CS2211 Midterm Review

_____ (Topic 1 – Unix Basics) _____

Definitions/Commands:

- cd = change directory
- more = show the content of a file in pages.
- cp = copy a file from x to y. must put –r after cp if you are copying a directory.
- rm –i FileName = remove a file.
- mkdir = make a directory.
- rmdir = remove a directory.
- mv = move a file or directory to…

Concepts:

- How to log in: ssh UserName@cs2211.gaul.csd.uwo.ca

_____ (Topic 2 – Unix Editors) _____

Definitions/Commands:

- Modal editors = have an input and command mode.
- Modeless editors = have only one mode.
- vi commands:
  - x = delete the current character
  - dd = delete the current line.
  - / = search for the text following /.

_____ (Topic 3 – What's an Operating System) _____

Definitions/Commands:

- Operating System (OS) = is a control program, that allocates resources, schedules tasks, and provides an interface.

Concepts:

- Before OS all programs ran directly off the hardware. And as hardware changed, software had to change.
- After OS only the OS changed with hardware, not the software, making software cheaper and easier to develop.
- CPU splits the programs running into time shares, where they all take turns using the hardware by itself.

_____ (Topic 4 – Unix Background) _____

Definitions/Commands:

- BSD = Berkeley Software Distribution.
- Kernel = manages processes, recourses, and controls/hides the hardware.
- Shell = an interface between users and the kernel. Command Line interpreter (CLI).
- Utilities and Standard Tools/Applications = (such as vi) so common it's a part of Unix.

Concepts:

- Unix was developed in 1969 by Ken Thompson. In 1974 it was rewritten in C.
- UCB put the internet protocols (IP) into Unix.
- Unix was meant to be user helpful, not user friendly.
- Unix tools kept simple, efficient and protected from others.

- Linux and Mac OS are Unix based.
- Android is based on Linux.

_____ (Topic 5 – Files and Directories) _____

Definitions/Commands:

- Directory = a file containing pointers to other files.
- Link = a pointer to another file, like a shortcut.
- Devices = device files for peripherals.
- pwd = print working directory.
- ls = display the contents of a directory.
    - ls –a = used to see hidden files (beginning with a ".").
- df = displays different disks and space used.
- cs .. = goes to the parent directory.
- mv directory/file = moves a file to another directory.
- ln = creates a hard link pointer of a file (2 name links for the same file).
- Find .-name "x" = finds all files/directories named x from the current directory.
    - You can use "*.c" to find all files/directories with the extension .c .
    - .-type f = is for files only.
    - .-type d = for directories only.
- –i = if put after a command, says to ask if the user is sure.
- tail = displays the bottom lines of a file. head = top.
- -- = is used to say there are no more options.

- Double quotes “ “ = can be used to stop misinterpretation of whitespace characters.
- Backslash \ = can be used to escape to a newline connecting the previous line.
- SFTP = secure file transfer protocol.
    - Sftp > get remotefile localfile = used to get a file.

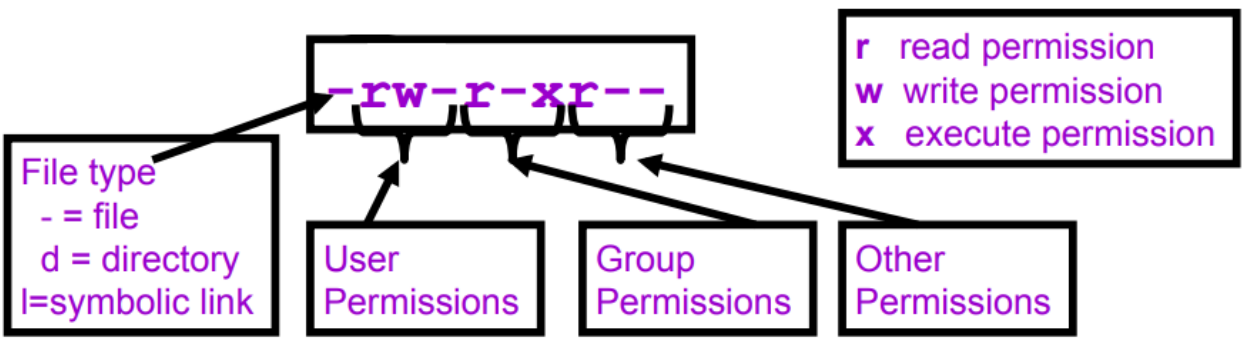
Concepts:

- Unix file’s are organized as an upside down tree starting at root (represented by “ / ”).
- Unix files are located on a disk in a server in a machine room, not your current computer.
- cd goes to the home directory automatically if followed by nothing.
- “more” goes forward, but less can go forward and backwards.
- Wildcard Characters (can be combined with other commands like ls or mv):
    - a*.c* = looks for any sequence of characters starting with a and ending with .c .
    - a?.c* = looks for any sequence of characters starting with a and a single character before .c .
    - a[123].c* = looks for any sequence of characters containing one matching character between a and ending with .c .
    - can’t cross “/” boundaries in names.

_____ (Topic 6 – File Security and Permissions) _____

Definitions/Commands:

- ls –l = view permissions.



- chmod DDD file where each D represents the 3 binary digits for user then group then other permissions. (ex 100 = 4, 110 = 6).

- bibd/ = files accessible to the user, and by name but not others.

Concepts:

- unmask format is backwards to chmod. Unmask 077 means only let the user do anything to the files.

- Symbolically for example chmod a+rw dir gives everyone read and right permission to all files in dir.

_____ (Topic 7 – Unix I/O Commands and Redirection) _____

Definitions/Commands:

- stdin = default place programs are read from.

- stdout = default place for programs to write to.

- stderr = default place where errors are reported to.

- cat file1 file 2 > file3 = used to concatenate files together into another file.
    - >| = used to overwrite a previous file3.
    - >> = gives a warning if file3 isn't there.
    - &> = copies into another file.

- grep focus = writes all lines containing the focus to stdout, or if specificed, a file.

- tee = replicates standard output into another file.

Concepts:

- Anything copied or moved to /dev/null disappears.

_____ (Topic 8 – Processes and Job Control) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic 9 – Regular Expressions) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic 10 – Introduction to C) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic 11 – C Fundamentals) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic 12 – Basic C types and I/O Format) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic 13 – Flow of Control in C) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic 14 – Expressions and Operations in C) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic 15 – Functions in C) _____

Definitions/Commands:

- d
- d

Concepts:

- d

- d

_____ (Topic 16 – Arrays + Strings in C) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic 17 – Pointers in C) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic 18 – Structured Types in C) _____

Definitions/Commands:

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- d

Concepts:

- d
- d

_____ (Topic 19 – Shell Environments) _____

Definitions/Commands:

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- d

Concepts:

- d
- d

New material for Final Exam:

_____ (Topic x – x) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic x – x) _____

Definitions/Commands:

- d
- d

Concepts:

- d
- d

_____ (Topic x – x) _____

Definitions/Commands:

- d
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Concepts:

- d
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