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EXP.No.2-

Aim: Execution of Unix General Purpose Utility Commands

Objective:
Outcome: Identify the Unix general purpose commands

General purpose Commands - echo, clear, exit, date, , cal, cat, , man, which, history, id, pwd, whoami, ping, ifconfig, pr.Working with Editor Vi/other editor

Exercise 1 (Getting Familiar with Linux)

Enter these commands at the UNIX prompt, and try to interpret the output:

- echo hello world
- passwd
- date
- who am i
- who
- finger
- top (you may need to press q to quit)
- echo $SHELL
- echo {con,pre}{sent,fer}{s,ed}
- man "automatic door"
- man ls (you may need to press q to quit)
- man who (you may need to press q to quit)
- clear
- cal 2000
- cal 9 1752 (do you notice anything unusual?)
- bc -l (type quit or press Ctrl-d to quit)
- echo 5+4 | bc -l
- yes please (you may need to press Ctrl-c to quit)
- time sleep
- history
- ifconfig
- ping

Exercise 2 Execute following set of commands in sequence
- **cd**
- pwd
- ls –al
- cd .
- pwd
- cd ..
- pwd
- ls –al
- cd ..
- pwd   (what happens now)
- cd /etc
- ls –al | more
- cat passwd

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- cd ~
- pwd

1. Change back into your home directory.
2. **Make subdirectories called work and play.**
3. **Delete subdirectory called work.**
4. Copy file /etc/passwd into your home directory.
5. Move it into the subdirectory **play**

The most popular editor under unix environment is vi editor, a visual editor. It supports most programming languages and their syntax. This will be in three modes:

1. Command mode: The default mode where every key pressed is interpreted as command.
2. Input mode: This mode allows us type in the text.
3. ex mode (or last line mode): This mode is used to handle files.

To create or modify a text file, type *vi filename <enter>* at the shell prompt.
Example: …]$ vi hello.c
The vi editor displays the contents of the file, if it exists. The editor will be in the command mode. Press *i* to insert text (Input mode). To return to command mode press [Esc] key. Press : here to get to ex mode.

Output:

```
soham32@soham32-VirtualBox:~$ echo Hello World
Hello World
soham32@soham32-VirtualBox:~$ date
Tuesday 25 January 2022 08:39:36 PM IST
soham32@soham32-VirtualBox:~$ who
soham32   :0           2022-01-25 19:55 (:0)
soham32@soham32-VirtualBox:~$ cal 2022
                           2022
      January               February               March
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
                   1         1  2  3  4  5         1  2  3  4  5
 2  3  4  5  6  7  8   6  7  8  9 10 11 12   6  7  8  9 10 11 12
 9 10 11 12 13 14 15  13 14 15 16 17 18 19  13 14 15 16 17 18 19
16 17 18 19 20 21 22  20 21 22 23 24 25 26  20 21 22 23 24 25 26
23 24 25 26 27 28 29  27 28                 27 28 29 30 31
30 31

       April                  May                   June
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
                1  2   1  2  3  4  5  6  7            1  2  3  4
 3  4  5  6  7  8  9   8  9 10 11 12 13 14   5  6  7  8  9 10 11
10 11 12 13 14 15 16  15 16 17 18 19 20 21  12 13 14 15 16 17 18
17 18 19 20 21 22 23  22 23 24 25 26 27 28  19 20 21 22 23 24 25
24 25 26 27 28 29 30  29 30 31              26 27 28 29 30

       July                 August               September
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
                1  2      1  2  3  4  5  6            1  2  3
 3  4  5  6  7  8  9   7  8  9 10 11 12 13   4  5  6  7  8  9 10
10 11 12 13 14 15 16  14 15 16 17 18 19 20  11 12 13 14 15 16 17
17 18 19 20 21 22 23  21 22 23 24 25 26 27  18 19 20 21 22 23 24
24 25 26 27 28 29 30  28 29 30 31           25 26 27 28 29 30
31

      October               November              December
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
                   1      1  2  3  4  5            1  2  3
 2  3  4  5  6  7  8   6  7  8  9 10 11 12   4  5  6  7  8  9 10
 9 10 11 12 13 14 15  13 14 15 16 17 18 19  11 12 13 14 15 16 17
16 17 18 19 20 21 22  20 21 22 23 24 25 26  18 19 20 21 22 23 24
23 24 25 26 27 28 29  27 28 29 30           25 26 27 28 29 30 31
30 31
```

```
LS(1)                           User Commands                              LS(1)

NAME
       ls - list directory contents

SYNOPSIS
       ls [OPTION]... [FILE]...

DESCRIPTION
       List  information  about  the FILEs (the current directory by default).
       Sort entries alphabetically if none of -cftuvSUX nor --sort  is  speci-
       fied.

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

       -a, --all
              do not ignore entries starting with .

       -A, --almost-all
              do not list implied . and ..

       --author
```

```
soham32@soham32-VirtualBox:~$ top

top - 20:40:17 up 45 min,  1 user,  load average: 0.29, 0.18, 0.11
Tasks: 191 total,   2 running, 188 sleeping,   1 stopped,   0 zombie
%Cpu(s): 20.0 us,  6.7 sy,  0.0 ni, 73.3 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :   3487.0 total,   1671.2 free,    664.6 used,   1151.2 buff/cache
MiB Swap:   2048.0 total,   2048.0 free,      0.0 used.   2653.4 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
 1170 soham32   20   0 3712672 332844 128156 S  12.5   9.3   1:03.85 gnome-shell
  904 soham32   20   0  557732  78160  46680 S   6.2   2.2   0:48.46 Xorg
 1915 soham32   20   0  822392  50404  38728 S   6.2   1.4   0:20.49 gnome-terminal-
    1 root      20   0  167644  11228   8088 S   0.0   0.3   0:00.99 systemd
    2 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kthreadd
    3 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_gp
    4 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_par_gp
    5 root      20   0       0      0      0 I   0.0   0.0   0:02.42 kworker/0:0-events
    6 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/0:0H-events_h
    9 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq
   10 root      20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_rude_
   11 root      20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_trace
   12 root      20   0       0      0      0 S   0.0   0.0   0:00.14 ksoftirqd/0
   13 root      20   0       0      0      0 R   0.0   0.0   0:00.77 rcu_sched
   14 root      rt   0       0      0      0 S   0.0   0.0   0:00.05 migration/0
   15 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/0
   16 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/0
   17 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kdevtmpfs
   18 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 netns
   19 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 inet_frag_wq
   20 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kauditd
   21 root      20   0       0      0      0 S   0.0   0.0   0:00.00 khungtaskd
   22 root      20   0       0      0      0 S   0.0   0.0   0:00.00 oom_reaper
   23 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 writeback
   24 root      20   0       0      0      0 S   0.0   0.0   0:00.36 kcompactd0
   25 root      25   5       0      0      0 S   0.0   0.0   0:00.00 ksmd
   26 root      39  19       0      0      0 S   0.0   0.0   0:00.00 khugepaged
   72 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kintegrityd
   73 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kblockd
   74 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 blkcg_punt_bio
   75 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 tpm_dev_wq
   76 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 ata_sff
   77 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 md
   78 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 edac-poller
   79 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 devfreq_wq
```

