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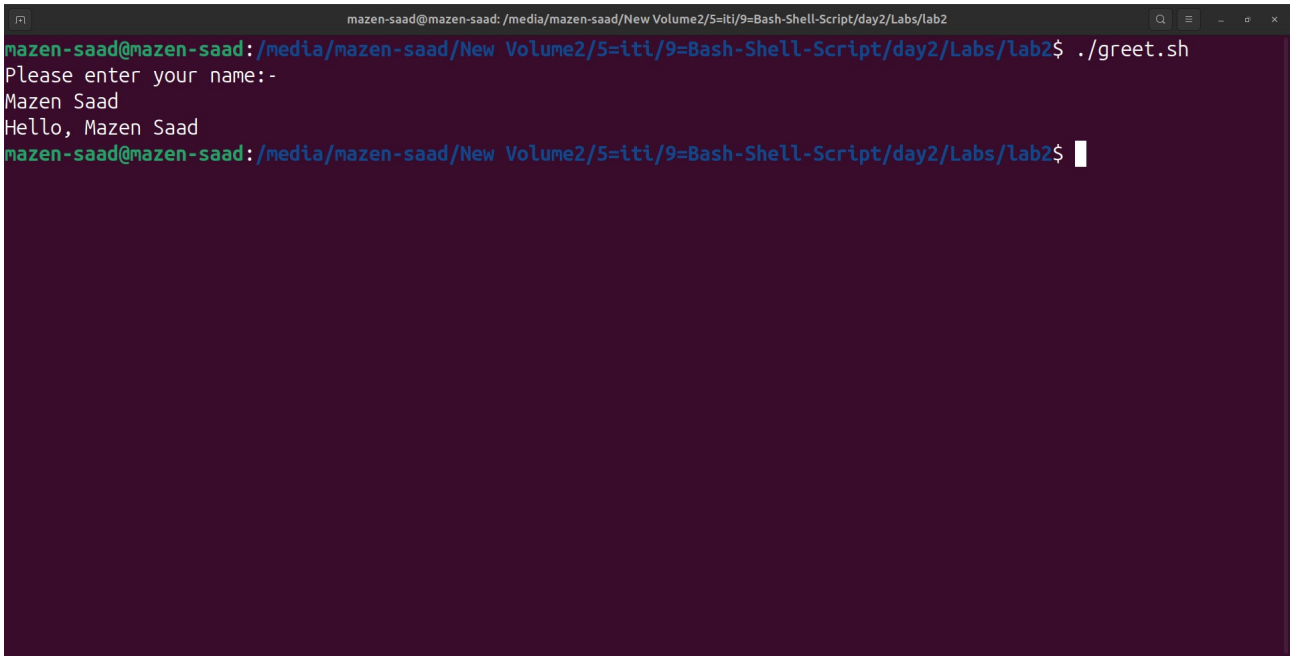
BSS – Lab 2

1. Create a script that asks for user name then send a greeting to him.

Q1
touch greet.sh

#! /usr/bin/bash
echo "Please enter your name:- "
read name
echo "Hello, $name"

