

Adam is working in an IT company. He has been given a task to reduce the load of a system by killing some of the processes running in the LINUX operating system. Which commands will he use to complete the given task with the help of the following operation?

```
saniya@LAPTOP-FSOUOMFO:/mnt/c/Windows/System32$ ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.1  21776 12388 ?        Ss   16:38   0:00 /sbin/init
root         2  0.0  0.0   3120  1920 ?        Sl   16:38   0:00 /init
root         7  0.0  0.0   3136  1796 ?        Sl   16:38   0:00 plan9 --control-socket 7 --log-level 4 --server-fd 8
root        53  0.0  0.2  66748 18660 ?        S<s  16:38   0:00 /usr/lib/systemd/systemd-journald
root       113  0.0  0.0   25136  6272 ?        Ss   16:38   0:00 /usr/lib/systemd/systemd-udev
systemd+   124  0.0  0.1  21456 12032 ?        Ss   16:38   0:00 /usr/lib/systemd/systemd-resolved
systemd+   125  0.0  0.0   91024  7808 ?        Ssl  16:38   0:00 /usr/lib/systemd/systemd-timesyncd
root       188  0.0  0.0    4236  2432 ?        Ss   16:38   0:00 /usr/sbin/cron -f -P
message+   189  0.0  0.0   9592  4864 ?        Ss   16:38   0:00 @dbus-daemon --system --address=systemd: --nofork --n
root       196  0.0  0.1  17964  8320 ?        Ss   16:38   0:00 /usr/lib/systemd/systemd-logind
root       198  0.0  0.1 1756096 12032 ?        Ssl  16:38   0:00 /usr/libexec/wsl-pro-service -vv
root       214  0.0  0.0   3160  1920 hvc0     Ss+  16:38   0:00 /sbin/agetty -o -p -- \u --noclear --keep-baud - 1152
syslog     217  0.0  0.0  222508  4992 ?        Ssl  16:38   0:00 /usr/sbin/rsyslogd -n -iNONE
root       220  0.0  0.0   3116  1792 tty1     Ss+  16:38   0:00 /sbin/agetty -o -p -- \u --noclear - linux
root       227  0.0  0.2 107028 22528 ?        Ssl  16:38   0:00 /usr/bin/python3 /usr/share/unattended-upgrades/unatt
root       349  0.0  0.0   3128    768 ?        Ss   16:38   0:00 /init
root       350  0.0  0.0   3144  1024 ?        S    16:38   0:00 /init
saniya     351  0.0  0.0   6076  5120 pts/0    Ss   16:38   0:00 /bin/bash
root       449  0.0  0.0   6692  4224 pts/1    Ss   16:40   0:00 /bin/login -f
saniya     488  0.0  0.1  20308 11008 ?        Ss   16:40   0:00 /usr/lib/systemd/systemd --user
saniya     490  0.0  0.0  21152  3520 ?        S    16:40   0:00 (sd-pam)
saniya     513  0.0  0.0   6056  4864 pts/1    S+   16:40   0:00 -bash
saniya     656  0.0  0.0   8280  4096 pts/0    R+   16:52   0:00 ps aux
```

Kill Processes by name

```
saniya     359    293  0 17:21 pts/1    00:00:00 -bash
polkitd    681      1  0 17:27 ?          00:00:00 /usr/lib/polkit-1/polkitd --no-debug
saniya     816    292  0 17:37 pts/0    00:00:00 ps -ef
saniya@LAPTOP-FSOUOMFO:/mnt/c/Windows/System32$ pkill saniya
saniya@LAPTOP-FSOUOMFO:/mnt/c/Windows/System32$ ps -ef|saniya
saniya: command not found
saniya@LAPTOP-FSOUOMFO:/mnt/c/Windows/System32$
```

Kill a single process at a time with the given process PID

```
saniya@LAPTOP-FSOUOMFO:~$ ps -ef | grep firefox
saniya      421      298  0 17:24 pts/0    00:00:00 grep --color=auto firefox
saniya@LAPTOP-FSOUOMFO:~$ pkill firefox
saniya@LAPTOP-FSOUOMFO:~$ killall chrome
chrome: no process found
saniya@LAPTOP-FSOUOMFO:~$ ps -ef | grep chrome
saniya      435      298  0 17:27 pts/0    00:00:00 grep --color=auto chrome
saniya@LAPTOP-FSOUOMFO:~$ kill 3456
-bash: kill: (3456) - No such process
saniya@LAPTOP-FSOUOMFO:~$ kill -9 3456
-bash: kill: (3456) - No such process
```

Write a program for process creation using C

```
saniya@LAPTOP-FSOUOMFO:~$ nano process.c
saniya@LAPTOP-FSOUOMFO:~$ nano process.c
saniya@LAPTOP-FSOUOMFO:~$ gcc process.c -o process
saniya@LAPTOP-FSOUOMFO:~$ ./process
Parent Process
PID = 567
Child Process
PID = 568
PPID = 350
saniya@LAPTOP-FSOUOMFO:~$ |
```

Orphan Process

```
saniya@LAPTOP-FSOUOMFO:~$ nano orphan.c
saniya@LAPTOP-FSOUOMFO:~$ gcc orphan.c -o orphan
saniya@LAPTOP-FSOUOMFO:~$ ./orphan
Parent exiting
saniya@LAPTOP-FSOUOMFO:~$ Child PID=596 PPID=350
|
```

Zombie Process

```
nano zombie.c
saniya@LAPTOP-FSOUOMFO:~$ gcc zombie.c
saniya@LAPTOP-FSOUOMFO:~$ ./a.out
Child exiting
Parent running
```