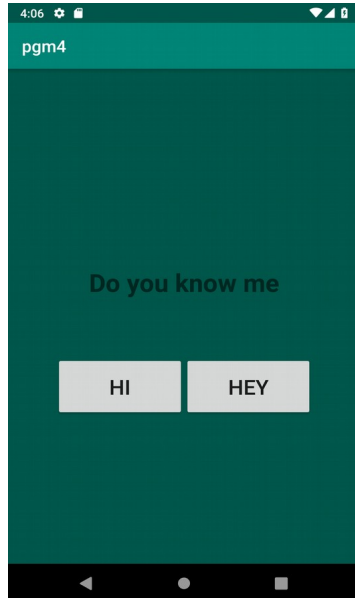
Java Code

```java
package com.example.sjcet.pgm4;

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);
            }
        });
    }
}
```

<u>Output</u>

5:Create a Sample Calculator Program

Xml Code

```xml
<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"
```

```xml
        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"
        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"
```

```xml
            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

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

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.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() {
```

```java
            @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
```

```java
            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() + ".");
            }
        });
    }
}
```