Basic Linux Commands Assignments

Assignment-1

Connect and disconnect with login Access

```
vagrant@vagrant:~$ exit
logout
❯ vagrant ssh
vagrant@127.0.0.1's password:
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.4.0-89-generic aarch64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Sat 19 Nov 2022 08:29:52 PM UTC

  System load:  0.02               Processes:               207
  Usage of /:   19.5% of 19.56GB   Users logged in:         0
  Memory usage: 32%                IPv4 address for eth0: 192.168.87.128
  Swap usage:   0%

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

0 updates can be applied immediately.

New release '22.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.


Last login: Sat Nov 19 15:11:19 2022 from 192.168.87.1
vagrant@vagrant:~$
```

- What happens when you login a non-existent users or username?

  o Provide Screenshot and What you understand, explain in short brief?

```
vagrant@vagrant:~$ su karan
su: user karan does not exist
vagrant@vagrant:~$
```

User does not exist, which there is no user named karan in the system, in order to login with the karan username we need to create that user first.

Assignment-2

Password changing

- Login into your account and then change password?

    o Change your password into *IneuR0n#42* and hit the **Enter** key

        ▪ Explain what happen and give screenshot?

```
vagrant@vagrant:~$ passwd
Changing password for vagrant.
Current password:
New password:
Retype new password:
passwd: password updated successfully
vagrant@vagrant:~$ ▌
```

it ask for current password and once valid password is entered it allows to update the current password.

    o Try again to change password but use like password *1234* or *abcd*

        ▪ Explain what happen and give screenshot?

asking for longer password

```
vagrant@vagrant:~$ passwd
Changing password for vagrant.
Current password:
New password:
Retype new password:
You must choose a longer password
New password:
Retype new password:
You must choose a longer password
New password: ▯
```

- Try again to change password but now don't use any password just hit **Enter** key

  - Explain what happen and give screenshot?

it mentions no password was entered hence prompts again.

```
vagrant@vagrant:~$ passwd
Changing password for vagrant.
Current password:
New password:
Retype new password:
No password supplied
New password: 
```

Assignment-3

Working with Directories

- Enter the command **cd /** and then **ls** and then hit **Enter** key

  - Take screenshot and explain what output we got?

```
vagrant@vagrant:~$ cd /
vagrant@vagrant:/$ ls
bin  boot  cdrom  dev  etc  home  lib  lost+found  media  mnt  opt  proc  root  run  sbin  snap  srv  swap.img  sys  tmp  usr  var
vagrant@vagrant:/$ 
```

files at / location(root) are visible

- Enter the command now **cd /home** and then hit **Enter** key

  - Do **ls,** provide screenshot and explain what is **/home** directory used for?

```
vagrant@vagrant:/$ cd /home
vagrant@vagrant:/home$ 
```

/home is used to go to home directory

- Enter **cd ..** and hit **Enter** key [*Note: here we have space after cd then use double dot*]

  - Check what happen and give screenshot?

```
vagrant@vagrant:/home$ cd ..
vagrant@vagrant:/$ 
```

we gone to parent directory

- Now enter **cd /var/www/html** and then type **cd** and hit **Enter** key

  o Explain what happen and give screenshot?

```
vagrant@vagrant:/$ cd /var/www/html
-bash: cd: /var/www/html: No such file or directory
vagrant@vagrant:/$ 
```

no directory was present

- Now type **cd /root** and then hit **Enter** key

  o Do **ls,** check any output we have on screen if yes then take screenshot?

```
vagrant@vagrant:/$ cd /root
-bash: cd: /root: Permission denied
vagrant@vagrant:/$ sudo su
root@vagrant:/# cd /root
root@vagrant:~# ls
snap
root@vagrant:~# 
```

