TASK 5

Task: Create a tutorial that explains how to use the "htop" command-line tool to monitor resource utilization on a Linux system. Cover the key features of "htop" and provide realtime examples of its application.

Htop: "htop" command is used as a cross-platform interactive process viewer.

To install htop use the following command:

Sudo apt install htop

```
venis@venis-VirtualBox: ~
                                                                                                                             Tasks: 127, 434 thr; 1 running Load average: 0.16 0.16 0.27
                                                                                                    0K/2.00G
                                                                                                                            Uptime: 06:21:17
                                                                                                                 2:17.36 /usr/bin/pulseaudio --daemonize=no --log-target=journal
 1205 venis
                                                                                          2.9 0.3
1.4 4.9
0.7 0.1
0.7 4.9
                                                                                                                1:45.65 /usr/bin/pulseaudio --dae
0:19.52 /snap/firefox/3626/usr/li
0:00.56 /usr/libexec/accounts-dae
1291 venis
                                           0 2157M 28324 22692 S
3708 venis
                                 0 3591M
                                           0 234M
0 3591M
0 3591M
                                                                           6816
2888 venis
3118 venis
                                                              390M
390M
                                                                           149M
149M
                                                                                                               0:50.38 /snap/firefox/3626/usr/lib/firefox/firefox
0:10.18 /snap/firefox/3626/usr/lib/firefox/firefox
                                                                                           0.7
0.7
0.7
0.7
 3558 venis
                                           0 2420M
                                                                                                                0:41.88 /snap/firefox/3626/usr/lib/firefox/firefox -contentproc -child
                                                                                                    2.0
3715 venis
3998 venis
                                           0 2420M
                                                                        90064 S
                                                                                                                0:13.31
                                                                                                                0:01.04 /usr/libexec/gnome-terminal-server
                                                            54364
                                                                        41640 S
                                                                                                               0:00.17 htop
0:00.17 htop
0:00.17 splash
0:00.19 /lib/systemd/systemd-udevd
0:01.44 /lib/systemd/systemd-resolved
0:00.16 /usr/sbin/acpid
0:00.14 avahi-daemon: running [venis-VirtualBox.local]
                                                                                                    0.1
0.2
0.1
0.2
0.0
                                                                          3584 R
8356 S
4736 S
4666 venis
                                                              4992
                                                            13220
7168
                                                                                           0.0
                                           0 25928 14180
0 2812 1920
                                                                           9600 S
1792 S
                                                                                           0.0
0.0
  385
  514 root
  519 avahi
                                                                           3712 S
2688 S
4224 S
                                                  7624
                                                                                         0.0 0.1 0:00.14 avaht-daemon: running [venis-VirtualBox.local]
0.0 0.0 0:00.04 /usr/sbin/cron -f -P
0.0 0.1 0:01.26 @dbus-daemon --system --address=systemd: --nofork --nopidfile
0.0 0.2 0:01.86 /usr/sbin/NetworkManager --no-daemon
0.0 0.3 0:00.25 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-tr
0.0 0.1 0:01.70 /usr/libexec/powletd --no-debug
0.0 0.1 0:00.03 /usr/libexec/power-profiles-daemon
0.0 0.1 0:00.16 /usr/sbin/rsyslogd -n -iNONE
0.0 0.4 0:14.79 /usr/lib/snapd/snapd
tByF7Nice -F8Nice -F8Nice +F9Kill F10Quit
  522 root
                                                 9492
                                                              2816
                                                11092
                                           0 535M 19244
0 41052 21248
                                                                        15916 S
11904 S
  539
                                                237M 11296
                                                              7680
  545 root
                                 20
                                                                           4480 S
  547
                                                              6016
```

- **PID:** PID is process id,
- USER: User column represents the user which started the process.
- **PRI:** PRI shows the priority of the
- NI: The nice value of a process
- VIRT: The size of the virtual memory of the process
- CPU%: It shows the percentage of CPU usage by a process
- **RES:** The resident set size (text + data + stack) of the process.
- **SHR:** The size of the process's shared pages.
- MEM% It shows the percentage of memory usage by the process
- **TIME:** The amount of time has been running for
- Command: it shows the command to run that process

Following are the options:

- **F1**: F1 is to show help
- **F2**: F2 is used to select setup
- **F3**: F3 is used to search the process
- **F4**: F4 is used to filter the processes
- F5: F5 is used to show the tree of the command
- **F6**: F6 is used to sort the processes by some feature0
- **F7**: Nice
- **F8**: Nice
- **F9**: F9 is used to kill a process
- **F10**:F10 is to quit