Assignment 1: General UNIX Utilities

**Weight**: 15% of your final grade

**Due**: after Unit 2, Section 1 (ideally by the end of Week 4)

**General Notes**

For Assignment 1, you are going to complete the following learning activities taken from your textbook. Use the script command to save the terminal session wherever necessary. Saving the terminal starts with the **script**filename command and ends with **exit**.

Combine all required problems in this set in one file, name it COMP325\_1\_YYMM (replacing ‘YYMM’ with the current year and month, e.g., 1309), **and upload it here to submit it to your tutor for marking and feedback.**

* Be sure to complete the final step—click on the **Send for Marking** button to notify your tutor.

1. Solve problems 7–11 and 15–17 at the end of Chapter 7.

7.echo $HOME; pwd -P ~;

8.root:x:0:0:root:/root:/bin/bash

login shell:/bin/bash user ID:0; group ID:0;home directory:/root

The password is encrypted and in the /etc/shadow

9.can't login the user anymore, because linux use the field is not exist

10.The number of the inode is 4541160,the home directory is /root;

The command is df -i

11.mkdir memos; touch memo.james

15.rm -rf memos; ls -al, can't see it anymore

16.CTRL\_D is just a signal saying that this is the end of a text stream

17.ls -al | grep -E 'chapter(1|2|6|8|9).(eps|prn)'

1. Solve problems 7–17 at the end of Chapter 8.

7.use rwx to control the permissions, r=4,w=2,x=1

8.

1. Do problem 9 (What do the following commands do?) in Chapter 9.
2. Enter a C program that reads a temperature in Celsius entered from a keyboard and displays the corresponding temperature in Fahrenheit and complete the steps below. (*Hint:*Look for such a program in the textbook or online.)
3. Compile this program using the cc compiler, or any other compiler.  Fix any errors, and recompile.
4. Your program must have declaration statements, such as *float c, f;* . Delete the semicolon from the end of the statement.  Recompile and report the kind of error.  The C compiler often provides cryptic error messages. Interpret this message.
5. Change the *float c, f;* statement to (*float c; char f;).*Do you get any errors during compilation? What are they and why? Do you see any difference between running this program and the earlier version? Why?
6. If your program uses a *cout*statement, then replace it with a *printf*  statement that does the same thing and vice versa. If you have used neither  *cout* nor *printf* in the first version, then replace what you have with *printf*.
7. Explain how you can schedule the executable program to run at 1:00 a.m. and to take the input from a file, rather than the keyboard, without any changes to the source program.
8. Explain how you can find the time it took the computer to execute your program.
9. Explain how the output of your program can be automatically emailed to your friend upon completion.