

CYCLE-2

Question 2:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<LinearLayout
```

```
    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:orientation="vertical"
    android:padding="16dp"
    tools:context=".MainActivity">
```

```
    <!-- Display TextView -->
```

```
    <!-- Calculator Buttons using GridLayout -->
```

```
    <TextView
```

```
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="end"
        android:layout_marginBottom="16dp"
        android:background="@android:color/background_light"
        android:gravity="end"
        android:padding="8dp"
        android:text="0"
        android:textSize="32sp" />
```

```
    <WebView
```

```
        android:id="@+id/webView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="end"
        android:layout_marginBottom="16dp"
        android:background="@android:color/background_light"
        android:padding="8dp"
        android:textSize="32sp" />
```

```
    <GridLayout
```

```
        android:id="@+id/gridLayout"
```

```

        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:columnCount="4"
        android:rowCount="5"
        android:layout_marginTop="16dp"
        android:layout_marginBottom="16dp">

        <!-- Buttons will be added dynamically in code -->

    </GridLayout>

</LinearLayout>

//JAVA
package com.example.c2pgm2;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.webkit.JavascriptInterface;
import android.webkit.WebView;
import android.widget.Button;
import android.widget.GridLayout;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity implements
View.OnClickListener {

    private TextView textView;
    private String currentInput = "";
    private String operator = "";
    private double firstOperand = 0;
    private double secondOperand = 0;
    private boolean isNewInput = true;

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

```

```

// Initialize TextView
textView = findViewById(R.id.textView);

// Initialize GridLayout
GridLayout gridLayout = findViewById(R.id.gridLayout);

// Define button labels
String[] buttonLabels = {
    "7", "8", "9", "/",
    "4", "5", "6", "*",
    "1", "2", "3", "-",
    "C", "0", "=", "+"
};

// Create and add buttons to GridLayout
for (String label : buttonLabels) {
    Button button = new Button(this);
    button.setText(label);
    button.setTextSize(24);
    button.setOnClickListener(this);
    gridLayout.addView(button);
}
}

@Override
public void onClick(View v) {
    Button button = (Button) v;
    String buttonText = button.getText().toString();

    switch (buttonText) {
        case "=":
            calculateResult();
            break;
        case "C":
            clearInput();
            break;
        default:
            handleInput(buttonText);
            break;
    }
}

private void handleInput(String input) {
    if (isNewInput) {
        currentInput = input;
    }
}

```

```

        isNewInput = false;
    } else {
        currentInput += input;
    }
    updateDisplay();
}

private void clearInput() {
    currentInput = "";
    operator = "";
    firstOperand = 0;
    secondOperand = 0;
    isNewInput = true;
    updateDisplay();
}

private void calculateResult() {
    if (!isNewInput) {
        String expression = currentInput;
        try {
            // Use JavaScript eval() to evaluate the expression
            WebView webView = new WebView(this);
            webView.getSettings().setJavaScriptEnabled(true);
            webView.addJavascriptInterface(new Object() {
                @JavascriptInterface
                public void processHTML(String html) {
                    // Process the result returned from
JavaScript
                    currentInput = html;
                    isNewInput = true;
                    updateDisplay();
                }
            }, "Android");

