Class, Section   _____
Total Points (Out of 100 points)   _____

Instruction:

1. Answer to the problem on a **PDF file (PDF file only)** and save it as HW#_YOUR-Name#.PDF
2. Submit the **PDF** file to eLearning before the due date

Design, Implement, and run PC (Predicate Coverage), CC (Clause Coverage) and CACC (Correlated Active Clause Coverage) tests for the method *turnHeaterOn* in class **Thermostat.java (from the book - ch8)**

1. (5 points) List **all predicates** in the method. How many have one clause, two clauses, three clauses, and more than three?
2. For each predicate, write the **truth table** and choose rows from the truth tables that **satisfy PC**.
   a. (10 points) You must submit the truth tables and clearly mark which rows will be used. These are your abstract tests.
   b. (5 points) For each abstract test, create input values that satisfy the truth assignments and that reach the predicate.
   c. (10 points) Implement each test in Junit file "**ThermostatTest_PC.java**". Include comments that state which predicate and which truth assignment (row in the truth table) is being implemented.
   d. (5 points) Run your tests.
3. For each predicate, write the **truth table** and choose rows from the truth tables that **satisfy CC**.
   a. (10 points) You must submit the truth tables and clearly mark which rows will be used. These are your abstract tests.
   b. (5 points) For each abstract test, create input values that satisfy the truth assignments and that reach the predicate.
   c. (10 points) Implement each test in Junit file "**ThermostatTest_CC.java**". Include comments that state which predicate and which truth assignment (row in the truth table) is being implemented.
   d. (5 points) Run your tests.
4. For each predicate, write the **truth table** and choose rows from the truth tables that **satisfy CACC**.
   a. (10 points) You must submit the truth tables and clearly mark which rows will be used. These are your abstract tests.
   b. (5 points) For each abstract test, create input values that satisfy the truth assignments and that reach the predicate.
   c. (10 points) Implement each test in Junit file "**ThermostatTest_CACC.java**". Include comments that state which predicate and which truth assignment (row in the truth table) is being implemented.
   d. (5 points) Run your tests.

Submit the following on paper:
- A write-up that describes your tests
- A printout of your JUnit tests. (ThermostatTest_PC.java, ThermostatTest_CC.java, ThermostatTest_CACC.java)
- Screen shots showing the results of running all your tests.