Terminal =>
./greet.sh



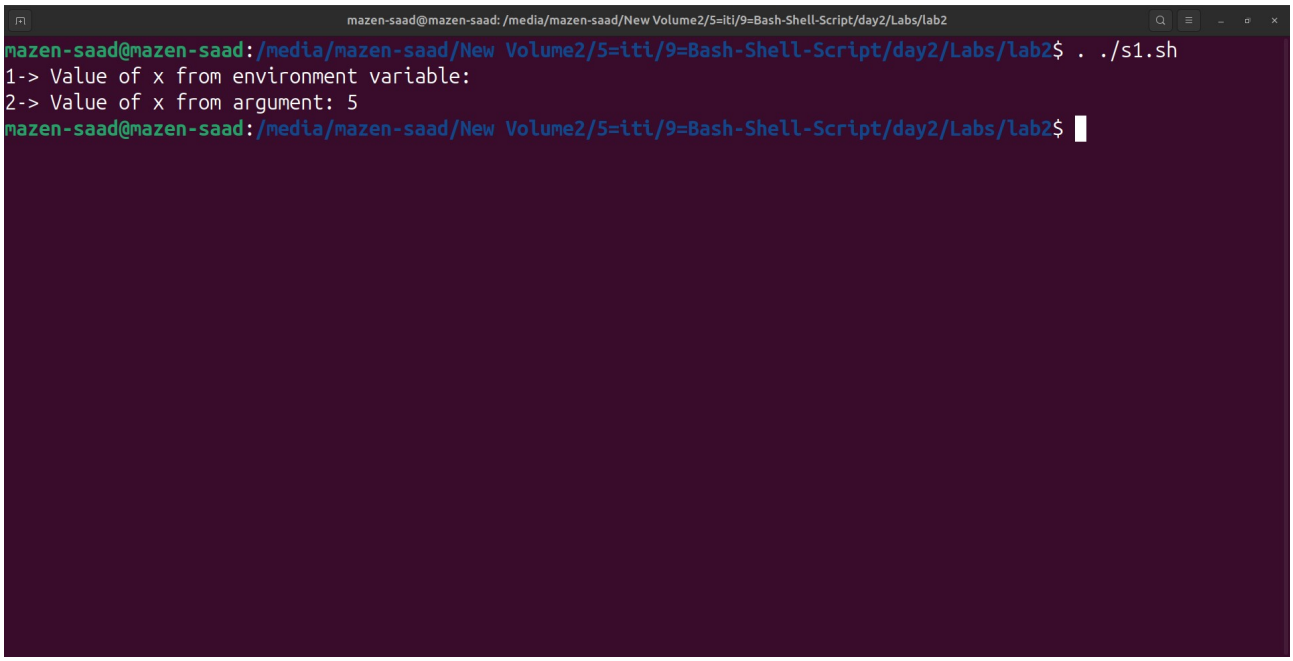
2. Create a script called s1
that calls another script s2 where:
   a. In s1 there is a variable called x, it's value 5
   b. Try to print the value of x in s2 by two different ways.

Q2
touch s1.sh s2.sh

#=> file s1.sh
#! /usr/bin/bash
x=5
./s2.sh $x
export x

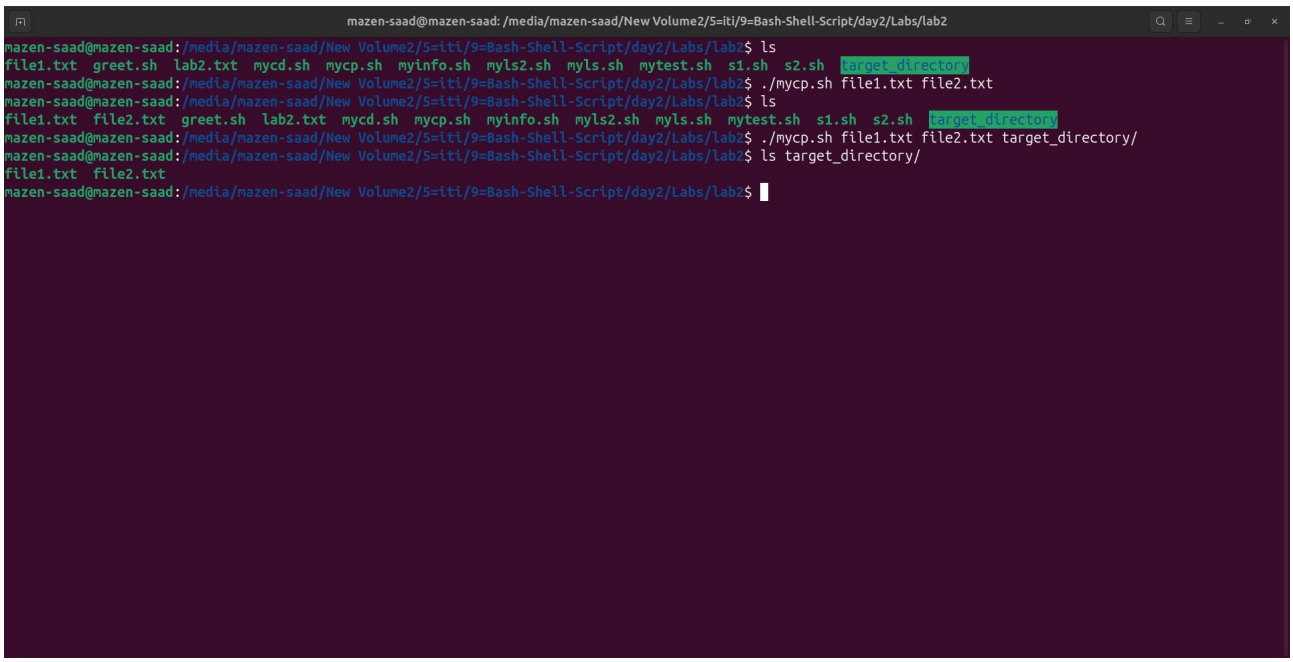
#=> file s2.sh
#! /usr/bin/bash
echo "1-> Value of x from environment variable: $x"
echo "2-> Value of x from argument: $1"

