EGR 281 - **Project 10** due Tuesday, November 2 by 6:00 PM

Write a class called **Temperature** that represents temperatures in degrees in both Celsius and Fahrenheit. Use a floating-point number for the temperature and an enum for the scale with either ‘C’ for Celsius or ‘F’ for Fahrenheit.

It will have four constructors: one for the number of degrees, one for the scale, one for both the degrees and the scale, and a default constructor. For each of these constructors, assume zero degrees if no value is specified and Celsius if no scale is given.

It will have two accessor methods: one to return the temperature in degrees Celsius, the other to return it in degrees Fahrenheit. (Use the formulas from the Programming Project 5 of Chapter 3 and round to the nearest tenth of a degree.)

It will have three set methods: one to set the number of degrees, one to set the scale, and one to set both.

It will have three comparison methods: one to test whether two temperature objects are equal, one to test whether one temperature is greater than another, and one to test whether one temperature is less than another.

Write a driver program called **TemperatureDriver** that tests all the methods. Be sure to invoke each of the constructors, to include at least one true and one false case for each of the different comparison methods, and to test at least the following three temperature pairs for equality: 0.0 degrees C and 32.0 degrees F, -40.0 degrees C and -40.0 degrees F, and 100.0 degrees C and 212.0 degrees F.

As always, don’t forget to include your name, the date, and a description of the program as javadoc comments at the top of your program file. Also be sure to use good variable names. Please send your .class file(s) as an attachment to [simsw@midlandstech.edu](mailto:simsw@midlandstech.edu). Also turn in a printed copy of your code.