

Name: Nooreldeen Ayman Mohammed Elmobashar
Track: Open Source
Branch: ITI Mansoura

1. Install Linux

Done. Fedora Installed.

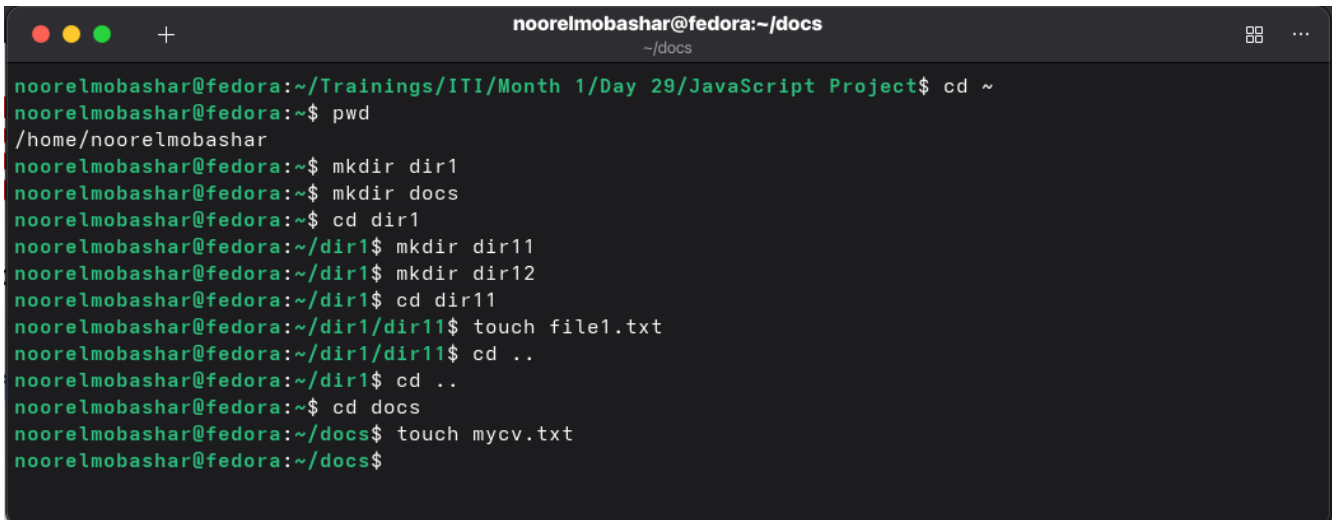
2. What is the difference between cat and more?

cat views all the file content in one time.
more views file content page by page.

3. What is the difference between rm and rmdir using man?

rm is used to delete files and directories (using flags).
rmdir only removes empty folders only.

4. Create the following hierarchy under your home directory

A terminal window titled 'noorelmobashar@fedora:~/docs' with a dark background and light green text. The terminal shows a series of commands and their outputs. The user starts in a directory path, then moves to the home directory, creates 'dir1' and 'docs' directories, moves into 'dir1', creates 'dir11' and 'dir12' subdirectories, moves into 'dir11', creates a 'file1.txt' file, moves back to 'dir1', and then to 'docs', where they create a 'mycv.txt' file.

```
noorelmobashar@fedora:~/Trainings/ITI/Month 1/Day 29/JavaScript Project$ cd ~
noorelmobashar@fedora:~$ pwd
/home/noorelmobashar
noorelmobashar@fedora:~$ mkdir dir1
noorelmobashar@fedora:~$ mkdir docs
noorelmobashar@fedora:~$ cd dir1
noorelmobashar@fedora:~/dir1$ mkdir dir11
noorelmobashar@fedora:~/dir1$ mkdir dir12
noorelmobashar@fedora:~/dir1$ cd dir11
noorelmobashar@fedora:~/dir1/dir11$ touch file1.txt
noorelmobashar@fedora:~/dir1/dir11$ cd ..
noorelmobashar@fedora:~/dir1$ cd ..
noorelmobashar@fedora:~$ cd docs
noorelmobashar@fedora:~/docs$ touch mycv.txt
noorelmobashar@fedora:~/docs$
```

4.a Remove dir11 in one-step. What did you notice? And how did you overcome that?