Terminal =>
. ./s1.sh



3. Create a script called mycp where:
    a. It copies a file to another
    b. It copies multiple files to a directory.

```
# Q3
touch mycp.sh

#-
#! /usr/bin/bash
if [ "$#" -lt 2 ]
then
    echo "Usage: $0 source_file... destination"
    exit 1
fi

#-
dest="${@: -1}"

#-
if [ -d "$dest" ]
then
    #-
    for src in "$@"
    do
        [ "$src" != "$dest" ] && cp -r "$src" "$dest/"
    done
else
    #-
    cp "$1" "$dest"
fi

Terminal =>
# 1=> one file
touch file1.txt
./mycp.sh file1.txt file2.txt

# 2=> multiple files
mkdir target_directory
./mycp.sh file1.txt file2.txt target_directory/
```

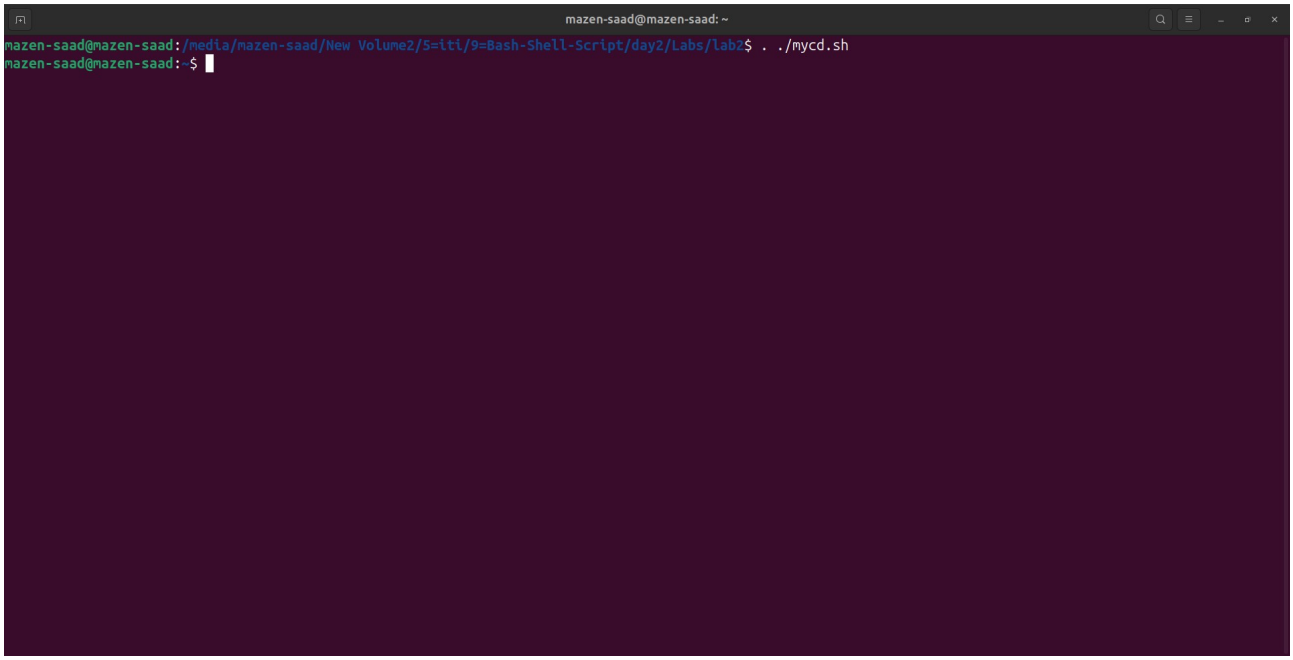

mazen-saad@mazen-saad: /media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$ ls
file1.txt greet.sh lab2.txt mycd.sh mycp.sh myinfo.sh myls2.sh myls.sh mytest.sh s1.sh s2.sh target_directory
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$ ./mycp.sh file1.txt file2.txt
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$ ls
file1.txt file2.txt greet.sh lab2.txt mycd.sh mycp.sh myinfo.sh myls2.sh myls.sh mytest.sh s1.sh s2.sh target_directory
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$ ./mycp.sh file1.txt file2.txt target_directory/
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$ ls target_directory/
file1.txt file2.txt
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$

