Mawlana Bhashani Science and Technology University

Lab-Report

Report No: 02

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Experiment no : 02

Experiment Name : Basic Command Of Linux Operating System.

Theory :

Linux is an operating system,that manages all of the hardware resources associated with your desktop or laptop. Linux is a Unix-Like operating system. All the Linux/Unix commands are run in the terminal provided by the Linux system. This terminal is just like the command prompt of Windows OS. Linux/Unix commands are *case-sensitive.* The terminal can be used to accomplish all Administrative tasks. This includes package installation, file manipulation, and user management. Linux terminal is user-interactive. The terminal outputs the results of commands which are specified by the user itself.

15 commands in Linux Operating System:

1. apt – Package manager for linux and derivitives.

2. pwd – Print working directory used to display the location that the terminal is open in.

3. ps – Process States displays info about all the running processes.

4.Uname – The uname command reports basic information about a computer's software and hardware.

5.kill – Terminates all running process.

6..ls – list information about the content of a directory.

7. cd – change directory and use to browse the file system.

8.mkdir – make directory used to create a new folder.

9.rmdir –remove directory used to delete folders.

10. man – Displays manuals for various commands.

11. history – Displays commands run in a chronological order.

12. passwd – Changes user password.

13. clear – Clears the terminal of all the output.

14.exit – exit command in linux is used to exit the shell where it is currently running

15. shutdown –Turns of the computer various option allow socheduling the shutdown.

Implementation :

- Step-1: First input the processes with their burst time and priority.
- Step-2: Sort the processes, burst time and priority according to the priority.
- Step-3: Now simply apply FCFS algorithm.

