

# Capstone Project 1

CMU-SE 450

## Code Standard

Version 1.0

Date: 10/11/2021

## Green Big5 Information System

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31 - Nov- 2021

## PROJECT INFORMATION

<b>Project acronym</b>	GB5		
<b>Project Title</b>	GreenBig5		
<b>Start Date</b>	19 Aug 2021	<b>Start Date</b>	19 Aug 2021
<b>Lead Institution</b>	International School, Duy Tan University		
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2	24211206857	2	24211206857
3	24211202217	3	24211202217

## REVISION HISTORY

Version	Date	Comments	Author	Approval
1.0	15/11/2021	Initial Release	All members	

## 1. Introduction

### 1.1 Purpose

- This Coding Standard requires certain practices for developing programs in the JavaScript language. The objective of this coding standard is to have a positive effect on
  - Avoidance of errors/bugs, especially the hard-to-find ones.
  - Maintainability, by promoting some proven design principles

### 1.2 Scope

- This standard pertains to the use of the JavaScript language.

## 2. Code Standards

### 2.1 Variables

- Using **camelCase** for identifier names (variables and functions).
- All names start with a **letter**.
- Constants (like PI) written in **UPPERCASE**
- No unused variables.
- For var declarations, write each declaration in its own statement.
- Avoid modifying variables of class declarations.
- Avoid modifying variables declared using const.
- No re-declaring variables.
- Avoid assigning a variable to itself.
- Avoid comparing a variable to itself.
- Restricted names should not be shadowed.

### 2.2 Spaces Around Operators

- Always put spaces around operators ( = + - \* / ), and after commas.

### 2.3 Statement Rules

- Put the opening bracket at the end of the first line.
- Use one space before the opening bracket
- Put the closing bracket on a new line, without leading spaces.
- Keep else statements on the same line as their curly braces.

### 2.4 Object Rules

- Place the opening bracket on the same line as the object name.
- Use colon plus one space between each property and its value
- Do not add a comma after the last property-value pair.
- Place the closing bracket on a new line, without leading spaces.

- Maintain consistency of newlines between object properties.
- Always end an object definition with a semicolon.

## **2.5 Line Length**

- For readability, avoid lines longer than 80 characters

## **2.6 Spaces**

- Use 2 spaces for indentation.
- Add a space after keywords.
- Add a space before a function declaration's parentheses
- Commas should have a space after them.
- Add spaces inside single line blocks.
- No space between function identifiers and their invocations.
- Add space between colon and value in key value pairs.

## **2.6 Quotes**

- Use single quotes for strings except to avoid escaping.

## **2.7 Comparative math**

- Always use `===` instead of `==`.

Exception: `obj == null` is allowed to check for null || undefined.

## **2.8 Dot location**

- Dot should be on the same line as property.

## **2.9 Array**

- Use array literals instead of array constructors

## **2.10 Modules**

- Use a single import statement per module.
- Renaming import, export, and destructuring assignments to the same name are not allowed.

## **2.11 Functions**

- Avoid unnecessary function binding.
- No unnecessary parentheses around function expressions.

- No function declarations in nested blocks.

## **2.12 String**

- Regular strings must not contain template literal placeholders.
- No octal escape sequences in string literals.
- No multiline strings.
- No spacing in template strings.

## **2.13 Error catching**

- Only throw an Error object.

## **2.14 Files**

- Files must end with a newline.

## **2.15 Others**

- Semicolons must have a space after and no space before.
- Must have a space before blocks.
- Use `isNaN()` when checking for NaN
- Function `typeof` must be compared to a valid string.
- Never start a line with `(`, `[`, ```, or a handful of other unlikely possibilities.