April 12, 2013

Team 19 Inspection Document

**Laboratory # 8: Inspection**

**Morgan, Laura**

**Miaw, Jireh**

**Hauser, Steven**

**Dworak, Catherine**

**Bertoglio, David**

***Work Product***

**Documentation of inspection of Group 20’s source code, following three-phase inspection.**

***Document Revision Information***

**April 12, 2013 – Document created**

**Approval Sheet**

**All group members whose names are listed below approve of the document and contributed fairly.**

**Member Names**

**Morgan, Laura**

**Miaw, Jireh**

**Hauser, Steven**

**Dworak, Catherine**

**Bertoglio, David**

**Pledge**

**On my honor, as a student, I have neither given nor received unauthorized aid on this assignment.**

**Names**

**Morgan, Laura**

**Miaw, Jireh**

**Hauser, Steven**

**Dworak, Catherine**

**Bertoglio, David**

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## Inspection Schedule

Phase 1 – Internal documentation & source-code layout

Monday, April 15 – 3:30 p.m. during in-lab.

Phase 2 – Coding practices

Sunday, April 21 – 1:30 p.m. Rice Hall.

Phase 3 – Functional correctness

Friday, April 26 – 1:00 p.m. Rice Hall.

## Group Member Responsibilities

Inspections

Phase 1 Inspector – Catherine

Phase 2 Inspector – Laura

Phase 3 Inspector – David, Jireh, Steven, Catherine Laura

Rework

Rework of source code after Phase 1 – Steven

Rework of source code after Phase 2 – Jireh

Rework of source code after Phase 3 - David

## Checklists Used

### Phase 1

Internal documentation & source-code layout (single inspector).

Structure

* proper use of indentation for “levels” in code
* proper use of tabbing when declaring variables
* existence of columns of related items
* existence of white space (spaces after commas, variables, between methods etc.)
* use of new line when line is too long
* consistency followed with use of braces {} throughout

Documentation

* sparing use of comments; only used to document unavoidable complexity
* identifiers
  + meaningful
  + underscores used as separators
  + capitalization of types, Classes
  + names indicate purpose
* constants
  + mixed case capitalization
  + no magic numbers (no embedded literals or constants)
  + only symbolic constants used
  + symbolic constants in all capital letters, separated by underscores
  + avoid abbreviations in names
* methods
  + mixed case for name
  + abbreviations avoided
  + names indicate function
  + “get/set” used where attribute is accessed directly
  + “is” used for Boolean methods
  + “find” used for methods that look something up
* variables
  + name should reveal purpose and/or type
  + plural if representing group of objects
  + iterator variables consistent (for example: i and j)
  + abbreviations avoided

### Phase 2

* Switch statements
  + Switch statements used rather than if-else-if blocks
  + Every switch statement has a break in each case statement
* Variables
  + All variables initialized prior to use
  + All variables declared at top of function
  + All loop variables initialized just before loop
  + No variables initialized that are not used
* Classes
  + All classes have complete set of get() and set() methods
* Bounds
  + All arithmetic checked for ranges within bounds
  + All loop bounds are correct
* Methods
  + All method arguments are used in method
  + All functions named after what they return
  + All procedures named after what they do
* Conditionals
  + Complexity of conditionals should be avoided
  + All relational operators correct (> vs >=)
  + Executable statements not included in conditionals
* Miscellaneous
  + No public data
  + Every file is included in given file uses
  + All file open commands checked for failure
  + Type conversion done explicitly

### Phase 3

* Methods
  + All methods return what they supposed to return
  + All methods execute what they are supposed to execute
* Variables
  + All variables exist for the purpose for which they are named
* All inputs are included and implemented
* All outputs are addressed and implemented

## Effort Expended (use of time)

David

Jireh

Steven

Catherine

Laura

## Questions about Implementation by Group 19

## Answers about Implementation for Group 20

## Results of Inspection

### Phase 1

Date and time:

Defects found:

Result of rework:

effort used in corrections, approximate number of statements had to be added, approximate number of statements that were changed

### Phase 2

Date and time:

Defects found:

Result of rework:

### Phase 3

Date and time:

Result of rework:

Defects found: