Problem 1: Suppose you are in the Documents directory.

Perform the following in the right order using ONE line of command for each question. I should be able to run your commands in the order you write them to achieve the results.

1. Create a directory Assignment01 in Documents

mkdir Assignment01

2. Create a directory Problem02 under Assignment01

cd Assignment01; mkdir Problem02

3. Create another directory Assignment02 in Documents

cd ..; mkdir Assignment02

4. Enter the directory Assignment01

cd Assignment01

5. Without leaving the current directory, create a file logfile in the directory Assignment02

touch ../Assignment02/logfile

6. Without leaving the current directory, move the file logfile from Assignment02 to Assignment01

mv ../Assignment02/logfile logfile

7. Without leaving the current directory make a symbolic link for Assignment01 called assignment under Documents

ln -s Assignment01 ../assignment

8. Fetch and store the kernel version number in the logfile using the redirection operator

uname -a > logfile

9. Display the contents of the logfile on the screen

less logfile

10. Append the current date and time as specified by your system to the logfile (must use redirection operator)

date >> logfile

11. Run the made-up, and pretend-installed program MyVirus in the background

MyVirus &

12. Display the pid and other details of the MyVirus process which is running after the previous step (don't display any other running processes)

ps

Problem 2

What are the commands to do the following:

1) Download the file from the made-up url http://www.mycoolurl.com/PrideAndPrejudice

wget http://www.mycoolurl.com/PrideAndPrejudice

2) Create a symbolic link to this file called Pride

ln -s PrideAndPrejudice Pride

2) Display the number of words in the file

wc Pride

3) Display the number of times the word prejudice appears in the file

grep -o prejudice Pride| wc -l

4) Display all lines containing the word prejudice

grep prejudice Pride

5) Remove the file Pride

rm Pride

Problem 3

What would you do to achieve the following in vim

a) Replace all occurrences of the string DontPanic with Panic

%s /DontPanic /Panic /g

b) Go to the first occurrence of the letter x on line 87

87Gfx

c) Search for the first occurrence of the string forty-two

/forty-two

d) Continue searching for forty-two

n

e) Continue searching for forty-two, but backwards through the document

?forty-two

f) Copy line 42 and paste it under line 142

42Gyy142Gp

g) Cut 8 lines from line 42 and paste these at the end of the document

42GV50GdG$p

h) Replace the current word with the string Towel-Day

cwTowel-Day

i) Go to the end of line 89

89G$

j) Go to the beginning of line 75

75G0

k) Start entering new text below the current line

o

l) Start entering new text above the current line

O

m) Start entering new text before the position of the cursor

i

n) Start entering new text (You guessed it) after the position of the cursor

a

o) Go 15 paragraphs below line 90

90G15{

p) Enter visual mode and indent the current line by one tab space

V>

q) Display line numbers

:set number

r) Quit without saving

:q!

s) Save and Quit

:wq

t) Save, but do not quit

w

Problem 4

Explain in about 3/4 of a page the difference between Kernel and Operating System

An operating system is a system program that provides an interface between the user and the computer. A Kernel is also a system program, however, it provides an interface between the application and the hardware. All systems need operating systems in order to run. Similarly, all operating systems need Kernels to run. In this sense, the Kernel is the foundation of the operating system and therefore, acts as a bridge between software and hardware. A Kernel also takes care of memory management, process management, task management and disk management. An operating system is responsible for all this in addition to being responsible for protection and security of the system. Overall, an operating system is an important software that runs a system. Without an operating system you can’t run a system on your computer. A Kernel is an important program in the operating system and without a Kernel, an operating system won’t work.