

## Bash Script LAB 2

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

```
nathan@nathan-G3-3500:~/BashCommands$ cat DayTwo.sh
#!/bin/bash

read -p "Please Enter Your Name: " Name
echo "Best Regards $Name"
nathan@nathan-G3-3500:~/BashCommands$ DayTwo.sh
Please Enter Your Name: Nathan
Best Regards Nathan
nathan@nathan-G3-3500:~/BashCommands$
```

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.

```
nathan@nathan-G3-3500:~/BashCommands$ cat s1.sh
x=5
. s2.sh
nathan@nathan-G3-3500:~/BashCommands$ cat s2.sh
echo "X = $x"
nathan@nathan-G3-3500:~/BashCommands$ s1.sh
X = 5
nathan@nathan-G3-3500:~/BashCommands$
```

```
nathan@nathan-G3-3500:~/BashCommands$ vi s1.sh
nathan@nathan-G3-3500:~/BashCommands$ vi s2.sh
nathan@nathan-G3-3500:~/BashCommands$ cat s1.sh
export x=5
s2.sh
nathan@nathan-G3-3500:~/BashCommands$ cat s2.sh
echo "X = $x"
nathan@nathan-G3-3500:~/BashCommands$ s1.sh
X = 5
nathan@nathan-G3-3500:~/BashCommands$
```

3. Create a script called mycp where:
  - a. It copies a file to another

```
cp $1 $2
nathan@nathan-G3-3500:~/BashCommands$ mycp.sh ~/fileeeeeee ~/Documents/
nathan@nathan-G3-3500:~/BashCommands$
```

- b. It copies multiple files to a directory.

```
cp $*
nathan@nathan-G3-3500:~/BashCommands$ mycp.sh ~/fileeeeeee ~/bash.sh ~/personal-access-token.txt ~/Documents/
nathan@nathan-G3-3500:~/BashCommands$
```

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

```
home > nathan > BashCommands > $ mycd
1  if [[ $# = 0 ]]
2  then
3      cd
4  else
5      cd $*
6  fi
7  |
```

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

```
nathan@nathan-G3-3500:~/BashCommands$ myls
DayOne.sh DayTwo.sh mycd mycp.sh myls s1.sh s2.sh
nathan@nathan-G3-3500:~/BashCommands$ myls /home/nathan
BashCommands Desktop Downloads personal-access-token.txt snap Videos
bash.sh DevOps fileeeeeee Pictures Templates vmware
compress Documents Music Public vc-lab-devops
nathan@nathan-G3-3500:~/BashCommands$ cat myls
if [[ $# = 0 ]]
then
    ls
else
    ls $*
finathan@nathan-G3-3500:~/BashCommands$
```

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

```
home > nathan > BashCommands > $ myls
1  if [[ $# = 0 ]]; then
2      ls
3  elif [[ $# = 1 ]]; then
4      if [[ $* = "-l" ]]; then
5          ls -l
6      elif [[ $* = "-a" ]]; then
7          ls -a
8      elif [[ $* = "-d" ]]; then
9          ls -d
10     elif [[ $* = "-i" ]]; then
11         ls -i
12     elif [[ $* = "-R" ]]; then
13         ls -R
14     else
15         ls $*
16     fi
17 else
18     ls $*
19 fi
20
```

```

nathan@nathan-G3-3500:~/BashCommands$ myls -i
4194830 DayOne.sh 4194626 mycd 4197917 myls 4197916 s2.sh
4194630 DayTwo.sh 4197915 mycp.sh 4195180 s1.sh
nathan@nathan-G3-3500:~/BashCommands$ myls -R
.:
DayOne.sh DayTwo.sh mycd mycp.sh myls s1.sh s2.sh
nathan@nathan-G3-3500:~/BashCommands$ myls -l /home/nathan
total 64
drwxrwxr-x 2 nathan nathan 4096 15:53 27 نف BashCommands
-rwxr-xr-x 1 nathan nathan 110 20:20 25 نف bash.sh
drwxrwxr-x 2 nathan nathan 4096 13:58 23 نف compress
drwxr-xr-x 2 nathan nathan 4096 15:24 2 نف Desktop
drwxrwxr-x 3 nathan nathan 4096 16:24 24 نف DevOps
drwxr-xr-x 2 nathan nathan 4096 15:15 27 نف Documents
drwxr-xr-x 4 nathan nathan 4096 15:02 27 نف Downloads
-rw-rw-r-- 1 nathan nathan 0 20:48 26 نف fileeeeeee
drwxr-xr-x 2 nathan nathan 4096 00:29 1 نف Music
-rw-rw-r-- 1 nathan nathan 41 23:55 24 نف personal-access-token.txt
drwxr-xr-x 3 nathan nathan 4096 12:44 25 نف Pictures
drwxr-xr-x 2 nathan nathan 4096 00:29 1 نف Public
drwx----- 6 nathan nathan 4096 13:35 1 نف snap
drwxr-xr-x 2 nathan nathan 4096 00:29 1 نف Templates
drwxrwxr-x 3 nathan nathan 4096 23:27 24 نف vc-lab-devops
drwxr-xr-x 2 nathan nathan 4096 00:29 1 نف Videos
drwxrwxr-x 3 nathan nathan 4096 23:04 25 نف vmware
nathan@nathan-G3-3500:~/BashCommands$
nathan@nathan-G3-3500:~/BashCommands$ myls -a /home/nathan
. .config .mozilla Templates
.. Desktop Music .var
BashCommands DevOps personal-access-token.txt vc-lab-devops
.bash_history Documents Pictures Videos
.bash_logout Downloads .pki .vmware
.bashrc fileeeeeee .profile vmware
.bashrc.swp .gitconfig Public .vscode
bash.sh .gnupg snap
.cache .lessht .ssh
compress .local .sudo_as_admin_successful
nathan@nathan-G3-3500:~/BashCommands$
nathan@nathan-G3-3500:~/BashCommands$ myls -i /home/nathan
4194424 BashCommands 4851044 Downloads 4196124 snap
4194341 bash.sh 4194343 fileeeeeee 4851045 Templates

