PACE-Monmouth Computer Science

Objective:

1. Identify all **Inputs** and **Outputs** for the problem presented below
2. Identify any **constants** that might be required
3. Identify any **key formulas** required
4. Identify any "**placeholders**" needed to store temporary computations
5. Write a set of **pseudo-code** statements that will solve the problem

Problem Statement: You are designing a program to control the temperature in a home. Typically, your program will interact with a computer-accessible thermometer, but because this is a simulation, you will be prompting a user to act as the thermometer.

Exercise A: Design a program that will take the temperature in a room and turn on the **A/C** if the temperature is 5 degrees or more above the Thermostat setting. Because it is a simulation, your program should print "A/C turned on" if it gets too hot; otherwise, it should print "Temperature is just fine!"
(Hint: in this simulation, the user will be your thermostat too!)

Exercise B: Modify your program to turn on the **Heat** if the temperature is 5 degrees or more below the Thermostat setting. Because it is a simulation, your program should print "Furnace turned on"

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Future Exercise C: Modify your program to sample the room temperature every 5 seconds until the Thermostat is turned off (a Thermostat reading of '0' indicates Off)