Getting used to using Linux

Due: September 20, 2019 on myCourses at 23:55

Lab A and lab B will provide some background help for this mini assignment.

Question: Software Engineering and the command-line

Software developers use the command line to support good software engineering practices. For this mini assignment we will explore a standard way that software developers organize their home directory when writing software.

For this question, you will need to make a screen shot or use your phone to take a picture of your computer screen. This photo/screen-shot needs to prove that you answered the following questions while logged into **mimi.cs.mcgill.ca**.

You must use **mimi.cs.mcgill.ca** to create the solution to this assignment. You cannot use your Mac command-line, Windows command-line, nor a Linux distro installed locally on your laptop. You can `ssh` or `putty` from your laptop to **mimi**, or you can go to the third floor of Trottier and use any of those labs, to complete this assignment.

You will submit a picture that answer these questions:

A. Create a SOCS account on **mimi.cs.mcgill.ca** and log into that account.

B. Change the command-line prompt to show your first and last name and a symbol. For example: John Doe $ or Mary Jane #. You will need to change your prompt by using either the `SET PROMPT` command or the `SET PS1` command, or `EXPORT PS1` command (it depends on your shell). See lecture notes. This change to your prompt will not be permanent. Once you logout it will revert back to what it was before.

C. Assume you are a software developer who wants to create a space in their Home directory to store a software project. In class we discussed this scenario. You may want to look at your notes.

   Create the following directory structure within your Home directory (each row is a directory name and the indentation imply that it is a subdirectory – for example COMP206 is a subdirectory of Projects, and ass1 is a subdirectory of COMP206. Projects is in your Home directory.):

   Projects
   - COMP206
     - ass1
       - archive
       - backup
       - docs
       - assets
       - database
       - source

Leave all the directories empty except docs. Use `vi` to create a file named **readme.txt**. In that file write the following information:

Name: <<your name>>

ID : <<your student ID>>

Major: <<your major at McGill>>

Format the text file as above.

D. Use the `who` and `grep` commands in a single lined expression that displays only your login information, given the output of the `who` command. You will need to pipe the complete output of the `who` command into the `grep` command.

Think of a way to write an `ls` command that, in one screen, will prove that you have created all those directories, that your prompt has changed, and that you are logged into mimi.

Take a screen shot.

Then, using the `cat` command show the contents of your **readme,txt** file, followed by the `who` / `grep` single line expression and the output it produced.

Take a second screen shot.

WHAT TO HAND IN

Everything must be submitted to My Courses before the due date. Remember that you can hand in your assignment up to two days late but there will be a penalty of 5% each day. After that, your assignment will not be accepted. Please hand in the following:

- A JPG or PNG file named A1a and A1b (both pictures) showing that you completed all the requirements.

HOW IT WILL BE GRADED

The assignment is worth a total of 20 points.

- 4 points for changing the prompt to show your first and last name and symbol. The student is permitted to have other things present in the prompt in addition to their name, if they want. It does not impact the grade. Displaying your username is not acceptable.
- 6 points for the correct directory structure. The student needs to be able to show in a single image that the solution was created within their account, on mimi, and all the folders created in the requested arrangement. This question also tests their ability to log into mimi and use the server, therefore a solution using the command line from their laptop is not acceptable. They can however, use ssh from their laptop to access mimi remotely.
- 4 points for readme.txt
- 4 points for the who grep pipe expression
- 2 points for following the assignment specifications as stated

GRADING RULES

The following rules are followed by the TA when grading assignments:

- A program must run in order to get a grade (even if it does not run well). If it does not run (does not compile) it will receive a zero. (Make sure to run your programs from mimi.cs.mcgill.ca).
- The TA will grade using the mimi.cs.mcgill.ca server.
- All questions are graded proportionally. This means that if 40% of the question is correct, you will receive 40% of the grade.