# Good Programming Practices

## Names

The choice of names for the various elements of a program is crucial to the understanding of the logical flow of the application. They should be long enough to be meaningful but avoid being too wordy. It makes sense to provide a name that the human user can comprehend. The names should be in compliance with the rules and standards of the particular programming language.

a) **Variables/Objects**

- Names being constructed by appending words, use mixed-case formatting to simplify reading. In Java, variables and object names usually start with a lowercase letter.
- The name of instance variables should not include the class name. For example, in a class *Student*, an instance variable would be *lastName* and not *studentLastName*.
- Append computational qualifiers (Avg, Sum, …) where appropriate
- Boolean variables should usually contain *Is* in the name (e.g. *isFound*, *numberIsPrime*, …)
- Avoid using terms like *flag.* Instead use names such as *endOfFileFlag*.
- Use single-letter names for short-loop indexes only.
- Constants should be all uppercase with underscore to separate each word (e.g. MAX_SIZE)
- Keep array names singular, i.e. *student* instead of *students*. Do not append the word array or table at the end of the name.
- Minimize the use of abbreviations. If an abbreviation is used, be consistent so that it has a single meaning. For example if *min* is used as a name to store a value for minutes, it should not later be used to represent minimum.
- Do not use closely related words such as *count* and *counter* to represent different values.

b) **Methods**

- Names being constructed by appending words, use mixed-case formatting to simplify reading. In Java, method names usually start with a lowercase letter.
- Avoid generic names such as *analyse()*.
- For instance methods, do not include the name of the class in the method name.
- Only specific instance methods should start with *set* or *get*. Avoid using at the beginning of the name get or set for other methods.
- Most of the time, a method name will start with a verb ( e.g. findMinimum(), calculateTax(), …).
- If using method overloading, all overloaded methods should perform a similar task.
- Do not use similar names for variables and methods.