Lab 8

System and Package management

df Command:

Syntax:
df [options]

Description:
The df (disk free) command displays the amount of disk space available on the file system.

Example:
df -h

```
momik@pop-os:~$ df -h
Filesystem       Size  Used Avail Use% Mounted on
tmpfs            1.6G  2.2M  1.6G   1% /run
efivarfs         100K   75K   21K  79% /sys/firmware/efi/efivars
/dev/sda3        108G   61G   42G  60% /
tmpfs            7.8G   28K  7.8G   1% /dev/shm
tmpfs            5.0M     0  5.0M   0% /run/lock
/dev/sda1       1020M  188M  833M  19% /boot/efi
/dev/sda2        4.0G  2.9G  1.2G  72% /recovery
/dev/nvme0n1p1   234G   60G  163G  27% /mnt/ssd2
tmpfs            1.6G  200K  1.6G   1% /run/user/1000
momik@pop-os:~$ 
```

du Command:

Syntax:
du [options] [file/dir]

Description:
The du (disk usage) command estimates the file space usage of a directory and its contents.

Example:
du -sh /home/momik/Pictures

```
momik@pop-os:~$ du -sh /home/momik/Pictures/
6.5M    /home/momik/Pictures/
momik@pop-os:~$ 
```

dd Command:

Syntax:
dd [options]

Description:
The dd command is used to convert and copy files. It is often used for creating disk images and copying data from one disk to another.

Example:
dd if=/dev/sda of=/dev/sdb bs=4M

Package Management

Install a Package:
    Command: sudo apt-get install [package-name]

View Installed Packages:
    Command: dpkg --list or apt list –installed

Upgrade Packages:
    Command: sudo apt-get upgrade

Remove a Package:
    Command: sudo apt-get remove [package-name]

```
momik@pop-os:~$ sudo apt-get install vim
[sudo] password for momik:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  vim-runtime
Suggested packages:
  ctags vim-doc vim-scripts
The following NEW packages will be installed:
  vim vim-runtime
0 upgraded, 2 newly installed, 0 to remove and 102 not upgraded.
Need to get 8,561 kB of archives.
After this operation, 37.6 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://apt.pop-os.org/ubuntu jammy-updates/main amd64 vim-runtime all 2:8.
2.3995-1ubuntu2.17 [6,827 kB]
16% [1 vim-runtime 1,735 kB/6,827 kB 25%]
```

```
momik@pop-os:~$ dpkg --list
Desired=Unknown/Install/Remove/Purge/Hold
| Status=Not/Inst/Conf-files/Unpacked/halF-conf/Half-inst/trig-aWait/Trig-pend
|/ Err?=(none)/Reinst-required (Status,Err: uppercase=bad)
||/ Name                              Version                            >
+++-===============================-===================================>
ii  accountsservice                  22.07.5-2ubuntu1.3pop1~1675994188~2>
ii  acl                              2.3.1-1                            >
ii  acpi-support                     0.144                              >
ii  acpid                            1:2.0.33-1ubuntu1                  >
ii  adduser                          3.118ubuntu5                       >
ii  adwaita-icon-theme               41.0-1ubuntu1                      >
ii  adwaita-icon-theme-full          41.0-1ubuntu1                      >
ii  alsa-base                        1.0.25+dfsg-0ubuntu7               >
ii  alsa-topology-conf               1.2.5.1-2                          >
ii  alsa-ucm-conf                    1.2.8-1pop1~1709769747~22.04~16ff97>
ii  alsa-utils                       1.2.8-1pop1~1676755497~22.04~a0d6ee>
ii  amd-ppt-bin                      1.0.0~1609862600~22.04~1b80593     >
ii  amd64-microcode                  3.20230808.1.1pop1~1691680164~22.04>
ii  apache2                          2.4.52-1ubuntu4.11                 >
ii  apache2-bin                      2.4.52-1ubuntu4.11                 >
ii  apache2-data                     2.4.52-1ubuntu4.11                 >
ii  apache2-utils                    2.4.52-1ubuntu4.11                 >
ii  apg                              2.2.3.dfsg.1-5build2
```

```
momik@pop-os:~$ sudo apt-get upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following packages have been kept back:
  libapache2-mod-php8.1 libgd3 libnvidia-cfg1-550 libnvidia-common-550
  libnvidia-compute-550 libnvidia-compute-550:i386 libnvidia-decode-550
  libnvidia-decode-550:i386 libnvidia-encode-550 libnvidia-encode-550:i386
  libnvidia-extra-550 libnvidia-fbc1-550 libnvidia-fbc1-550:i386
  libnvidia-gl-550 libnvidia-gl-550:i386 nvidia-compute-utils-550
  nvidia-dkms-550 nvidia-driver-525 nvidia-driver-550 nvidia-kernel-common-550
  nvidia-kernel-source-550 nvidia-utils-550 php8.1-bcmath php8.1-cli
  php8.1-common php8.1-curl php8.1-gd php8.1-imap php8.1-mbstring php8.1-mysql
  php8.1-opcache php8.1-pgsql php8.1-readline php8.1-xml php8.1-zip
  xserver-xorg-video-nvidia-550
The following packages will be upgraded:
  apache2 apache2-bin apache2-data apache2-utils bind9-host bind9-libs discord
  firefox ghostscript ghostscript-x gir1.2-gtk-3.0 gtk-update-icon-cache
  gtk2-engines-pixbuf imagemagick imagemagick-6-common imagemagick-6.q16
  libgail-common libgail18 libgs9 libgs9-common libgtk-3-0 libgtk-3-bin
  libgtk-3-common libgtk2.0-0 libgtk2.0-bin libgtk2.0-common libldap-2.5-0
  libmagickcore-6.q16-6 libmagickcore-6.q16-6-extra libmagickwand-6.q16-6
  libnvidia-egl-wayland1 libpcre2-16-0 libpcre2-32-0 libpcre2-8-0
```

```
momik@pop-os:~$ sudo apt-get remove vim
[sudo] password for momik:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  vim-runtime
Use 'sudo apt autoremove' to remove it.
The following packages will be REMOVED:
  vim
0 upgraded, 0 newly installed, 1 to remove and 36 not upgraded.
After this operation, 4,025 kB disk space will be freed.
Do you want to continue? [Y/n] y
(Reading database ... 225760 files and directories currently installed.)
Removing vim (2:8.2.3995-1ubuntu2.17) ...
update-alternatives: using /usr/bin/vim.tiny to provide /usr/bin/vi (vi) in auto
 mode
update-alternatives: using /usr/bin/vim.tiny to provide /usr/bin/view (view) in
auto mode
update-alternatives: using /usr/bin/vim.tiny to provide /usr/bin/ex (ex) in auto
 mode
update-alternatives: using /usr/bin/vim.tiny to provide /usr/bin/rview (rview) i
n auto mode
momik@pop-os:~$
```