SOEN 6441: Advanced Programming Practices

Winter 2019
Project – Risk Game
(Build 1 and Build 2)
Coding Standards Document

Submitted By:
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CODING CONVENTIONS

Coding conventions are a set of rules that are followed during writing the code which includes the following :

- **File organization**: How the code is distributed between files and organized within each file.
- **Indentation**: How particular syntactical elements are to be indented in order to maximize readability
- **Comments**: How to consistently and efficiently use comments to help program understandability.
- **Declarations**: What particular syntax to use to declare variables, data structures, classes, etc. in order to maximize code readability.
- **Naming**: How to give names to various named entities in a program as to convey meaning embedded into the names.

In our project, we have used coding conventions which helps a user to read and understand the code easily.

1. Code Layout

a. Indentation

In our Project, we have used indentation of 4 spaces.

b. Statement Blocks

The open curly brace is appended to the statement that precedes it, which minimize the length of the code.

c. Blank Lines

We have put blank lines to separate the components in the following sections:

- Between access modifier sections of the class declaration.
- Between function and method definitions.
- Between class declarations.
- Between major sections of a long and complex function.

d. The absence of commented code

The code which is not necessary is commented between /* and */. It helps to increase the readability of source code.

e. The Presence of comments for Long Methods

Inline comments are used for Long methods. It helps to increase the understandability of source code.

2. Naming Conventions

a. **Classes**
   Class names are in upper CamelCase. For eg: MainController.
b. **Constants**
   Constants are in uppercase letters separated by underscore between words.
c. **Attributes and Methods.**
   These are written in a lower case letter and use upper case letters to separate words. For eg: getCountryId.
d. **Local Variables**
   These are written in lower CamelCase. For eg: selectMapMenuOption.
e. **Global Variables**
   Global names are prefixed with the project name.

3. Commenting Conventions

- In all the files, there is a comment at the beginning of each file which explains the purpose of the file in the project.

- Each class declaration is preceded by a comment explains what the class is for.

- Each method or function is having comments explaining what it does and how it works, as well as the purpose of its parameters or arguments.

- All variable declarations are appended with a comment describing its role.

- Inline comments are given in a long method to explain all the important steps of the methods. For eg:
  //To list the countries depending on their continent name
  //ex: NorthAmerica: Alaska, Canada etc

4. Writing Testable code

We test our code functionality with the help of Junit (Testing framework) by writing test cases.

References

From the professor slides(Chapter - Documentation)
https://moodle.concordia.ca/moodle/pluginfile.php/3520559/mod_resource/content/1/Lecture%204.pdf