Assignment-4

Working with File Listing

- Go to **cd /etc** and type **ls**

  o Take screenshot and explain what files you have seeing?

```
vagrant@vagrant:/$ cd /etc
vagrant@vagrant:/etc$ ls
NetworkManager          dbus-1          init.d              mailcap              pollinate              ssl
PackageKit              dconf           initramfs-tools     mailcap.order        popularity-contest.conf subgid
X11                     debconf.conf    inputrc             manpath.config       profile                subgid-
adduser.conf            debian_version  iproute2            mdadm                profile.d              subuid
alternatives            default         iscsi               mime.types           protocols              subuid-
apparmor                deluser.conf    issue               mke2fs.conf          python3                sudoers
apparmor.d              depmod.d        issue.net           modprobe.d           python3.8              sudoers.d
apport                  dhcp            kernel              modules              rc0.d                  sysctl.conf
apt                     dpkg            landscape           modules-load.d       rc1.d                  sysctl.d
at.deny                 e2scrub.conf    ld.so.cache         mtab                 rc2.d                  systemd
bash.bashrc             environment     ld.so.conf          multipath            rc3.d                  terminfo
bash_completion         ethertypes      ld.so.conf.d        multipath.conf       rc4.d                  timezone
bash_completion.d       fonts           ldap                nanorc               rc5.d                  tmpfiles.d
bindresvport.blacklist  fstab           legal               netplan              rc6.d                  ubuntu-advantage
binfmt.d                fuse.conf       libaudit.conf       network              rcS.d                  ucf.conf
byobu                   fwupd           libblockdev         networkd-dispatcher  resolv.conf            udev
ca-certificates         gai.conf        libnl-3             networks             rmt                    udisks2
ca-certificates.conf    groff           locale.alias       newt                 rpc                    ufw
ca-certificates.conf.dpkg-old group     locale.gen          nsswitch.conf        rsyslog.conf           update-manager
calendar                group-          localtime           opt                  rsyslog.d              update-motd.d
cloud                   grub.d          logcheck            os-release           screenrc               update-notifier
console-setup           gshadow         login.defs          overlayroot.conf     security               vim
cron.d                  gshadow-        logrotate.conf      pam.conf             selinux                vmware-tools
cron.daily              gss             logrotate.d         pam.d                services               vtrgb
cron.hourly             hdparm.conf     lsb-release         passwd               shadow                 wgetrc
cron.monthly            host.conf       ltrace.conf         passwd-              shadow-                xattr.conf
cron.weekly             hostname        lvm                 perl                 shells                 xdg
crontab                 hosts           machine-id          pki                  skel                   zsh_command_not_found
cryptsetup-initramfs    hosts.allow     magic               pm                   sos
crypttab                hosts.deny      magic.mime          polkit-1             ssh
vagrant@vagrant:/etc$ 
```

o Take screenshot and explain what different output you found compare to previous command you used?

- Then type **ls -al** and hit **Enter** key

o Take screenshot and explain what new file or directory you found?

```
vagrant@vagrant:/etc$ ls -al
total 804
drwxr-xr-x 95 root root      4096 Nov 19 20:41 .
drwxr-xr-x 20 root root      4096 Oct 28  2021 ..
-rw-------  1 root root         0 Aug 24  2021 .pwd.lock
drwxr-xr-x  3 root root      4096 Aug 24  2021 NetworkManager
drwxr-xr-x  2 root root      4096 Aug 24  2021 PackageKit
drwxr-xr-x  4 root root      4096 Aug 24  2021 X11
-rw-r--r--  1 root root      3028 Aug 24  2021 adduser.conf
drwxr-xr-x  2 root root      4096 Aug 24  2021 alternatives
drwxr-xr-x  3 root root      4096 Aug 24  2021 apparmor
drwxr-xr-x  7 root root      4096 Oct 28  2021 apparmor.d
drwxr-xr-x  3 root root      4096 Oct 28  2021 apport
```

hidden files are shown with -a option

- Then use **ls -i** and hit **Enter** key

o Now see what different output its shows and take screenshot?

```
vagrant@vagrant:/etc$ ls -i
524297 NetworkManager          524325 fwupd
524298 PackageKit              524976 gai.conf
524299 X11                     524326 groff
524959 adduser.conf            533586 group
524300 alternatives            533598 group-
```

it prints the inode of file which is index number

- Then use **ls --help** and see other options about **ls** command

o Explore it and try with other attribute we can use with **ls** command

Assignment-5

Know where you are and where you working

*Here we use **pwd, cd and ls** as combine task to understand where you working on terminal and how you can switch from one directory to another one.*

- Open terminal after restart the linux

o Check which location you working, type **pwd** and take screenshot

```
vagrant@vagrant:~$ pwd
/home/vagrant
vagrant@vagrant:~$
```

- Now use **cd /var** and hit **Enter** key

  o Do **ls,** and see what output comes, give screenshot?

```
vagrant@vagrant:~$ cd /var
vagrant@vagrant:/var$ ls
backups  cache  crash  lib  local  lock  log  mail  opt  run  snap  spool  tmp
vagrant@vagrant:/var$
```

- Do explore other help options of each command to learn more other things we can do with these commands