## CS161: Introduction to Computer Science Homework Assignment 5 Due: 10/18 by 11:59pm

In this week's homework assignment you'll be working with conditionals and private methods. Be sure to pull out any repeated code into a private method.

## \_\_\_\_\_ Fever Flow Chart \_\_\_\_\_

One of the earliest forms of artificial intelligence (AI) were expert systems. An expert system is a system designed to make decisions or arrive at diagnoses based on information it is given. The decisions it makes are based on a sequence of conditionals.

For this assignment, you will create an expert system to diagnose the cause of a fever. The flowchart shown on the next page is a simplification of the American Medical Associations's (AMA) diagram for diagnosing a fever <sup>1</sup>. Using the flowchart, your program should ask the necessary questions to determine the cause of the fever as indicated by the chart.

Create a new BlueJ project entitled hw5. Inside the project, create a Java class called FeverDiagnosis that uses a Scanner to ask the user questions and diagnose the cause of the fever. You should pull out all repeated code into private methods to make your main() method as short and readable as possible.

Style Guide

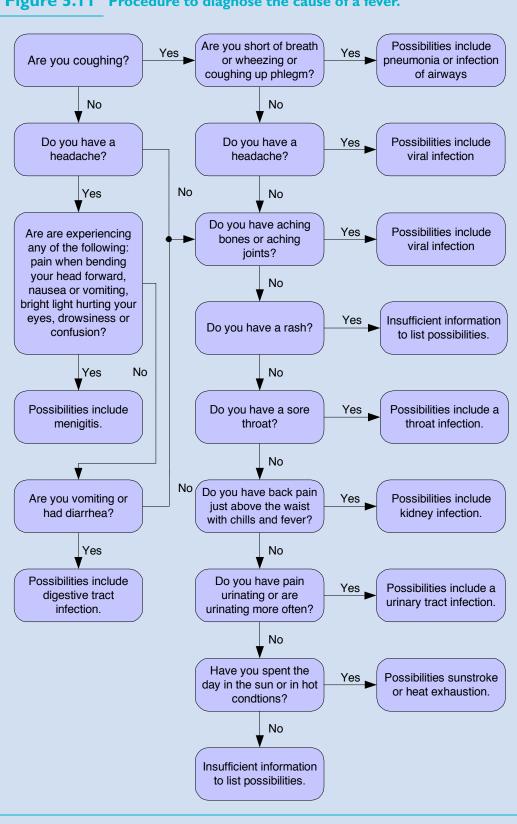
Before you submit your assignment, double check the following:

- You have a Javadoc comment at the top of the class with a brief description (written in full English sentences), you and your partner's name, and the date.
- All variable names are lower cased (remember, only classes are capitalized in Java)
- Use inline comments (//) to explain any complicated code

## Submitting your homework assignment

You should submit your hw5 folder with your FeverDiagnosis class.

<sup>&</sup>lt;sup>1</sup>The flowchart is taken from Java: Programming Design by James Cohoon and Jack Davidson who themselves took it from The American Medical Family Medical Guide: Third Edition, C. B. Clayman (medical editor), 1994.



## Figure 5.11 Procedure to diagnose the cause of a fever.