Java Coding Style Guidelines

This document outlines coding style conventions to be followed throughout the course when writing Java code.

# 1. Naming Conventions

- Classes: Use CamelCase, with the first letter capitalized.

Example: StudentInfos.

- Methods: Use camelCase, starting with a lowercase letter.

Example: calculateTotal().

- Variables: Use camelCase, meaningful and descriptive.

Example: studentName.

- Constants: Use uppercase letters with underscores.

Example: MAX\_SIZE.

# 2. Code Layout and Formatting

- Line Length: Limit lines to 100 characters.  
- Indentation: Use 4 spaces per indentation level.  
- Braces: Open brace { on the same line, closing brace } on its own line.

if (isValid) {  
 runFunction();  
} else {  
 displayError();  
}

- Blank Lines:   
 - Add a blank line between methods.  
 - Use blank lines to separate logical blocks of code.

# 3. Comments and Documentation

- Use inline comments (//) for short explanations of code logic.  
- Use block comments (/\* ... \*/) for larger notes.  
- Document each class and public method.  
- methods will be documented using @requires, @modify, @effect but if the standard Javadoc tags gives enough information, use them instead/in addition.

/\*\*  
 \* @requires x and y != null  
 \* @effects return a new ComplexNumber object that is the sum of x and y  
 \*/  
public static ComplexNumber add(ComplexNumber x, ComplexNumber y) {  
 …  
}

# 4. Additional Guidelines

- Avoid magic numbers; use named constants instead.  
- Use descriptive variable names; avoid one-letter names except for loop counters (i, j, etc.).  
- Keep methods short and focused on a single task.  
- Use refactor when possible if a part of a code is repeated more than 3 times.