

Lab 1 Tasks

23K-0594

Q1.

apt-get:

Manages packages by allowing upgradation, installation, updation and removal of packages for Debian and Ubuntu based systems.

yum:

Its also a package management command for RPM based Linux distributions that install, updates and removes software packages while resolving dependencies automatically.

wget:

It downloads files from web.

gzip:

Used for compressing or decompressing files

rar:

Used for creating, extracting and modifying .rar archive files

Q2.

I)

```
student@student-OptiPlex-7000:~/Desktop$ arch
x86_64
student@student-OptiPlex-7000:~/Desktop$
```

II)

```
student@student-OptiPlex-7000:~/Desktop$ lscpu
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:          46 bits physical, 48 bits virtual
Byte Order:             Little Endian
CPU(s):                 20
On-line CPU(s) list:   0-19
Vendor ID:              GenuineIntel
Model name:             12th Gen Intel(R) Core(TM) i7-12700
CPU family:             6
Model:                  151
Thread(s) per core:    2
Core(s) per socket:    12
Socket(s):              1
Stepping:               2
CPU max MHz:            4900.0000
CPU min MHz:            800.0000
BogoMIPS:               4224.00
Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 cl
flush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm
constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc
c cpuid aperfmperf tsc_known_freq pni pclmulqdq dtes64 monitor ds_cpl vmx
smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm sse4_1 sse4_2 x2apic movbe popcn
t tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch c
puid_fault epb ssbd ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexprio
rity ept vpid ept_ad fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms invpcid
rdseed adx smap clflushopt clwb intel_pt sha_ni xsaveopt xsavec xgetbv1 xs
aves split_lock_detect avx_vnni dtherm ida arat pln pts hwp hwp_notify hwp
_act_window hwp_epp hwp_pkg_req hfi umip pku ospke waitpkg gfni vaes vpclm
ulqdc tme rdpid movdiri movdir64b fsrm md_clear serialize pconfig arch_lbr
ibt flush_lid arch_capabilities

Virtualization features:
Virtualization:        VT-x
Caches (sum of all):
L1d:                   512 KiB (12 instances)
L1i:                   512 KiB (12 instances)
L2:                    12 MiB (9 instances)
L3:                    25 MiB (1 instance)
NUMA:
NUMA node(s):          1
NUMA node0 CPU(s):    0-19
Vulnerabilities:
Gather data sampling:  Not affected
Itlb multihit:        Not affected
L1tf:                 Not affected
Mds:                  Not affected
Meltdown:             Not affected
Mmio stale data:      Not affected
Retbleed:             Not affected
Spec store bypass:    Mitigation; Speculative Store Bypass disabled via prctl
Spectre v1:          Mitigation: usercopy/swapgs barriers and __user pointer sanitization
```

III)

```
student@student-OptiPlex-7000:~/Desktop$ uname -r
6.2.0-33-generic
student@student-OptiPlex-7000:~/Desktop$
```

IV)

```
student@student-OptiPlex-7000:~/Desktop$ date
09:46:31 و 24 جنوري 2025 PKT
student@student-OptiPlex-7000:~/Desktop$
```

V)

```
[sudo] password for student:
10:54:55 و 24 اپريل 2025 PKT
student@student-OptiPlex-7000:~/Desktop$
```

VI and VII)

```
student@student-OptiPlex-7000:~/Desktop$ ls -l
total 0
student@student-OptiPlex-7000:~/Desktop$ ls -a
.  ..
student@student-OptiPlex-7000:~/Desktop$
```

Remaining tasks)

```
student@student-OptiPlex-7000:~/Desktop$ ls | grep '[0-9]'
lab1
student@student-OptiPlex-7000:~/Desktop$
```

```
lab1
student@student-OptiPlex-7000:~/Desktop$ mkdir dir1
student@student-OptiPlex-7000:~/Desktop$ ls
```

```
student@student-OptiPlex-7000:~/Desktop$ mkdir dir2 dir3
student@student-OptiPlex-7000:~/Desktop$ pwd
/home/student/Desktop
```

```
student@student-OptiPlex-7000:~/Desktop$ rm file1
rm: cannot remove 'file1': Is a directory
student@student-OptiPlex-7000:~/Desktop$ rm -r dir1
student@student-OptiPlex-7000:~/Desktop$ ls
dir2 dir3 file1 lab1 labb
student@student-OptiPlex-7000:~/Desktop$ rmdir dir1
rmdir: failed to remove 'dir1': No such file or directory
student@student-OptiPlex-7000:~/Desktop$ rmdir dir2
student@student-OptiPlex-7000:~/Desktop$ touch -c -t 202501232211.44 file_or_dir
student@student-OptiPlex-7000:~/Desktop$ ls -l
total 16
drwxrwxr-x 2 student student 4096 10:03 24 جنوري dir3
drwxrwxr-x 2 student student 4096 10:03 24 جنوري file1
drwxrwxr-x 2 student student 4096 09:55 24 جنوري lab1
drwxrwxr-x 2 student student 4096 09:55 24 جنوري labb
student@student-OptiPlex-7000:~/Desktop$
```