I know that I should use `rm -rf dir11` command to delete all the files and directories inside dir11

```
noorelmobashar@fedora:~/dir1
~/dir1
noorelmobashar@fedora:~/docs$ cd ..
noorelmobashar@fedora:~$ cd dir1
noorelmobashar@fedora:~/dir1$ ls
dir11  dir12
noorelmobashar@fedora:~/dir1$ rm -rf dir11
noorelmobashar@fedora:~/dir1$ ls
dir12
noorelmobashar@fedora:~/dir1$
```

4.b Then remove dir12 using `rmdir -p` command. State what happened to the hierarchy (Note: you are in your home directory).

```
noorelmobashar@fedora:~
noorelmobashar@fedora:~/dir1$ cd ..
noorelmobashar@fedora:~$ rmdir -p dir1/dir12
noorelmobashar@fedora:~$ ls
Desktop  docs  Documents  Downloads  Music  Pictures  Public  Templates  Trainings  Videos
noorelmobashar@fedora:~$ cd
```

I notice that dir12 is removed and its parent is removed also.

4.c The output of the command `pwd` was `/home/user`. Write the absolute and relative path for the file `mycv`

Absolute Path: `/home/noorelmobashar/docs/mycv.txt`

Relative Path: `docs/mycv.txt`

5. Copy the `/etc/passwd` file to your home directory making its name is `mypasswd`.

```
noorelmobashar@fedora:~  
noorelmobashar@fedora:~/docs$ cp /etc/passwd /home/noorelmobashar  
noorelmobashar@fedora:~/docs$ ls  
mycv.txt  
noorelmobashar@fedora:~/docs$ cd ..  
noorelmobashar@fedora:~$ ls  
Desktop docs Documents Downloads Music passwd Pictures Public Templates Trainings Videos  
noorelmobashar@fedora:~$ mv passwd mypasswd  
noorelmobashar@fedora:~$ ls  
Desktop docs Documents Downloads Music mypasswd Pictures Public Templates Trainings Videos  
noorelmobashar@fedora:~$
```

6. Rename this new file to be oldpasswd.

```
noorelmobashar@fedora:~$ mv mypasswd oldpasswd  
noorelmobashar@fedora:~$ ls  
Desktop docs Documents Downloads Music oldpasswd Pictures Public Templates Trainings Videos  
noorelmobashar@fedora:~$
```

7. You are in /usr/bin, list four ways to go to your home directory

1. cd /home/noorelmobashar
2. cd ~
3. cd
4. cd \$HOME

8. List Linux commands in /usr/bin that start with letter w

```
noorelmobashar@fedora:~/usr/bin
noorelmobashar@fedora:~$ cd /usr/bin
noorelmobashar@fedora:~/usr/bin$ ls w*
w          wavpack      wget         which        wipefs       wmcrtl        wpctl       wsdump
wait       wc           wget2        who          wireplumber  wnck-urgency-monitor wpexec      wspsearch
waitpid    wcurl       whatis       whoami       withsctp     wpa_cli       write       wvgain
wall       wdctl       whatis.man-db whois        wl-copy      wpa_passphrase wrudf       wvtag
watch      westcos-tool whereis      whois.md     wl-paste     wpa_supplliant wsdd        wvunpack
noorelmobashar@fedora:~/usr/bin$
```

9. Display the first 4 lines of /etc/passwd

```
noorelmobashar@fedora:~$ head -n 4 oldpasswd
root:x:0:0:Super User:/root:/bin/bash
bin:x:1:1:bin:/bin:/usr/sbin/nologin
daemon:x:2:2:daemon:/sbin:/usr/sbin/nologin
adm:x:3:4:adm:/var/adm:/usr/sbin/nologin
noorelmobashar@fedora:~$
```