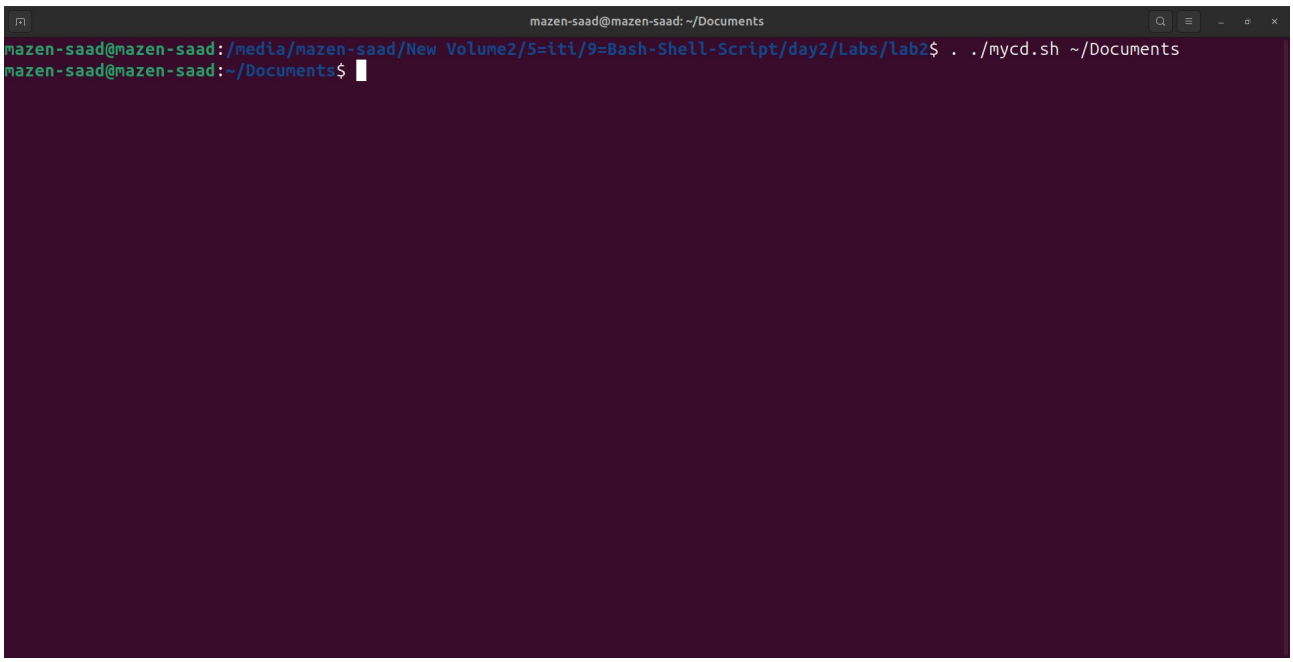
4. Create a script called mycd where:
    a. It changed directory to the user home directory, if it is called without arguments.
    b. Otherwise, it change directory to the given directory.

```
# Q4
touch mycd.sh

if [ $# -eq 0 ]
then
    cd ~
else
    cd "$1"
fi
```

