Software Construction
Coding Standards
06/15/2016
Team 7

Coding Standards for Java

Indent nested code
Every time that we open a bracket we should indent the code written after it. The indentation should continue until the bracket is closed. The indentation should be a tab character.

Indentation Style

The indentation style our team will use is the K&R style.

Methods

```
void method(int j){
   ...
}
```

Loops

```
for(int i = 0; i<=j; i++){
   ...
}

while(true){
   ...
}
```

If/else statements

```
if(j<0){
   ...
}
else if(j>0){
   ...
}
else{
   ...
}
```

Try/Catch/Finally

```
try{
   ...
}
catch(Exception e){
   ...
}
finally{
   ...
}
```

Switch

```
switch(value){
  case 0:
   ...
   break;
  default:
   ...
   break;
}
```

White Space

Use one blank line to separate each logical section of the program.

Naming Conventions

- Name should be meaningful to its application.
- Class name should be noun and singular number.
- Capitalize the first letter of each word that appears in a class or interface name.

    ```
    public class MyClass
    ```

- For method names use lowercase for the first word and capitalize only the first letter of each of the remaining words. Use verbs as names for methods.

    ```
    public void countSomething(String s)
    ```

- For variable names use lowercase for the first word and capitalize only the first letter of each of the remaining words. Use nouns as names for variables. Such as:

    ```
    int bookEntries;
    ```

- To name constants use uppercase for each word and separate each pair of words with an underscore. This is only applicable in constant naming.

    ```
    final double PI = 3.1416;
    final int MAX_COUNT = 27;
    ```

Comments with tags

For Java methods:
```
/**
 * Prints out "Hello World"
 * and the command line arguments.
 * @param arg A string array containing
 * the command line arguments.
```

```
 * @exception Any exception
 * @return No return value.
 */
```

For Java file at the top:
```
/**
*[Describe what is the java file about]
*[Include list of operation in the java file]
*
* @author  [author name-text]
* @author  [author name-text]
* @version [current version abel; Ex 1.0]
* @since   [release date]
*/
```

Inter term spacing

Use space between terms. Such as:

testMethod(a, b, c);

a = b

Declarations

One declaration per line. Such as:

int x;

int y;

Repository

GitHub

Management for our team project. Source code will be subject for GitHub essential operations: Pull, push, branch, clone, merge, pull request, approve request, add-commit, and checkout.

Google Drive

Collect and manage documents for our team, and for the course in general. In addition, use Google Hangouts to discuss online, and use Google Drive to add/edit documents on the fly while other team members are able to review and edit as well.

Google Drive and Google Hangout essential operations:

Manage reports, team assignments, presentations, lectures and resources, as well as hangouts that provides online communication with our team members.

Change Process

For our team, we will use Github to establish a controlled change process, as well as reviewing upcoming changes to the masters, adding new sentences or Java classes, and proper coding standards established for our team.

Naming Convention

The naming convention for the versioning of the configuration management items is as follows:

For all items, versions will be identified by three digits, each digit representing the value of the changes made to any item. One such example is: System.**1.2.3**.

1: Changes if change made to item took longer than 7 hours, or caused a highly drastic change to item. For documentation, this could include the addition of a new section. For code, this could include the introduction of a new subsystem.

2: Changes if change make to an item took between 3 and 7 hours. For documentation, this could include the addition of a subsection. For code, this could include the addition of some function used within a class.

3: Changes if change made to an item took less than 1 hours. For documentation, this could include grammatical error checking. For code, this could include minor debugging and error checks.

References

http://www.oracle.com/technetwork/java/codeconvtoc-136057.html
https://www.google.com/drive/
https://github.com/