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

1. Answer the following questions.

   a. What is an operating system?

   b. What is a kernel of an operating system?

   c. What is a shell in Unix?

2. Answer the following questions. For this question, we assume that you are in directory $\sim$/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?

   b. What command do you use to create 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 $\sim$/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?

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

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

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

4. Answer the following questions for the use of **find** command. And then demonstrate your answers by typing the appropriate commands and capture the screen with **script** command assuming that you are in ∼*/Tmp/CS2211a.*

    a. What option(s) should we use if we want to display recursively all the directory names?

    b. What option(s) should we use if we want to display recursively all the files (but not directory) whose name start with *d*?

    c. What option(s) should we use if we want to display all the files that have been accessed within the last 48 hours? (hint: use **man find** to check -atime option of find command)