Terminal =>

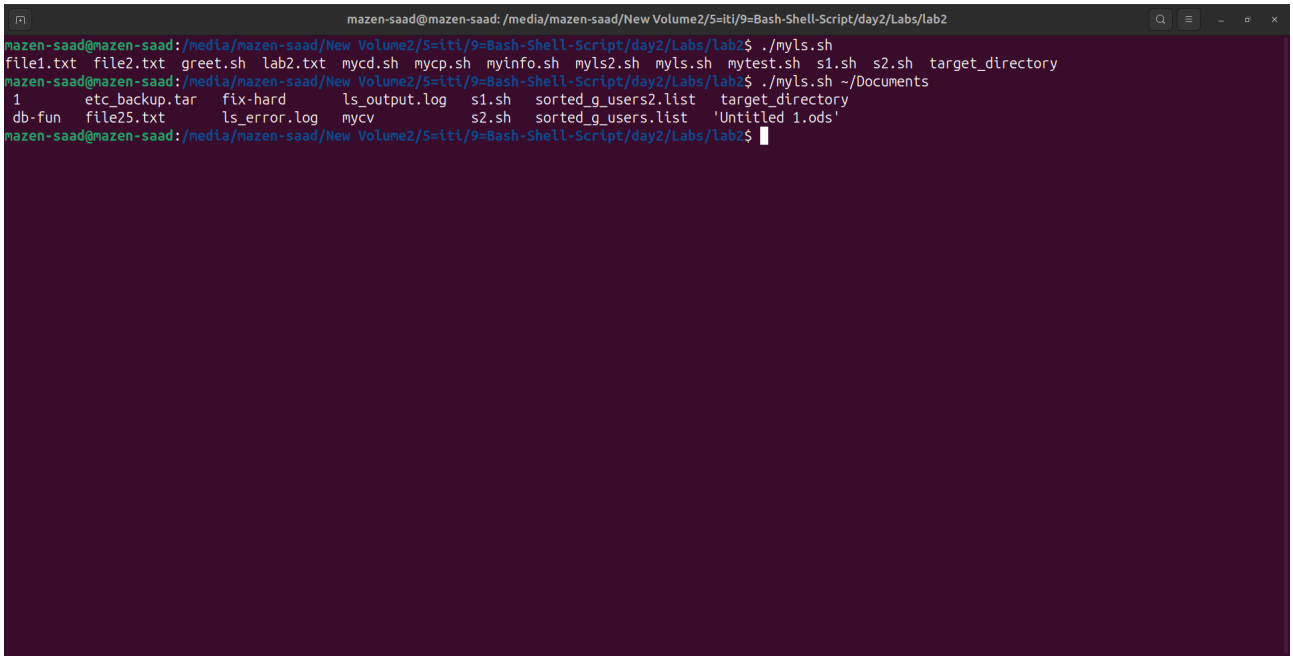
```
. ./mycd.sh
. ./mycd.sh ~/Documents
```




mazen-saad@mazen-saad: ~/Documents
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$ . ./mycd.sh ~/Documents
mazen-saad@mazen-saad:~/Documents$

5. Create a script called myls where:
    a. It lists the current directory, if it is called without arguments.
    b. Otherwise, it lists the given directory.

```
# Q5
touch myls.sh

#! /usr/bin/bash
if [ $# -eq 0 ]
then
    ls
else
    ls "$1"
fi

Terminal =>
./myls.sh
./myls.sh ~/Documents
```

