

Question 2

e) yes, but when you use `cd` inside a script, it changes the directory only for the duration of that script's execution. Once the script ends, the original shell remains unchanged. This means `cd` alone doesn't persistently affect the calling environment, which might not meet the intent if the next steps assume the user's home directory as the working directory.

```
GNU nano 7.2                                direc.sh
#!/bin/bash
directory="NEWDDir"
if [ -d "$directory" ]; then
    echo "The directory already exists..."
    echo "Removing the existing directory..."
    rm -r "$directory"
fi
mkdir "$directory"
cd "$directory"
touch {main,hello}.{c,h}
for file in main.c hello.c main.h hello.h; do
    echo "this file is named $file"
done
cd ..
tar -czf NEWDir.tar.gz "$directory"
if [ -d "/home/edges/" ]; then
    cp NEWDir.tar.gz /home/edges/ && cd /home/edges/ && tar -xzf NEWDir.tar.gz
else
    echo "Home directory /home/edges not found"
    exit 1
fi
```

Output

```
nancy@DESKTOP-902BIGV:~/Desktop$ ls
direc.sh  userdef.sh
nancy@DESKTOP-902BIGV:~/Desktop$ sudo ./direc.sh
this file is named main.c
this file is named hello.c
this file is named main.h
this file is named hello.h
nancy@DESKTOP-902BIGV:~/Desktop$ sudo su - edges
```

```
nancy@DESKTOP-902BIGV:~/Desktop$ sudo su - edges
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.6.87.2-microsoft-standard-WSL2 x86_64)

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

System information as of Thu Aug 21 17:37:08 EEST 2025

System load:  0.1               Processes:            37
Usage of /:   0.2% of 1006.85GB Users logged in:     1
Memory usage: 9%               IPv4 address for eth0: 172.29.94.113
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

This message is shown once a day. To disable it please create the
/home/edges/.hushlogin file.
edges@DESKTOP-902BIGV:~$ ls
NEWDDir  NEWDir.tar.gz
edges@DESKTOP-902BIGV:~$ cd NEWDir
edges@DESKTOP-902BIGV:~/NEWDir$ ls
hello.c  hello.h  main.c  main.h
```

g) Switch to the newly created user

```
sudo su - edges
```

h) Display all the files inside the extracted folder recursively and with long listing format

```
la -lar NEWDir/
```

```
nancy@DESKTOP-902BIGV:~/Desktop$ sudo su - edges
[sudo] password for nancy:
edges@DESKTOP-902BIGV:~$ ls
NEWDDir  NEWDir.tar.gz
edges@DESKTOP-902BIGV:~$ ls -laR NEWDir/
NEWDDir/:
total 8
drwxr-xr-x 2 root  root 4096 Aug 21 17:36 .
drwxr-x--- 4 edges ASU 4096 Aug 21 17:46 ..
-rw-r--r-- 1 root  root  0 Aug 21 17:36 hello.c
-rw-r--r-- 1 root  root  0 Aug 21 17:36 hello.h
-rw-r--r-- 1 root  root  0 Aug 21 17:36 main.c
-rw-r--r-- 1 root  root  0 Aug 21 17:36 main.h
```

i) Change to owner of this directory recursively to be the new user

```
sudo chown -R edges:ASU /home/edges/NEWDDir
```

```
nancy@DESKTOP-902BIGV:~/Desktop$ sudo chown -R edges:ASU /home/edges/NEWDDir
nancy@DESKTOP-902BIGV:~/Desktop$ sudo su - edges
edges@DESKTOP-902BIGV:~$ ls -l
total 8
drwxr-xr-x 2 edges ASU 4096 Aug 21 17:36 NEWDir
-rw-r--r-- 1 root  root 187 Aug 21 17:36 NEWDir.tar.gz
```

j) Again, display all the files inside the extracted folder recursively and with long listing format

```
edges@DESKTOP-902BIGV:~$ la -lar NEWDir/
total 8
-rw-r--r-- 1 edges ASU 0 Aug 21 17:36 main.h
-rw-r--r-- 1 edges ASU 0 Aug 21 17:36 main.c
-rw-r--r-- 1 edges ASU 0 Aug 21 17:36 hello.h
-rw-r--r-- 1 edges ASU 0 Aug 21 17:36 hello.c
drwxr-x--- 4 edges ASU 4096 Aug 21 17:46 ..
drwxr-xr-x 2 edges ASU 4096 Aug 21 17:36 .
```

k) Search for the word “file” in the extracted directory recursively

```
edges@DESKTOP-902BIGV:~$ grep -r "file" NEWDir/
NEWDir/hello.c:this file is named hello.c
NEWDir/main.c:this file is named main.c
NEWDir/hello.h:this file is named hello.h
NEWDir/main.h:this file is named main.h
```

l) Remove all the files ending with “.c”

```
nancy@DESKTOP-902BIGV:~$ sudo su - edges
edges@DESKTOP-902BIGV:~$ cd NEWDir
edges@DESKTOP-902BIGV:~/NEWDir$ chmod u+w *.c
edges@DESKTOP-902BIGV:~/NEWDir$ rm *.c
edges@DESKTOP-902BIGV:~/NEWDir$ ls -l
total 8
-rw-r--r-- 1 edges ASU 27 Aug 21 18:03 hello.h
-rw-r--r-- 1 edges ASU 26 Aug 21 18:03 main.h
```