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```
soham32@soham32-VirtualBox:~$ pwd
/home/soham32
soham32@soham32-VirtualBox:~$ cd Downloads/
soham32@soham32-VirtualBox:~/Downloads$ cd .
soham32@soham32-VirtualBox:~/Downloads$ cd ..
soham32@soham32-VirtualBox:~$ ls -a;
.               Downloads        snap                        Templates
..              .gnupg           so                          t.txt
.bash_history   .local           soham                       .vboxclient-clipboard.pid
.bash_logout    Music            Soham                       .vboxclient-display-svga-x1
.bashrc         Pictures         soham1.txt                  .vboxclient-draganddrop.pid
c1.tar          .profile         soham2.txt                  .vboxclient-seamless.pid
.cache          Public           soham3                      Videos
.config         .python_history  .ssh                        .viminfo
Desktop         s                .sudo_as_admin_successful
Documents       s1               .swp
soham32@soham32-VirtualBox:~$ ls -al
total 160
drwxr-xr-x 18 soham32 soham32  4096 Jan 25 19:55 .
drwxr-xr-x  4 root    root     4096 Jan 24 14:30 ..
-rw-------  1 soham32 soham32  3456 Jan 25 20:15 .bash_history
-rw-r--r--  1 soham32 soham32   220 Oct  9 19:53 .bash_logout
-rw-r--r--  1 soham32 soham32  3771 Oct  9 19:53 .bashrc
-rw-rw-r--  1 soham32 soham32 10240 Jan 24 14:14 c1.tar
drwx------ 17 soham32 soham32  4096 Jan 13 13:22 .cache
drwx------ 15 soham32 soham32  4096 Oct 10 11:33 .config
drwxr-xr-x  2 soham32 soham32  4096 Jan 17 14:17 Desktop
drwxr-xr-x  2 soham32 soham32  4096 Oct  9 19:57 Documents
drwxr-xr-x  2 soham32 soham32  4096 Oct  9 19:57 Downloads
drwx------  3 soham32 soham32  4096 Jan 20 14:15 .gnupg
drwx------  3 soham32 soham32  4096 Oct  9 19:57 .local
drwxr-xr-x  2 soham32 soham32  4096 Oct  9 19:57 Music
drwxr-xr-x  2 soham32 soham32  4096 Oct  9 19:57 Pictures
-rw-r--r--  1 soham32 soham32   807 Oct  9 19:53 .profile
drwxr-xr-x  2 soham32 soham32  4096 Oct  9 19:57 Public
-rw-------  1 soham32 soham32     7 Jan 25 00:28 .python_history
-rw-rw-r--  1 soham32 soham32    52 Jan 24 13:42 s
-rw-rw-r--  1 soham32 soham32     0 Jan 17 13:28 s1
drwx------  3 soham32 soham32  4096 Oct 10 01:32 snap
-rw-rw-r--  1 soham32 soham32    72 Jan 24 14:05 so
drwxrwxr-x  2 soham32 soham32  4096 Jan 17 14:17 soham
drwxrwxr-x  2 soham32 soham32  4096 Jan 24 14:13 Soham
-rw-rw-r--  1 soham32 soham32    29 Jan 17 13:43 soham1.txt
-rw-rw-r--  1 soham32 soham32    27 Jan 17 13:43 soham2.txt
-rw-rw-r--  1 soham32 soham32    29 Jan 17 14:00 soham3
drwx------  2 soham32 soham32  4096 Oct  9 20:04 .ssh
-rw-r--r--  1 soham32 soham32     0 Oct 10 01:21 .sudo_as_admin_successful
-rw-------  1 soham32 soham32 12288 Jan 24 13:21 .swp
```

Conclusion:- General purpose commands executed successfully