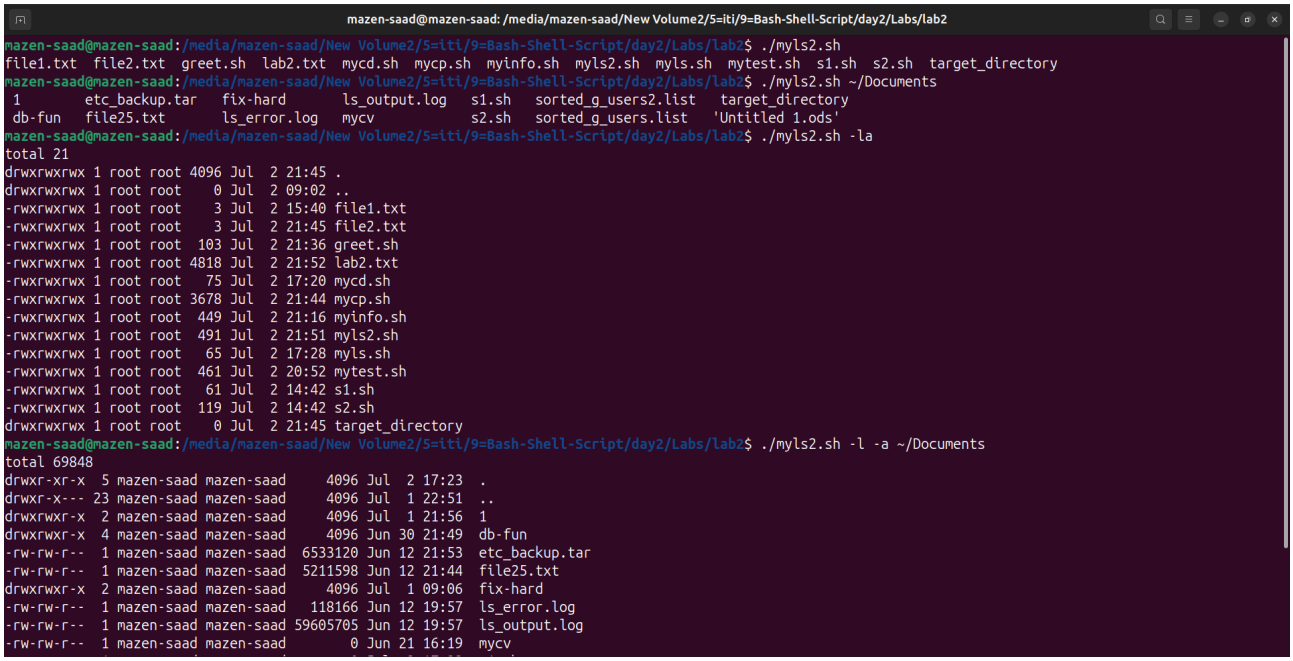


6. Enhance the above script to support the following options individually:
   a. –l: list in long format
   b. –a: list all entries including the hiding files.
   c. –d: if an argument is a directory, list only its name
   d. –i: print inode number
   e. –R: recursively list subdirectories

Bonus: enhance the above script to support the following Synopsis:
   myls -option1 –option2
   myls –option2 –option1
   myls –option1option2
   myls –option2option1

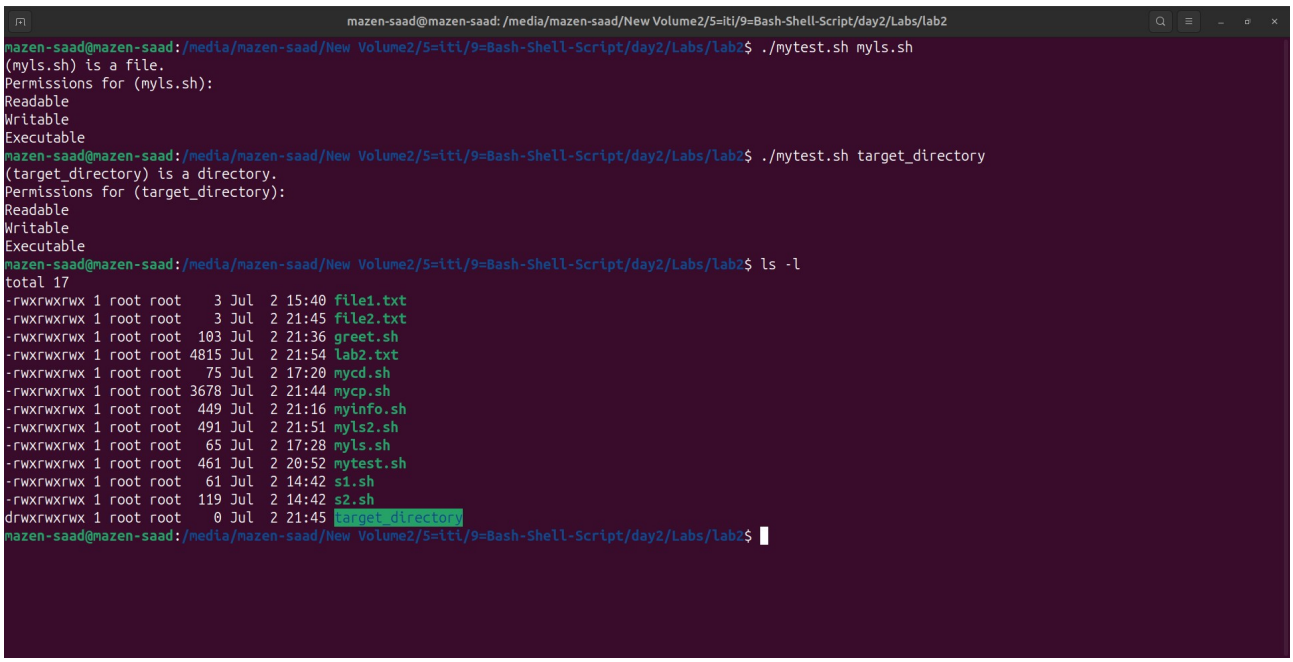
```
# Q6
touch myls2.sh

#! /usr/bin/bash
options=""
directory=""

#-
while [[ "$1" =~ ^- ]]
do
   options="$options $1"
   shift
done

if [ -n "$1" ]
then
   directory="$1"
fi

#-
if [ -n "$directory" ]
then
   ls $options "$directory"
else
   ls $options
fi
```