Working Process :

```
jui@DESKTOP-1T35KU2:~$ sudo apt update
[sudo] password for jui:
Get:1 http://security.ubuntu.com/ubuntu focal-security InRelease [107 kB]
Hit:2 http://archive.ubuntu.com/ubuntu focal InRelease
Get:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease [111 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-backports InRelease [98.3 kB]
Fetched 317 kB in 3s (97.5 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
48 packages can be upgraded. Run 'apt list --upgradable' to see them.
jui@DESKTOP-1T35KU2:~$
```

```
jui@DESKTOP-1T35KU2:~$ pwd
/home/jui
jui@DESKTOP-1T35KU2:~$ ps -aux
USER       PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   8328   160 ?        Ss   05:50   0:00 /init
root        41  0.0  0.0   8328   156 tty2     Ss   05:59   0:00 /init
jui         42  0.4  0.0  18084  3600 tty2     S    05:59   0:00 -bash
jui         65  0.0  0.0  18880  2040 tty2     R    05:59   0:00 ps -aux
jui@DESKTOP-1T35KU2:~$ uname -a
Linux DESKTOP-1T35KU2 4.4.0-17763-Microsoft #1217-Microsoft Mon May 05 16:09:00 PS
jui@DESKTOP-1T35KU2:~$ shutdown now
```

```
jui@DESKTOP-1T35KU2:~$ killall
Usage: killall [ -Z CONTEXT ] [ -u USER ] [ -y TIME ] [ -o TIME ] [ -eIgiqrvw ]
               [ -s SIGNAL | -SIGNAL ] NAME...
       killall -l, --list
       killall -V, --version

  -e,--exact          require exact match for very long names
  -I,--ignore-case    case insensitive process name match
  -g,--process-group  kill process group instead of process
  -y,--younger-than   kill processes younger than TIME
  -o,--older-than     kill processes older than TIME
  -i,--interactive    ask for confirmation before killing
  -l,--list           list all known signal names
  -q,--quiet          don't print complaints
  -r,--regexp         interpret NAME as an extended regular expression
  -s,--signal SIGNAL  send this signal instead of SIGTERM
  -u,--user USER      kill only process(es) running as USER
  -v,--verbose        report if the signal was successfully sent
  -V,--version        display version information
  -w,--wait           wait for processes to die
  -n,--ns PID         match processes that belong to the same namespaces
                      as PID
  -Z,--context REGEXP kill only process(es) having context
                      (must precede other arguments)

jui@DESKTOP-1T35KU2:~$ exit
```

```
jui@DESKTOP-1T35KU2:~$ ls -la
total 12
drwxr-xr-x 1 jui  jui  4096 Sep 12 05:06 .
drwxr-xr-x 1 root root 4096 Sep 11 20:15 ..
-rw------- 1 jui  jui   832 Sep 12 05:50 .bash_history
-rw-r--r-- 1 jui  jui   220 Sep 11 20:15 .bash_logout
-rw-r--r-- 1 jui  jui  3771 Sep 11 20:15 .bashrc
drwx------ 1 jui  jui  4096 Sep 12 05:06 .config
drwxr-xr-x 1 jui  jui  4096 Sep 11 20:15 .landscape
-rw-rw-rw- 1 jui  jui     0 Sep 12 04:24 .motd_shown
-rw-r--r-- 1 jui  jui   807 Sep 11 20:15 .profile
-rw-r--r-- 1 jui  jui     0 Sep 12 04:38 .sudo_as_admin_successful
jui@DESKTOP-1T35KU2:~$ ls /mnt/
c  d  e  f  g
jui@DESKTOP-1T35KU2:~$ cd /mnt/f
jui@DESKTOP-1T35KU2:/mnt/f$ ls -la
ls: 'System Volume Information': Permission denied
total 211132
drwxrwxrwx 1 jui  jui       4096 Dec  9  2018 '$RECYCLE.BIN'
drwxrwxrwx 1 jui  jui       4096 Sep 12 05:01  .
drwxr-xr-x 1 root root      4096 Sep 11 20:14  ..
-rwxrwxrwx 1 jui  jui     365149 Mar 18 12:58  90180711_134731708087943_304911
drwxrwxrwx 1 jui  jui       4096 Mar  8  2020 'Install Software'
drwxrwxrwx 1 jui  jui       4096 Mar  6  2020 'New folder project'
-rwxrwxrwx 1 jui  jui    1114172 Jun 15 13:32 'Nusrat Jahan Jui_IT-18039_CT_01
d--x--x--x 1 jui  jui       4096 Feb 18  2018 'System Volume Information'
```

```
jui@DESKTOP-1T35KU2:/mnt/f$ mkdir linuxfolder
jui@DESKTOP-1T35KU2:/mnt/f$ rmdir linuxfolder
jui@DESKTOP-1T35KU2:/mnt/f$ man cp
jui@DESKTOP-1T35KU2:/mnt/f$ clear
```

```
CP(1)                                                User Commands

NAME
       cp - copy files and directories

SYNOPSIS
       cp [OPTION]... [-T] SOURCE DEST
       cp [OPTION]... SOURCE... DIRECTORY
       cp [OPTION]... -t DIRECTORY SOURCE...

DESCRIPTION
       Copy SOURCE to DEST, or multiple SOURCE(s) to DIRECTORY.

       Mandatory arguments to long options are mandatory for short options too.

       -a, --archive
              same as -dR --preserve=all

       --attributes-only
              don't copy the file data, just the attributes

       --backup[=CONTROL]
              make a backup of each existing destination file

       -b     like --backup but does not accept an argument

       --copy-contents
              copy contents of special files when recursive

 Manual page cp(1) line 1 (press h for help or q to quit)
```

```
   82  killall
   83  clear
   84  ls -la
   85  ls /mnt/
   86  cd /mnt/f
   87  ls -la
   88  mkdir linuxfolder
   89  rmdir linuxfolder
   90  man cp
   91  clear
   92  history
jui@DESKTOP-1T35KU2:/mnt/f$ history -c
jui@DESKTOP-1T35KU2:/mnt/f$ history
    1  history
jui@DESKTOP-1T35KU2:/mnt/f$ passwd
Changing password for jui.
Current password:
New password:
```

Discussion :

Linux is open source software,the source code is available for review. Linux is Mainly used in server. About 90% of the internet is powered by Linux servers. This is because Linux is fast, secure, and free! The main problem of using Windows servers are their cost. This is solved by using Linux servers. The OS that runs in about 80% of the smartphones in the world, Android, is also made from the Linux kernel. Most of the viruses in the world run on Windows, but not on Linux.