CSCI-410
FILE HEADERS

You will be writing/generating/submitting files in several different formats, specifically:

Extension	Description
hack	Hack-platform executable code
hdl	Hardware Description Language source code
asm	Hack Assembly Language source code
vm	Virtual Machine source code
jack	Jack high level language source code
py	Python source code

Files that you submit for grading will normally have specified file names that are the same for everyone. It is therefore important that the contents of the file include comments that enable someone reading the file to be able to determine whose file it is. The format for the comments will be very similar from one file type to the next, but not identical if, for no other reason, the comment delimiters are not the same for all file types.

It is important that the file format be adhered to exactly as described since an automated report generator may be used to extract this information and prepare a grading report. If your files have to be corrected in order for this to work, you will lose points.

The File Header will generally consist of the following elements: UserID, Programmer Name, Course Identifier, Term, Project, and Filename. These will be preceded and following by "solid" lines consisting of exactly sixty equals signs ('=') to offset the header content from the rest of the file. Additional comments may be required below the file header.

UserID: This is your ADET Username, which is also your assigned CSM e-mail username (the part of your e-mail address that appears before the '@' symbol).

Programmer Name: This is your last name, followed by a comma, followed by your first name. It would be best to use your name as it appears in Blackboard, but this is not critical and you may use a preferred name if you desire. The use of middle (or other) initials is optional.

Course Identifier: This is CSCI-410. Those eight characters exactly as shown.

Term: Use the two letter term identifier {FA, SP, SU} followed by the two-digit year.

Project: The project identifier, such as 01, PY03, 06B, etc. The files submitted for the A portion of a project do not need a suffix. The files submitted for the B version require a suffix unless they are identical to the files submitted for the A portion.

Filename: The basic filename (i.e., no path information) including the extension. The case should match the case of the filename since *NIX systems are case sensitive. For Windows, use the case as shown in the directory listing.

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Copywrite Comments

Many of the files you will submit for grading will be modifications of files supplied by the authors. These files all contain a notice at the beginning that is of the following general format:

```
// This file is part of www.nand2tetris.org
// and the book "The Elements of Computing Systems"
// by Nisan and Schocken, MIT Press.
// File name: projects/11/Pong/Main.jack
```

When you modify a file, you should modify this notice and include it in your file below the prescribed header. The modified comment should be similar to:

```
// This file is based on a file from www.nand2tetris.org
// and the book "The Elements of Computing Systems"
// by Nisan and Schocken, MIT Press.
// File name: projects/11/Pong/Main.jack
```

These comments protect you from copyright infringement. The contents have been modified slightly to reflect the fact that the file you are submitting is no longer a part of the original file set, but merely based on it. The name of the file here is the name and location of the original file within the author's file set.

While not required, it is a very good idea to copy descriptive comments from the original file and place them below the copywrite comments. You should add any additional comments as appropriate.

Generated Files

You will write several Python programs, in particular your VM Translator (Projects 07 & 08) and your Jack Compiler (Projects 10 & 11), that will generate files as their output. With the exception of XML files, these should insert the appropriate header into each file they generate. The project number should be **NA** (for Not Available). While no copywrite comments are needed in generated files, you may add additional comments, such as version information about your translator or compiler, below the header.

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HACK, XML Files

Hack files have no provision for comments. The XML files that you will generate must not contain comments because they are graded using a text comparison utility.

HDL, ASM, VM, JACK Files

```
//============================================================
// USERID:........ WBAHN
// PROGRAMMER:.... Bahn, William L.
// COURSE:........ CSCI-410
// TERM:.......... SP14
// PROJECT:....... 01
// FILENAME:...... DMux.hdl
//============================================================
```

PYTHON Files

```
#============================================================
# USERID:......... WBAHN
# PROGRAMMER:..... Bahn, William L.
# COURSE:........ CSCI-410
# TERM:.......... SP14
# PROJECT:........ PY01
# FILENAME:....... py01.py
# PYTHON VERSION:. 3.3.3
#============================================================
```

Note the following expectations:

1. The top separating line is the first line in the file and there is a blank line following the second separating line.
2. The two separating lines consist of the comment delimiter followed immediately by exactly sixty equal signs.
3. There is exactly one space between the comment delimiter and the item label
4. There are sufficient periods after the item label (and colon) such that, following exactly one space, the item text begins in 20th column.
5. The filename should be exactly the same as the actual filename of the file. While this does not matter in the case of Windows systems, *nix systems have case-sensitive file systems, so even though your file might have been developed on a Windows machine, it might be graded on a Linux machine. In Windows, the filename as shown in Windows Explorer reflects the case of the filename as stored within the file system.