Operating Systems Fundamentals **Lab 3.1: Introduction to Linux**

Note: Do not cut and paste the commands into the terminal – it will produce unreliable output. You must manually type out every command.

Please create a document called OperatingSystems1-Lab3-XXXXXXXX (replace with your student number). For questions 1 -3 inclusive, write your answers into this document. For Question 4-5 inclusive, copy and paste the commands into this document.
You must show this document to the Teaching Assistant towards the end of the lab session, before leaving the lab session.

1. **Install the *man* command.**
   You were shown how to install the *man* command in last week's lab session. Please do so now. You will use the man command to help you complete the exercises below.
2. **Information on Users** Enter the following commands and interpret the output:
   - **a.** whoami
   - **b.** who
   - **c.** w
3. **Moving around the file system.** State what these commands do:
   - **a.** pwd
   - **b.** cd path
   - **c.** cd ~
   - **d.** cd –
   - **e.** cd ..
   - **f.** cd ../..
   - **g.** cd
4. **General commands.** Interpret the output of the following commands: (Use the *man* command to help you).
   - **a.** echo hello world
   - **b.** echo -e "Hello \bOS1 \nClass \v I love this class"
   - **c.** date
   - **d.** date "+%Y-%m-%d %T"
   - **e.** hostname

f. uname

g. uname -a

h. uptime

i. man ls (you may need to Press **q** to quit)

j. man who (you may need to Press q to quit)

k. clear

l. du -hs ~

m. du -h ~

n. df -h

Question 4

Write down the commands that you use to perform these operations into the Word document. First verify they work using the Linux terminal.

a. Create a file called test.txt in your HOME directory. To create a file you can use the touch command. The format of this command is : touch file1

b. Create a folder called **Lab03** in your home directory and change into that folder.

c. Copy the file test.txt from the home directory into your Lab03 directory. The command to copy a file is '*cp' (without the quotes).*

d. If the destination file exists before you give a copy command, the copy command will overwrite it. For example in c. above, if a file called **test.txt** already exists in the **Lab03** directory, then it will be overwritten if you use the basic form of the copy command. How can you modify the copy command to ensure that the system will prompt before carrying out such an operation?

e. Make 2 directories in the **Lab03** directory. Name them **myDir1** and **myDir2.**

f. Change into **myDir2.**

g. Move **test.txt** to **myDir2.** The command to move is file is 'mv' (without the quotes)

h. What command do you use to find out information such as the owner and size of the file that you just moved?

i. Rename **test.txt** to **happy.txt**

j. Create another file in your home directory: call it **Listing.txt**

k. Redirect the output of the who command to **Listing.txt**

l. Use the **cat** command to print the contents of the file **Listing.txt** on the screen. (Read/concatenate one or more files and print them on standard output).

m. Append the output of **ls** to the **Listing.txt** file.

n. Print the contents of **Listing.txt** on the screen.

Question 5

Write down the commands that you use to perform these operations. First verify they work using the Linux terminal.

a. Use the **cat** command and the redirection operator to create an empty file called **q5.txt**. You should use <ctrl-D> after entering the command – this will create an empty file

b. Use the interactive form of **rm** to delete this file – using the interactive form the system should prompt you with the name of the file before it is deleted.

c. Create a file called **courses.txt** using **cat** and redirection. Enter a few lines of text before using <ctrl-D> to return to the prompt.

d. Print the contents of this file (**courses.txt**) to the screen.

e. Search for a string in this file using the **grep** command