Terminal =>
# ./myls2.sh
# ./myls2.sh ~/Documents
# ./myls2.sh -l
# ./myls2.sh -a
# ./myls2.sh -i
# ./myls2.sh -R
# ./myls2.sh -la
# ./myls2.sh -al
# ./myls2.sh -l -a
# ./myls2.sh -l -a ~/Documents



7. Create a script called mytest where:
   a. It check the type of the given argument (file/directory)
   b. It check the permissions of the given argument (read/write/execute)

```
# Q7
touch mytest.sh

#! /usr/bin/bash
if [ "$#" -ne 1 ]
then
    echo "Usage: $0 type file or directory"
    exit 1
fi

target="$1"
if [ -f "$target" ]
then
    echo "($target) is a file."

elif [ -d "$target" ]
then
    echo "($target) is a directory."

else
    echo "($target) is not a regular file or directory."
    exit 1
fi
echo "Permissions for ($target):"
[ -r "$target" ] && echo "Readable"
[ -w "$target" ] && echo "Writable"
[ -x "$target" ] && echo "Executable"

Terminal =>
./mytest.sh myls.sh
./mytest.sh target_directory
```

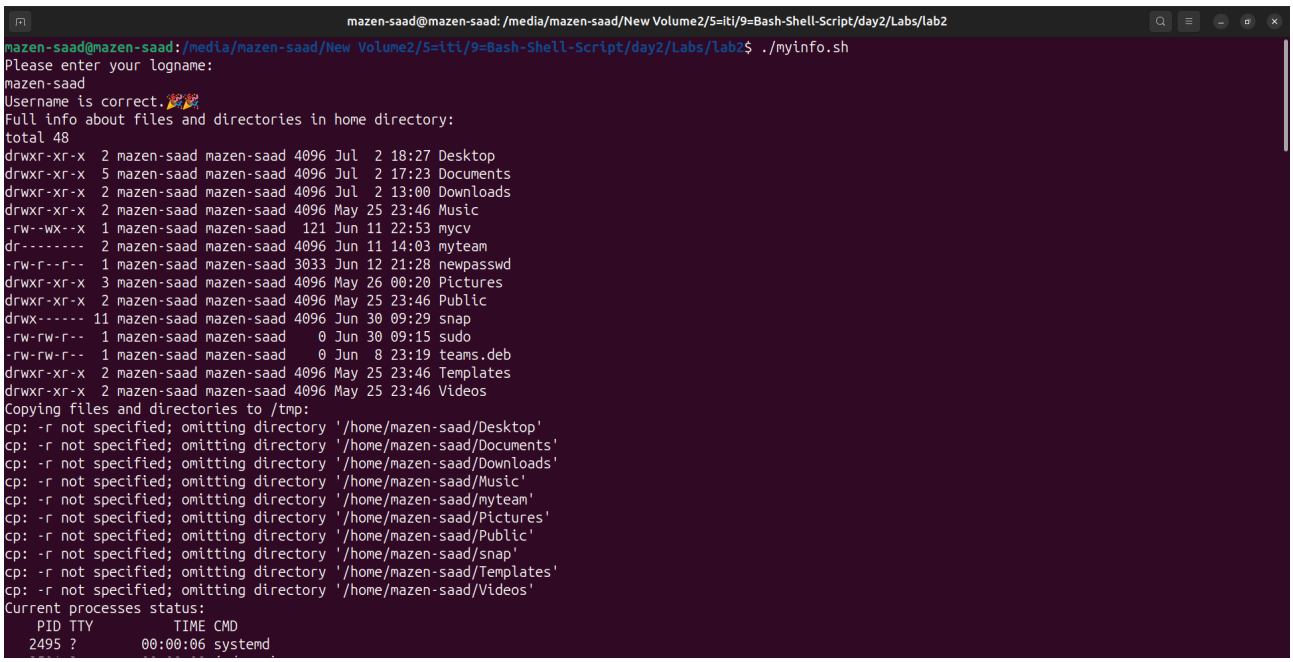

mazen-saad@mazen-saad: /media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$ ./mytest.sh myls.sh
(myls.sh) is a file.
Permissions for (myls.sh):
Readable
Writable
Executable
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$ ./mytest.sh target_directory
(target_directory) is a directory.
Permissions for (target_directory):
Readable
Writable
Executable
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$ ls -l
total 17
-rwxrwxrwx 1 root root   3 Jul 2 15:40 file1.txt
-rwxrwxrwx 1 root root   3 Jul 2 21:45 file2.txt
-rwxrwxrwx 1 root root 103 Jul 2 21:36 greet.sh
-rwxrwxrwx 1 root root 4815 Jul 2 21:54 lab2.txt
-rwxrwxrwx 1 root root   75 Jul 2 17:20 mycd.sh
-rwxrwxrwx 1 root root 3678 Jul 2 21:44 mycp.sh
-rwxrwxrwx 1 root root 449 Jul 2 21:16 myinfo.sh
-rwxrwxrwx 1 root root 491 Jul 2 21:51 myls2.sh
-rwxrwxrwx 1 root root   65 Jul 2 17:28 myls.sh
-rwxrwxrwx 1 root root 461 Jul 2 20:52 mytest.sh
-rwxrwxrwx 1 root root   61 Jul 2 14:42 s1.sh
-rwxrwxrwx 1 root root 119 Jul 2 14:42 s2.sh
drwxrwxrwx 1 root root   0 Jul 2 21:45 target_directory
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$

8. Create a script called myinfo where:
   a. It asks the user about his/her logname.
   b. It print full info about files and directories in his/her home directory
   c. Copy his/her files and directories as much as you can in /tmp directory.
   d. Gets his current processes status.

#Q8
touch myinfo.sh

```