10.Display the last 7 lines of /etc/passwd

```
noorelmobashar@fedora:~$ tail -n 7 oldpasswd
gnome-remote-desktop:x:976:976:GNOME Remote Desktop:/var/lib/remote-desktop:/usr/sbin/nologin
vboxadd:x:974:1::/var/run/vboxadd:/usr/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/usr/share/empty.sshd:/usr/sbin/nologin
passim:x:973:973:Local Caching Server:/usr/share/empty:/usr/sbin/nologin
tcpdump:x:72:72:tcpdump:/:usr/sbin/nologin
noorelmobashar:x:1000:1000:nooreldeen ayman elmobashar:/home/noorelmobashar:/bin/bash
akmods:x:969:969:User is used by akmods to build akmod packages:/var/cache/akmods:/usr/sbin/nologin
noorelmobashar@fedora:~$
```

11.Display the man pages of passwd the command and the file sequentially in one command.

```
noorelmobashar@fedora:~$ man passwd && man -s5 passwd
```

```
noorelmobashar@fedora:~ -- man passwd

PASSWD(1)                                User Commands                                PASSWD(1)

NAME
    passwd - change user password

SYNOPSIS
    passwd [options] [LOGIN]

DESCRIPTION
    The passwd command changes passwords for user accounts. A regular user can only change the
    password for their own account, while the superuser can change the password for any account.
    The passwd also changes the account or associated password validity period.

    Password Changes
    Manual page passwd(1) line 1 (press h for help or q to quit)
```

```
noorelmobashar@fedora:~ — man -s5 passwd

passwd(5)                                File Formats Manual                                passwd(5)

NAME

    passwd - password file

DESCRIPTION

    The /etc/passwd file is a text file that describes user login accounts for the system. It should have read permission allowed for all users (many utilities, like ls(1) use it to map user IDs to usernames), but write access only for the superuser.

    In the good old days there was no great problem with this general read permission. Everybody could read the encrypted passwords, but the hardware was too slow to crack a well-chosen password, and moreover the basic assumption used to be that of a friendly user-community. These days many people run some version of the shadow password suite, where /etc/passwd has an 'x' character in the password field, and the encrypted passwords are in /etc/shadow, which is

Manual page passwd(5) line 1 (press h for help or q to quit)
```

12.Display the man page of the passwd file.

```
noorelmobashar@fedora:~$ man 5 passwd
```

```
noorelmobashar@fedora:~ — man 5 passwd

passwd(5)                                File Formats Manual                                passwd(5)

NAME

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DESCRIPTION

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Manual page passwd(5) line 1 (press h for help or q to quit)
```

13. Display a list of all the commands that contain the keyword passwd in their man page.

```
noorelmobashar@fedora:~$ man -k passwd
```

```
passwd (1openssl)      - OpenSSL application commands
passwd (5)             - password file
passwd2des (3)         - RFS password encryption
passwdqc.conf (5)      - libpasswdqc configuration file
pwhistory_helper (8)    - Helper binary that transfers password hashes from passwd or shadow to opasswd
selinux_check_passwd_access (3) - query the SELinux policy database in the kernel
smbpasswd (5)          - The Samba encrypted password file
SSL_CTX_get_default_passwd_cb (3openssl) - set or get passwd callback for encrypted PEM file handling
SSL_CTX_get_default_passwd_cb_userdata (3openssl) - set or get passwd callback for encrypted PEM file ...
SSL_CTX_set_default_passwd_cb (3openssl) - set or get passwd callback for encrypted PEM file handling
SSL_CTX_set_default_passwd_cb_userdata (3openssl) - set or get passwd callback for encrypted PEM file ...
SSL_get_default_passwd_cb (3openssl) - set or get passwd callback for encrypted PEM file handling
SSL_get_default_passwd_cb_userdata (3openssl) - set or get passwd callback for encrypted PEM file hand...
SSL_set_default_passwd_cb (3openssl) - set or get passwd callback for encrypted PEM file handling
SSL_set_default_passwd_cb_userdata (3openssl) - set or get passwd callback for encrypted PEM file hand...
noorelmobashar@fedora:~$
```