

PRACTICAL ASSESSMENT SHEET

Experiment number: - 05

Title of experiment: - TEMPERATURE CONVERTER USING ANDROID STUDIO

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Roll number: - 68

Date of performance: -

Date of submission: -

Attendance 03 marks	Submission 03 marks	Performance 03 marks	Oral 03 marks	Result 03 marks	Total 15 marks

Faculty Signature with date

Practical No. 05

TITLE: TEMPERATURE CONVERTER USING ANDROID STUDIO

AIM: IMPLEMENT TEMPERATURE CONVERTER USING ANDROID STUDIO

APPARATUS: ANDROID STUDIO

THEORY:

In this Android program we will convert temperature from Celsius to Fahrenheit and from Fahrenheit to Celsius. This will be done with the help of a Button. We will be using two formulas one to convert temperature from Celsius to Fahrenheit which is $(temp * 1.8) + 32$ and from Fahrenheit to Celsius which is $(temp - 32) / 1.8$.

- **activity_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.appcompat.widget.LinearLayoutCompat
    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"
    tools:context=".MainActivity"
    android:background="@drawable/backnew">
    <androidx.appcompat.widget.Toolbar
        android:layout_width="match_parent"
        android:background="@color/lightviolet"
        android:layout_height="?attr/actionBarSize">
        <RelativeLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:gravity="center_vertical">
```

```

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="match_parent"
            android:layout_alignParentStart="true"
            android:layout_marginStart="8dp"
            android:gravity="center"
            android:text="@string/app_name"
            android:textColor="@color/lightblue"
            android:textSize="25dp"
            android:textStyle="bold" />

        <ImageView
            android:layout_width="wrap_content"
            android:layout_height="match_parent"
            android:layout_alignParentEnd="true"
            android:layout_marginStart="240dp"
            android:layout_marginEnd="-31dp"
            android:src="@drawable/add" />

    </RelativeLayout>
</androidx.appcompat.widget.Toolbar>
<TextView
    android:id="@+id/TempConvWel"
    android:layout_gravity="center"
    android:gravity="center"
    android:layout_marginTop="11dp"
    android:layout_marginBottom="8dp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:shadowColor="@color/white"
    android:padding="2dp"
    android:text="Welcome To Temperature Converter"
    android:textColor="@color/lightorange"

```

```
        android:textStyle="bold"
        android:textSize="21dp"
    />
<ImageView
    android:layout_margin="8dp"
    android:src="@drawable/temp"
    android:layout_width="400dp"
    android:layout_height="250dp"
    android:padding="2dp"
    android:layout_marginBottom="7dp"
    android:layout_gravity="center"
/>
<EditText
    android:id="@+id/editText"
    android:textStyle="italic"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:hint="Enter Temperature"
    android:textColor="@color/lightgreen"
    android:textColorHint="@color/lightgreen"
    android:inputType="numberSigned"
    android:ems="10"
    android:textAlignment="center"
    android:textSize="23dp"
    android:layout_marginTop="7dp"
/>
<Button
    android:id="@+id/cToF"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
```

```
        android:textAlignment="center"
        android:shadowColor="@color/black"
        android:text="Celsius To Fahrenheit"
        android:textSize="25dp"
        android:layout_gravity="center"
        android:layout_marginTop="25dp"
        android:backgroundTint="@color/lightyellow"
        android:textStyle="bold"
        android:textAllCaps="false"
        android:elevation="18sp"
        android:textColor="@color/darkblue"/>
<Button
    android:id="@+id/fToC"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Fahrenheit To Celsius"
    android:textSize="25dp"
    android:textAlignment="center"
    android:layout_gravity="center"
    android:layout_marginTop="25dp"
    android:backgroundTint="@color/lightpink"
    android:textStyle="bold"
    android:shadowColor="@color/black"
    android:elevation="18sp"
    android:textAllCaps="false"
    android:textColor="@color/darkblue"/>
<TextView
    android:id="@+id/result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="0 Degrees"
```