#! /usr/bin/bash
echo "Please enter your logname:"
read logname

if [ "$logname" == "$(whoami)" ]
then
    echo "Username is correct.🎉🎉"

    echo "Full info about files and directories in home directory: "
    ls -l /home/"$logname"

    echo "Copying files and directories to /tmp: "
    cp /home/"$logname"/* /tmp/

    echo "Current processes status:"
    ps -u "$logname"

else
    echo "Incorrect username."
fi
```

Terminal =>
./myinfo.sh


mazen-saad@mazen-saad: /media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2
mazen-saad@mazen-saad:/media/mazen-saad/New Volume2/5=iti/9=Bash-Shell-Script/day2/Labs/lab2$ ./myinfo.sh
Please enter your logname:
mazen-saad
Username is correct.🎉🎉
Full info about files and directories in home directory:
total 48
drwxr-xr-x 2 mazen-saad mazen-saad 4096 Jul 2 18:27 Desktop
drwxr-xr-x 5 mazen-saad mazen-saad 4096 Jul 2 17:23 Documents
drwxr-xr-x 2 mazen-saad mazen-saad 4096 Jul 2 13:00 Downloads
drwxr-xr-x 2 mazen-saad mazen-saad 4096 May 25 23:46 Music
-rw--wx--x 1 mazen-saad mazen-saad 121 Jun 11 22:53 mycv
dr-------- 2 mazen-saad mazen-saad 4096 Jun 11 14:03 myteam
-rw-r--r-- 1 mazen-saad mazen-saad 3033 Jun 12 21:28 newpasswd
drwxr-xr-x 3 mazen-saad mazen-saad 4096 May 26 00:20 Pictures
drwxr-xr-x 2 mazen-saad mazen-saad 4096 May 25 23:46 Public
drwx------ 11 mazen-saad mazen-saad 4096 Jun 30 09:29 snap
-rw-rw-r-- 1 mazen-saad mazen-saad   0 Jun 30 09:15 sudo
-rw-rw-r-- 1 mazen-saad mazen-saad   0 Jun 8 23:19 teams.deb
drwxr-xr-x 2 mazen-saad mazen-saad 4096 May 25 23:46 Templates
drwxr-xr-x 2 mazen-saad mazen-saad 4096 May 25 23:46 Videos
Copying files and directories to /tmp:
cp: -r not specified; omitting directory '/home/mazen-saad/Desktop'
cp: -r not specified; omitting directory '/home/mazen-saad/Documents'
cp: -r not specified; omitting directory '/home/mazen-saad/Downloads'
cp: -r not specified; omitting directory '/home/mazen-saad/Music'
cp: -r not specified; omitting directory '/home/mazen-saad/myteam'
cp: -r not specified; omitting directory '/home/mazen-saad/Pictures'
cp: -r not specified; omitting directory '/home/mazen-saad/Public'
cp: -r not specified; omitting directory '/home/mazen-saad/snap'
cp: -r not specified; omitting directory '/home/mazen-saad/Templates'
cp: -r not specified; omitting directory '/home/mazen-saad/Videos'
Current processes status:
    PID TTY   TIME CMD
   2495 ?   00:00:06 systemd