Discussion 1 - Wednesday, 1/25/2023

Intruduction

We don't use Java in this class

We code in an environment where we connect to the Grace cluster. It uses the OS Red Hat Enterprise Linux which is a Unix environment. This environment runs a tcsh shell.

SSH

To use SSH, type `ssh` into the command line.

Wait, First, we must take a look at this handed out piece of paper. This piece of paper has many ssh commands.

To use SSH, type `ssh -Y {directoryid}@grace.umd.edu` into the command line (Mac).

Then, type in your directory id password.

To disconnect from grace, type `exit`.

Some basic unix commands:

`ls`

This lists all the items in the directory you're in.

`ls -l`

Gives more information, including the priviledge for each file. Things with x at the end stands for executable. Things with an arrow `->` shows the file is a shortcut.

`cd`

Stands for "change directory". changes your working directory to whichever directory you specify

`mkdir`

Stands for "make directory". creates a directory (folder).

`.`

The `.` represents the current directory

`pwd`

Stands for "present working directory". it tells you what directory you're in.

`mv`

Stands for "move". moves the first argument to the second argument

cp

Stands for "copy". Copies the first argument to the second argument.

Must use `-r` because it stands for recursive and it makes sure everything is copied

rm

Stands for "remove". removes a directory or file. use `-r` to remove everything inside. `-r` stands for recursive.

rmdir

Stands for "remove directory". recursively removes a directory.

logout

Does the same thing as `exit` but just for the login shell.

man

Stands for "manual". shows you the official manual for a command.

up and down arrows

These arrows allow you to scroll through your previously used commands so that you don't need to type them.

tab

This key autocompletes while in the tcsh shell.

vim

This opens the `vim` editor which lets you edit a file you specify.

emacs

This opens a graphical editor which lets your edit a file you specify. This requires an x-server which is what enables you to open a graphical interface through ssh.

x-servers

If you're on Mac, download XQuartz to have a CLI (command line interface) with an x-server. If you're on windows, install mobaXterm.

vscode

how to set up vscode with grace for cmsc216: https://www.youtube.com/watch?v=X2wVY-7wvbw

emacs tutorial:

in emacs, press ctrl+h for help

in emacs, use M-x snake to play snake

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