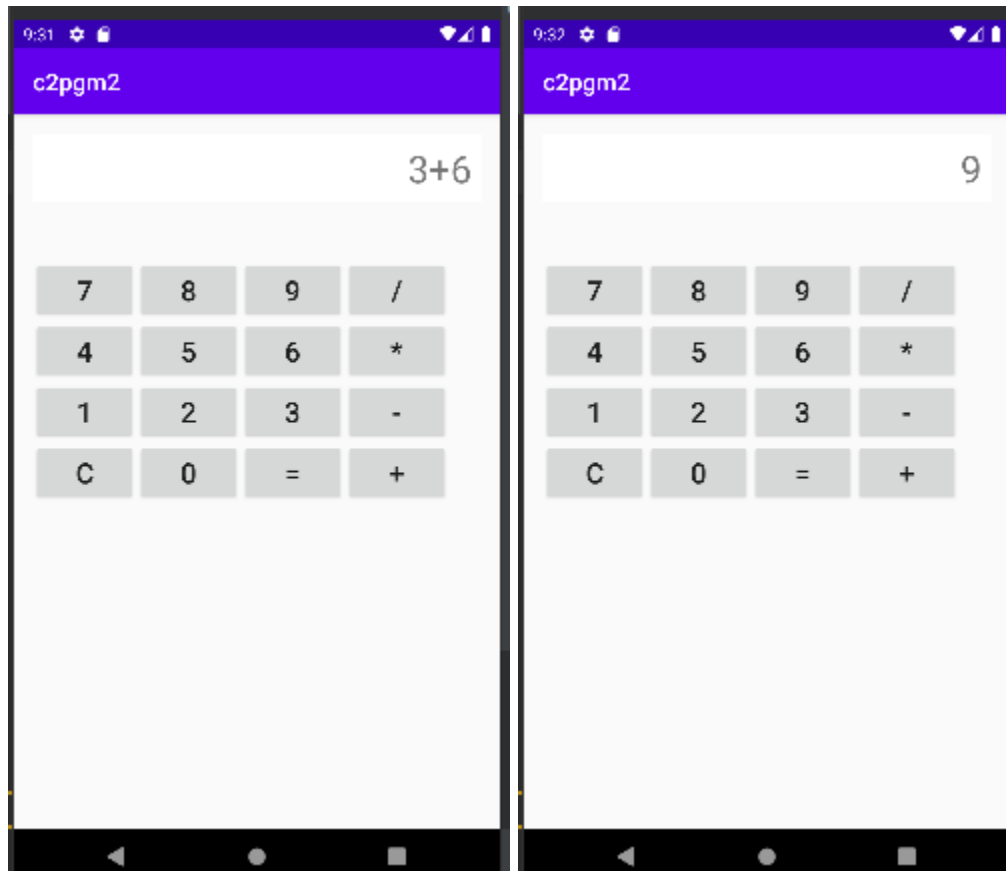
webView.evaluateJavascript("javascript:Android.processHTML(eval('" +
expression + "'))", null);
        } catch (Exception e) {
            currentInput = "Error: Invalid expression";
            isNewInput = true;
            updateDisplay();
        }
    }
}

```

```

private void updateDisplay() {
    textView.setText(currentInput);
}
}

```



Question 4:

```

<?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"
    tools:context=".MainActivity">

    <FrameLayout
        android:id="@+id/frameLayout"
        android:layout_width="match_parent"

```

```

        android:layout_height="match_parent">

        <ImageView
            android:id="@+id/imageView1"
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:src="@drawable/image1"
            android:scaleType="centerCrop"
            android:visibility="visible" />

        <ImageView
            android:id="@+id/imageView2"
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:src="@drawable/image2"
            android:scaleType="centerCrop"
            android:visibility="invisible" />

    </FrameLayout>

    <Button
        android:id="@+id/toggleButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Toggle Image"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"/>

</RelativeLayout>

//JAVA
package com.example.c2pgm4;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.FrameLayout;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {
    private FrameLayout frameLayout;
    private ImageView imageView1;
    private ImageView imageView2;
    private Button toggleButton;

```

```

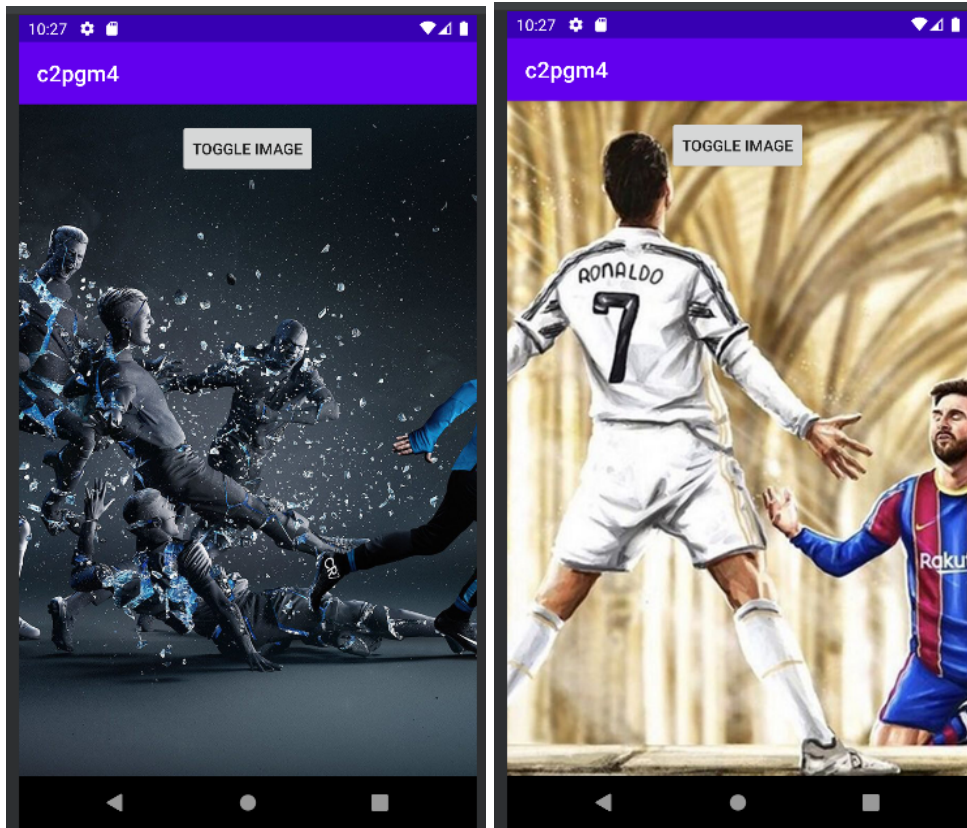
private boolean isImage1Visible = true;

