

THE UNIVERSITY OF WESTERN ONTARIO DEPARTMENT
OF COMPUTER SCIENCE LONDON CANADA
Software Tools and Systems Programming (Computer Science 2211a)
ASSIGNMENT 1 Due date: Tuesday, September 24, 2019, 11:55 PM
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1. Answer the following questions.

a. What is an operating system?

An operating system runs directly on the hardware and is the control program for computers to manage hardware and hide its properties (details) from the software which in turn provides a simple user interface. This allows for software developing much easier and hardware independent. The OS also allows for multiple programs to run at the same time by allocating time segments to different operations.

b. What is a kernel of an operating system?

The Kernel managed the processes and resources and hides the hardware from software.

c. What is a shell in Unix?

The Shell (also known as a Command Line Interpreter) is the interface between the user and the kernel

2. Answer the following questions. For this question, we assume that you are in directory `~/Tmp/CS2211a/Asn/asn1`. You should create directories along the path if they do not exist. In this directory, create two directories, `dir0` and `dir1` and two files `df0` and `df1`. In `dir0` create a file `dir0`

a. What command do you use to create a directory?

To make a directory in you must use the command `"mkdir"`.

b. What command do you use to create a file?

To create a file you could use `"touch"` command (and `vim` if you want to create and edit a file).

3. Answer the following questions for the use of `ls` command. And then demonstrate your answers by typing the appropriate commands and capture the screen with `script` command assuming that you are in directory `~/Tmp/CS2211a/Asns/asn1`. For this question, please use `/usr/bin/ls` in `compute.gaul.csd.uwo.ca`.

a. What option(s) should we use if we want to display permission information?

We should use `"ls -l"`.

b. What option(s) should we add to `ls di*` to display permission information of `dir0` and `dir1` but not their contents?

We should change the command to `"ls -ld di*"` to display permissions of `dir0` and `dir1` without displaying the content.

c. What is the result of `ls *` and why?

The result of `"ls *"` command is a display of directories and files in the current directory (`asn1`), as well as the files/directories within the directories (e.g `dir0` and `dir1`).

d. What is the result of `ls * *` and why?

The result of `"ls * *"` command does mostly the same as the previous command with the only difference being that all the directories and files are repeated twice on the display.