Tutorial 02
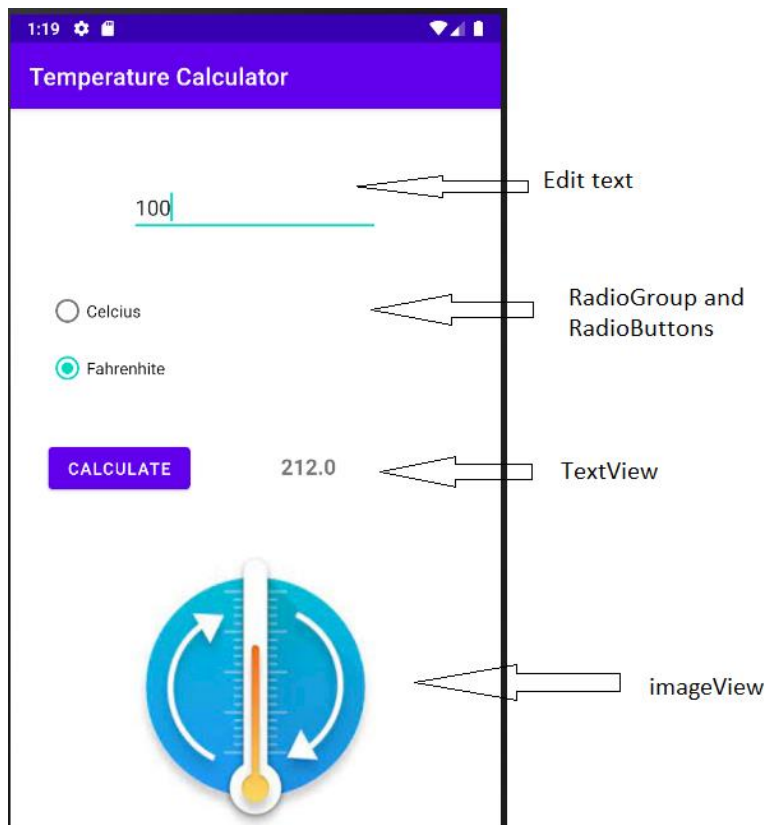
IT2010 – Mobile Application Development

- Create a new project in Android Studio to do the following.
- Create the interface of the MainActivity as following to convert temperature, input by the user.

NOTE: Why RadioGroup?

If we check one radio button that belongs to a radio group, it automatically unchecks any previously checked radio button within the same group.

- Download the image provided in courseweb and copy it to the drawable folder as a resource file.
- Set the above added image as the source of the imageView.

```xml
<ImageView
    android:id="@+id/imageView2"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:src="@drawable/temperature" />
```

- Create a java class called "Calculations.java" and implement two methods to convert a temperature value to Celsius and Fahrenheit as following.

```java
protected float convertCelciusToFahrenheit(Float value) {
    Float ans = (value * 9/5) + 32;
    return ans;
}

protected float convertFahrenheitToCelcius(Float value) {
    Float ans = (value - 32) * 5/9;
    return ans;
}
```

- Implement the button click event of Calculate button to convert the input temperature according to the selected type and display the answer as given in the above image. (Use the above methods for calculations)

```java
@Override
protected void onResume() {
    super.onResume();
    btnCalculate.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            calculateAnswer();
        }
    });
}

private void calculateAnswer() {
    if(    /* input value is empty  */ -> write the condition){

        Toast.makeText(this, "Please add a value",
Toast.LENGTH_LONG).show();
    }
    else{

        if(  /* celcius button is checked  */ ){

          // convert it into Fahrenheit and display the answer
        }
        else{

          // convert it into Celcius and display the answer

        }
    }
}
```