```
        android:textStyle="bold"
        android:textAlignment="center"
        android:textAllCaps="false"
        android:textColor="#f3c4fb"
        android:textSize="25dp"
        android:layout_gravity="center"
        android:layout_marginTop="61dp"/>
</androidx.appcompat.widget.LinearLayoutCompat>
```

- **MainActivity.java**

```
package com.example.temperatureconverter;
import androidx.appcompat.app.AppCompatActivity;
import android.annotation.SuppressLint;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    private Button cToF, fToC;
    private TextView result;
    private EditText enterTemp;
    double result0;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        cToF = findViewById(R.id.cToF);
```

```

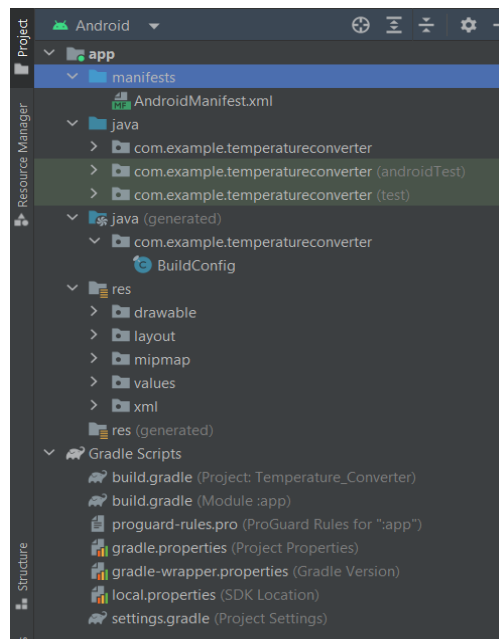
        fToC = findViewById(R.id.fToC);
        result = findViewById(R.id.result);
        enterTemp = findViewById(R.id.editText);
        cToF.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Toast.makeText(MainActivity.this, "Thanks For
Using", Toast.LENGTH_SHORT).show();

                double temp =
Double.parseDouble(enterTemp.getText().toString());
                result0 = (temp *1.8) + 32;
                result.setText(String.valueOf(result0));
            }
        });
        fToC.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Toast.makeText(MainActivity.this, "Thanks For
Using", Toast.LENGTH_SHORT).show();

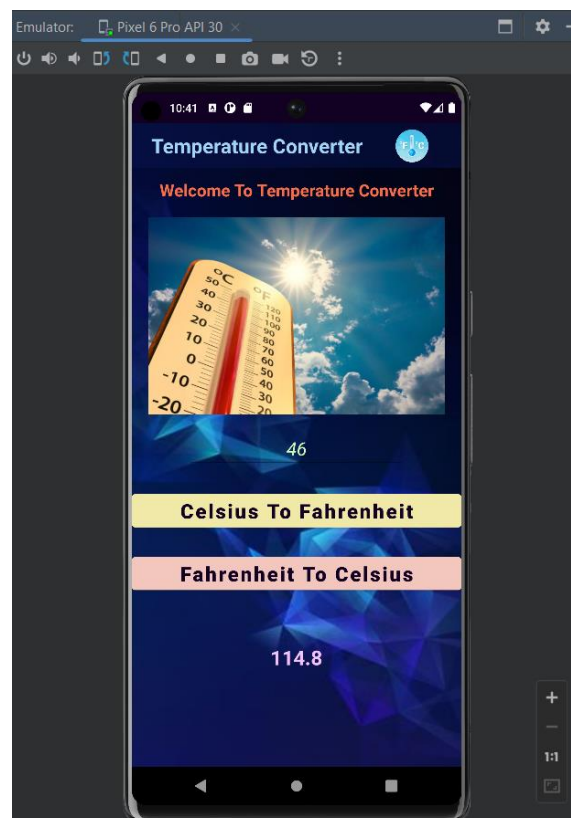
                double temp =
Double.parseDouble(enterTemp.getText().toString());
                result0 = (temp - 32) / 1.8;
                result.setText(String.valueOf(result0));
            }
        });
    }
}

```

- **Project Files –**



- **Output on Emulator –**



Conclusion: Thus we studied the implementation of Hello world on Android Studio.