Code Conventions & Algorithms

- *Code conventions* are a set of guidelines for writing an application
- They provide details about commenting, rules for naming methods, classes, and packages, and statement formatting
- Makes a program easier to read and understand
- Organizations the employ programmers often not only encourage the use of code conventions, but require it

Here is a list of conventions that you are responsible for (more will be added as we progress through the course)

1) An introductory comment should begin a program.
   - The comment should include information such as your name, class name, the date, and a brief statement about the program

2) Package names should begin with a lowercase letter and then an uppercase letter should begin each word within the name, no spaces!

3) Class names should be nouns and begin with an uppercase letter and an uppercase letter should begin each word within the name, no spaces!

4) A comment block should be included before each class and method.
   - Not typically placed before the main() method

5) Comments should not reiterate what is clear from the code

6) Statements in a method should not be indented

7) An open curly brace { should be placed on the same line as the class or method declaration, and the closing curly brace } should be on a separate line and aligned with the class or method declaration

Algorithm Design

Programs are created to solve problems. It is necessary to outline, or design, a solution before typing any source code. One method is called an *algorithm* (a set of steps that outline how to solve a problem).

4 types of algorithms:

1) Written out in plain English are called **<u>pseudocode</u>**.
2) A visual representation called a UML (Unified Modeling Language) diagram
3) A sequence diagram
4) A flowchart