JAVA PROGRAMMING LANGUAGE
Assignment 11

1. Write a ***Thermostat*** class such that a user of the ***Thermostat*** class can create an object of ***ThermoStat*** and set it to the desired temperature within a pre-specified range. If the user tries set the temperature outside this range it should throw a ***TemperatureTooHigh*** or ***TemperatureTooLow*** exception. Use inheritance to create an exception superclass ***TemperatureOutofRange*** and subclasses ***TemperatureTooHigh*** and ***TemperatureTooLow***.

   Sample Tester code:

   ```
   ThermoStat t = new ThermoStat(0, 100);
   t.setTemp(50);          // Should be OK.
   t.setTemp(150);         // Should throw TemperatureTooHigh exception.
   t.setTemp(-50);         // Should throw TemperatureToolLow exception.
   ```

   Write a program to demonstrate throwing and catching of exceptions. Show that the *catch* specifying the superclass catches the subclass exceptions. The order of exception handlers is important. If you try to catch a superclass exception type before a subclass type, the compiler would generate errors. Also show the re-throwing of exceptions.