Lab Activity - 1

Submission Deadline: 25 August 2020 - 7.00PM (Moodle Submission)

Topic: Basic Shell Session

Submission instructions: Submit this as LabActivity1_<ROLLNUMBER>.tar on Moodle.

LabActivity1_<ROLLNUMBER>

|-- act1.sh

|-- act2.sh

|-- act3.sh

Activity 1:

1. Change from current directory to /usr/local/lib using absolute path.
2. Switch back to the directory you were working in.
3. Change from this to /usr/src using relative path.
4. Go to the user's home directory using one command.
5. In Documents, create a directory called LabActivity1.
6. Enter this directory

Activity 2: File permissions, patterns in a file

Resources:
https://gist.githubusercontent.com/provpup/2fc41686eab7400b796b/raw/b575bd01a58494dfddc1d6429ef0167e709abf9b/hamlet.txt

1. Consider the file "hamlet.txt". Display all occurrences (case insensitive) of the word "to" in the file.
2. In the same file, display all the lines in which the word "is" occurs (not as a part of any other word). (Words like "despised" should not be present in your output).
3. Display 2 lines below the word "bear".
4. Remove read, write and execute access from the file "hamlet.txt" for group and others using 2 different ways. (symbolic and octal)
5. Allow everyone to read write and execute the same file (hamlet.txt), using a single command
6. View all the groups that the current user account is attached to.
7. Change the group of the file "hamlet.txt". (chown)
8. List all the files from your home directory for which group has execute permissions. (Hint: piping, grep)

Activity 3: Piping and redirection

1. Create a new file named out1, which contains the calendar for this month. (output redirection)
2. To the same file, append today's date (using the command).
3. Display the contents of this file.
4. Display the last 3 lines of the file.
5. Display the lines 3 to 7. (Piping)
6. Display the number of lines in the output of task 5, using piping.
7. Using the echo command, write the string "This day is awesome." in new file called "out2".
8. Print the number of words in the file "out2".
9. Append the line "I am looking forward to the day." in the same file.
10. Print the number of lines in the file "out2".
11. Print the 5th column of the file "out1".
12. Print from column number 4 to column number 9 (both included) of the file "out1".
13. Extract from the third column till the end from the file "out1".
14. Print the second and the fourth words of every row from the file "out2" using a single command (Hint: space delimiter). Expected output: day awesome. am forward

Lab Activity (Not Graded) :

Question 1: List all the files and folders (not hidden files) in your home directory (from any other directory) in long listing format and store the output in a file named 'file.txt' in the home directory.

Rename the 'file.txt' to 'file1.txt' and extract the fifth field (column) of the content of the file 'file1.txt' separating each field by space and display all the unique values. (Hint: you will need to replace multiple spaces by a single space).

Answer:

```
ls -l ~ > ~/file.txt

Mv ~/file.txt ~/file1.txt

cat ~/file1.txt | tr -s ' ' | cut -d ' ' -f 5 | sort -n | uniq
```

Question 2: Write one-line commands (using pipes) to use in following scenario:

$ ls

to_replace.txt

replace/

$ c

at t

o_replace.txt

a b

f g

$ ls replace

a.txt b.txt c.txt d.txt e.txt f.txt g.txt h.txt i.txt ... x.txt y.txt z.txt

$ <Your Command Here>

$ ls replace

aa.txt bb.txt c.txt d.txt e.txt ff.txt gg.txt h.txt i.txt ... x.txt y.txt z.txt