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

    frameLayout = findViewById(R.id.frameLayout);
    imageView1 = findViewById(R.id.imageView1);
    imageView2 = findViewById(R.id.imageView2);
    toggleButton = findViewById(R.id.toggleButton);

    toggleButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            if (isImage1Visible) {
                imageView1.setVisibility(View.INVISIBLE);
                imageView2.setVisibility(View.VISIBLE);
            } else {
                imageView1.setVisibility(View.VISIBLE);
                imageView2.setVisibility(View.INVISIBLE);
            }
            isImage1Visible = !isImage1Visible;
        }
    });
}
}

```



Question 3

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <!-- Profile Picture -->
    <ImageView
        android:id="@+id/profilePicture"
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:src="@drawable/f"
        android:layout_margin="16dp"
        android:contentDescription="TODO" />

    <Button
        android:id="@+id/loginButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/profilePicture"
        android:layout_margin="16dp"
```



```

        android:layout_marginEnd="16dp"
        android:layout_marginRight="16dp"

        android:text="Login" />

</RelativeLayout>

//JAVA
package com.example.c2pgm3;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.content.Intent;
import android.net.Uri;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

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

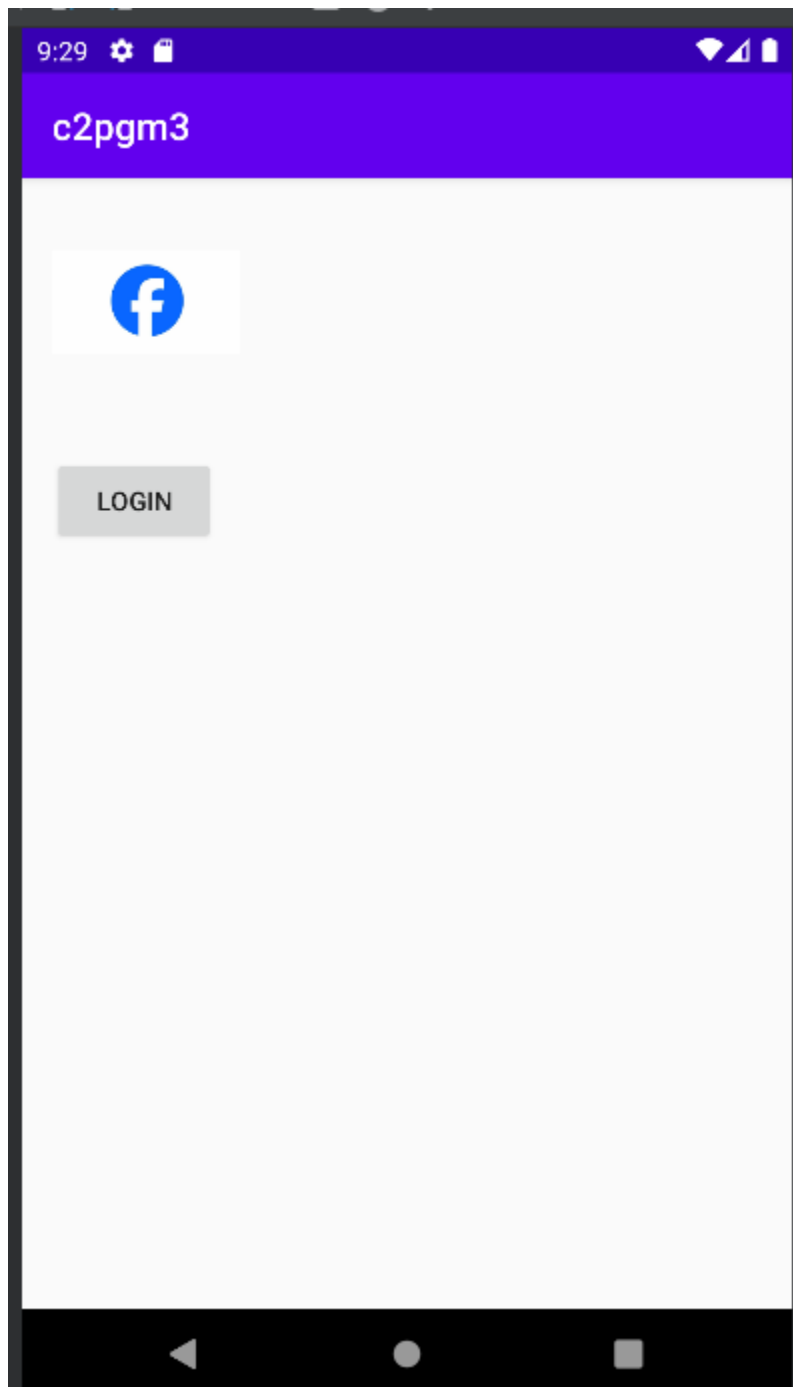
        Button loginButton = findViewById(R.id.loginButton);
        loginButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                openFacebook();
            }
        });
    }

    private void openFacebook() {
        String facebookUrl = "https://www.facebook.com"; // Or use
the actual Facebook URL

        try {
            Intent intent = new Intent(Intent.ACTION_VIEW);
            intent.setData(Uri.parse("fb://facewebmodal/f?href=" +
facebookUrl));
            startActivity(intent);
        } catch (Exception e) {
            // Facebook app isn't installed, open the website

