Lecture 2

DAY 2

- Searching the filesystem

- WH Commands

- Pipelining

- Standard Output and Error

- Vim Editor

- Managing Users and Groups

Searching the filesystem

Find command is used to search and locate the list of files and directories based on conditions you specify for files that match the arguments

Searching the filesystem

There are various options for the find command in linux.

-name: to search by a file name
Example: find /home/user -name book

-i: used to ignore case

-type: to search by type

    -type f: for files

    -type d: for directories

Searching the filesystem

-perm: to search for files with specific permissions

-empty: to find empty files or directories

Example:
find /home/hassanmohamed –name book -type d -perm 077 → ?

Searching the filesystem

Locate command is used to print the path of a specific file or directory.

Example: locate examscroes.txt

locate "*.html" –n 20 → ?

locate -c "*.html" → to display the number of files with the mentioned criteria

locate -i "scores" → to ignore case sensitivity

WH Commands

- whoami: prints effective userid
- whereis: locates the binary, source and manual page files for a command

Pipelining

The Pipe is a command in Linux that lets you use two or more commands such that output of one command serves as input to the next.

Example:

ls -l | find . –type f

cat scores.txt | grep Ahmed

Standard Output and Error

">" to direct output by overwrite the file

">>" to direct output by append the file

ls -l /home/maihussein >> mai_hussein_content.txt

ls mm 2> lab/err.txt → to direct error if exist to err.txt file instead of screen

ls mm 2> lab/err.txt 1> lab/out.txt → to direct error to err.txt and output to out.txt

ls mm &> lab/both.txt →to save output and error to same file

Standard Output and Error

#echo "new line of information" >> /tmp/many-lines-of-information → ?

#find /etc -name passwd 2> /tmp/errors

→ overwrite standard errors in errors file

find /etc -name passwd 2> /tmp/errors 1> /tmp/output

→ overwrite standard output to file "output" and standard error in file "errors"

find ~/Desktop/ -name out.txt >> /tmp/result.txt

→append standard output

Standard Output and Error

\# find /etc -name passwd > /tmp/output 2> /dev/null
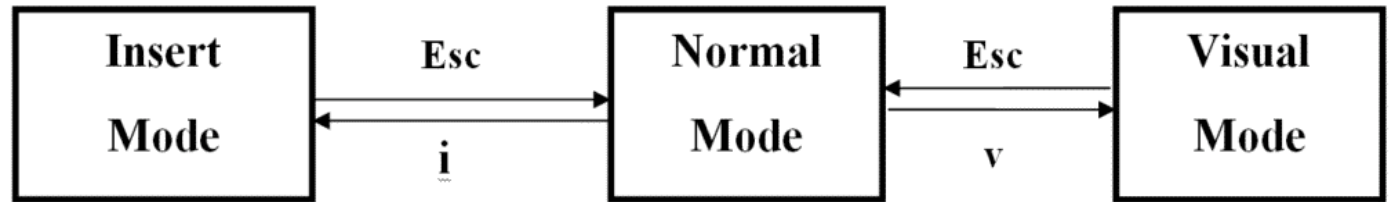
→ ?

\# find /etc -name passwd &> /tmp/save-both

→ ?

\# find /etc -name passwd >> /tmp/save-both 2>&1

→ to append standard output and standard error in same file

Text Editors

VIM Editor-Modes

Text Editors

yy → copy

dd → cut

pp → paste

:q - → quit

:q! → force quit

:w → save without quit

:wq → save and quit

:wq! → force save and quit

:u → undo

: set number → show lines number

Managing Users and Groups

<u>Adding Users</u>

useradd mostafa → command to add new user to the system

passwd mostafa   → command to change passwd of user

How to create password for a new user?

cat /etc/passwd   → to see the configuration file of command passwd

tail -n 1 /etc/passwd   → to see configuration of the last added user

mostafa:x:1002:1002::/home/mostafa:/usr/bin/bash

username:password:UID:GID:GECOS:/home/dir:shell

Note: !! indicates that the user has no password

Managing Users and Groups

Adding Groups

-Primary group is the user Private Group (UPG).

groupadd sales → to add new group to your system

groupadd -g 1005 admin → to add new group to your system with specific group ID)

Managing Users and Groups

<u>Switching users with su</u>

su mostafa

pwd → you will figure out you still under working directory of the root

exit

su - mostafa

pwd → you will find you move to working directory of the user

su - → switch to root user

Managing Users and Groups

Modifying Users

usermod --help → to see command options

usermod -L mostafa → lock the user

usermod -U mostafa → unlock the user

usermod -G sales mostafa → overwrite secondary group

usermod -aG admin mostafa → append to secondary group

Managing Users and Groups

Modifying Groups

groupmod -g 2000 admin → ?

groupadd old → ?

groupmod -n new old → rename a group

Managing Users and Groups

<u>Running commands as root with sudo</u>

sudo passwd ahmed

→ to give passowrd for user ahmed

sudo passwd -l ahmed

→ to lock account

sudo usermod mostafa -aG sudo

→to add user mostafa to sudoers group as a secondary group

Managing Users and Groups

Deleting Users and Groups

userdel mostafa → to delete the user mostafa

groupdel sales → to delete group sales

Managing Users and Groups

<u>Password Aging</u>

chage -l mostafa → list info about the user

chage -E 2017-1-1 mostafa → expire the user on the specified address

chage -m 1 mostafa → set minimum number of days before password change

chage -M 120 mostafa → set maximim number of days before password change

passwd -x 90 mostafa → the password will expire after 90 days

Assignments

- NANO Editor
- YUM Package Manager
- RPM Package Manager
- Standard Input

How to present your assignment?

- 2-3 slides presentation
- Live example on your machine
- For Nano Editor team: Compare it with VIM and VI
- For YUM team: Compare it with RPM
- For RPM team: Compare it with YUM