**Practice Problems**

**Question 1:**

Get user info from /etc/passwd and change ownership of user’s home directory (select userid higer than 1000)

1. View /etc/passwd file

* nano passwd.txt

Hi I'm Shreyas...

Working on Deep Learning Project and on the way to success

1. Print the 1st field from /etc/passwd file

* Head -1 passwd.txt

Hi I'm Shreyas...

1. Print all userid > 1000

* $ awk '$4 > 100000' data.csv

Id EmployeeName JobTitle BasePay OvertimePay OtherPay TotalPay TotalPayBenefits

1 NATHANIEL GM 167411 0 400184 567595 567595

2 GARY CAPTAIN 155966 245131 137811 538909 538909

3 ALBERT CAPTAIN 212739 106088 16452 335279 335279

5 PATRICK DEPUTYCHIEF 134401 9737 182234 326373 326373

6 DAVID ASSTDEPUTY 118602 8601 189082 316285 316285

8 DAVID DEPUTYDIRECTOR 256576 0 51322 307899 307899

10 JOANNE CHIEF 285262 0 17115 302377 302377

13 EDWARD EXECUTIVE 294580 0 0 294580 294580

1. Print 2nd field to get home directory
2. Use command Substitution to get user list and home directory
3. Change ownership of above home directory with user which is retrieve above
4. Iterate above steps for all userid > 1000

**Question 2:**

Move files from one folder to the respective folders.

1. Create file in current directory or any temporary directory – abc.txt, def.txt, ghi.txt, jkl.txt

* touch abc.txt

touch asdf.pdf

touch jkl.csv

1. Print list of files to move

* $ ls

abc.txt asdf.pdf jkl.csv

1. Segregate basename and extension of a file.

* find . \*.pdf

.

.abc.txt

.asdf.pdf

.jkl.csv

asdf.pdf

1. Create folder using basename

* mkdir asdf

mkdir abc

mkdir jkl

1. Move files to newly created folder.

* mv asdf.pdf asdf

mv abc.txt abc

mv jkl.csv jkl

1. Iterate above steps for all files.

**Question 3:**

Append Current date to all log file names which has extension .log.1 from a folder

1. Create files with name abc.log.1, def.log.1, jkl.log.1, mno.log.1

* touch abc.log.1

touch def.log.1

touch ghi.log.1

touch jkl.log.1

touch mno.log.1

1. Print list of files to rename.

* ls

abc.log.1 def.log.1 ghi.log.1 jkl.log.1 mno.log.1

1. Segregate basename and extension of a file

* find . \*.log.1

.

./abc.log.1

./def.log.1

./ghi.log.1

./jkl.log.1

./mno.log.1

abc.log.1

def.log.1

ghi.log.1

jkl.log.1

mno.log.1

1. Print Date command to show I ddmmyy

* date +"%d-%m-%Y"

18-05-2022

1. Append Date to the log file name

* mv abc.log.1 abc-$(date +%d-%m-%Y).log

mv def.log.1 def-$(date +%d-%m-%Y).log

mv ghi.log.1 ghi-$(date +%d-%m-%Y).log

mv jkl.log.1 jkl-$(date +%d-%m-%Y).log

mv mno.log.1 mno-$(date +%d-%m-%Y).log

* $ ls

abc19-05-2022.log ghi-19-05-2022.log mno-19-05-2022.log

def-19-05-2022.log jkl-19-05-2022.log

1. Iterate above steps for all the log files which has extension .log.1

**Question 4:**

Archive files for /var/log folder which have modified 7 days ago and move it to your backup folder

1. Identify files which have modified time greater than 7 days
2. Move these files to the backup folder

**Question 5:**

Print last 4 frequently access urls count in sorted order from /var/log/httpd/access.log

1. View /var/log/httpd/access.log

* cat access.log

1. Print field which has urls data.

* cat access.log | awk ‘{print $15}’

1. Sort extracted urls and count it

* cat access.log | awk ‘{print $15}’ | sort -nr

1. Print 4 unique urls

* cat access.log | awk ‘{print $15}’ | sort -nr | uniq -c

**Question 6:**

Print list of last 4 frequently access unique urls at particular hours from /var/log/httpd/access.log

1. View access.log without opening it using editor.

* cat access.log

1. Print Urls which has given timestamp.

* cat access.log | awk ‘{print $15}’

1. Sort extracted urls and count it.

* cat access.log | awk ‘{print $15}’ | sort -nr

1. Print 4 unique urls.

* cat access.log | awk ‘{print $15}’ | sort -nr | uniq -c

**Question 7:**

Print list of last 10 unique sorted client IP from /var/log/httpd/Access.log

1. View access.log without opening it using editor.

* cat access.log

1. Print client IP field from access log

* cat access.log | awk ‘{print $1}’

1. Sort extracted client IP and count it

* cat access.log | awk ‘{print $15}’ | sort -n

1. Print 4 unique client Ips

* cat access.log | awk ‘{print $15}’ | sort -n | uniq -c

**Question 8:**

Print list of web response code count in the uniqe sorted order at specific hours

1. View access.log without opening it using editor

* cat access.log

1. Print web response code field which has given timestamp

* cat access.log | awk '{print $4}'

1. Sort extracted responses code and count it

* cat access.log | awk '{print $4}' | sort -n

1. Print 4 unique responses code count

* cat access.log | awk '{print $4}' | sort -n | uniq -c