```

```
        Intent intent = new Intent(Intent.ACTION_VIEW);
        intent.setData(Uri.parse(facebookUrl));
        startActivity(intent);
    }
}
```



Question 1

```
<?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:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity"

    tools:ignore="HardcodedText">

    <TextView

        android:id="@+id/textview"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_centerHorizontal="true"

        android:layout_marginTop="32dp"

        android:text="Registration"

        android:textColor="@android:color/black"

        android:textSize="24sp" />

    <!--EditText to take the data from the user and save the data in
    SharedPreferences-->

    <EditText

        android:id="@+id/edit1"
```

```
        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_below="@+id/textview"

        android:layout_marginStart="16dp"

        android:layout_marginTop="8dp"

        android:layout_marginEnd="16dp"

        android:hint="Enter your name"

        android:padding="10dp" />

    <!--EditText to take the data from the user and save the data in
    SharedPreferences-->
```

```
<EditText

        android:id="@+id/edit2"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_below="@+id/edit1"

        android:layout_marginStart="16dp"

        android:layout_marginTop="8dp"

        android:layout_marginEnd="16dp"

        android:hint="Enter your age"

        android:inputType="number"

        android:padding="10dp" />
```

```
<EditText
```

```

        android:id="@+id/edit3"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_below="@+id/edit2"

        android:layout_marginStart="16dp"

        android:layout_marginTop="8dp"

        android:layout_marginEnd="16dp"

        android:hint="Enter your email"

        android:padding="10dp"/>

<EditText

        android:id="@+id/edit4"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_below="@+id/edit3"

        android:layout_marginStart="16dp"

        android:layout_marginTop="8dp"

        android:layout_marginEnd="16dp"

        android:hint="Enter your password"

        android:padding="10dp"/>

</RelativeLayout>

//java
package com.example.c2p1;

```

```

import android.support.v7.app.AppCompatActivity;
import android.content.SharedPreferences;

import android.os.Bundle;

import android.widget.EditText;


public class MainActivity extends AppCompatActivity {

    private EditText name, age, email, password;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        name = findViewById(R.id.edit1);

        age = findViewById(R.id.edit2);

        email = findViewById(R.id.edit3);

        password = findViewById(R.id.edit4);

    }


    @Override

    protected void onResume() {

        super.onResume();

        // Fetching the stored data from the SharedPreferences

        SharedPreferences sh =
getSharedPreferences("MySharedPref", MODE_PRIVATE);

        String s1 = sh.getString("name", "");

```

```

        int a = sh.getInt("age", 0);

        String s2 = sh.getString("email", "");

        String s3 = sh.getString("password", "");


        // Setting the fetched data in the EditTexts

        name.setText(s1);

        age.setText(String.valueOf(a));

        email.setText(s2);

        password.setText(s3);

    }


    // Store the data in the SharedPreferences in the onPause()
method

    // When the user closes the application onPause() will be
called and data will be stored

    @Override

    protected void onPause() {

        super.onPause();

        // Creating a shared pref object with a file name
"MySharedPreferences" in private mode

        SharedPreferences sharedPreferences =
getSharedPreferences("MySharedPreferences", MODE_PRIVATE);

        SharedPreferences.Editor myEdit =
sharedPreferences.edit();


        // write all the data entered by the user in
SharedPreferences and apply

```

```

        myEdit.putString("name", name.getText().toString());

        myEdit.putInt("age",
Integer.parseInt(age.getText().toString()));

        myEdit.putString("email", email.getText().toString());

        myEdit.putString("password",
password.getText().toString());

        myEdit.apply();

    }

}

```