```

Bonus:

enhance the above script to support the following Synopsis:

mysls -option1 -option2

mysls -option2 -option1

mysls -option1option2

mysls -option2option1

```
$ myls x
4108C53E6F2 > ITI DevOps > Bash Script > DAY 2 > Bash-Script-Lab-2 > BashScriptingFiles > $
1  <<Comment
2  if [[ $# = 0 ]]; then
3      ls
4  elif [[ $# = 1 ]]; then
5      if [[ $* = "-l" ]]; then
6          ls -l
7      elif [[ $* = "-a" ]]; then
8          ls -a
9      elif [[ $* = "-d" ]]; then
10         ls -d
11     elif [[ $* = "-i" ]]; then
12         ls -i
13     elif [[ $* = "-R" ]]; then
14         ls -R
15     else
16         ls $*
17     fi
18 else
19     ls $*
20 fi
21 Comment
22
23 <<Comment
24 if [[ $# = 0 ]]; then
25     ls
26 else
27     ls $*
28 fi
29 Comment
30
31 ls $*
```

```

nathan@nathan-G3-3500:~/BashCommands$ myls -al
total 36
drwxrwxr-x  2 nathan nathan 4096 15:53 27 نف .
drwxr-xr-x 26 nathan nathan 4096 23:53 26 نف ..
-rwxrw-r--  1 nathan nathan 1322 10:00 27 نف DayOne.sh
-rwxrwxrwx  1 nathan nathan   80 14:18 27 نف DayTwo.sh
-rwxrwxrwx  1 nathan nathan   46 16:01 27 نف mycd
-rwxrwxrwx  1 nathan nathan   17 15:27 27 نف mycp.sh
-rwxrwxrwx  1 nathan nathan  302 16:48 27 نف myls
-rwxrw-r--  1 nathan nathan   17 14:30 27 نف s1.sh
-rwxrw-r--  1 nathan nathan   14 14:24 27 نف s2.sh
nathan@nathan-G3-3500:~/BashCommands$ myls -i -l
total 28
4194830 -rwxrw-r--  1 nathan nathan 1322 10:00 27 نف DayOne.sh
4194630 -rwxrwxrwx  1 nathan nathan   80 14:18 27 نف DayTwo.sh
4194626 -rwxrwxrwx  1 nathan nathan   46 16:01 27 نف mycd
4197915 -rwxrwxrwx  1 nathan nathan   17 15:27 27 نف mycp.sh
4197917 -rwxrwxrwx  1 nathan nathan  302 16:48 27 نف myls
4195180 -rwxrw-r--  1 nathan nathan   17 14:30 27 نف s1.sh
4197916 -rwxrw-r--  1 nathan nathan   14 14:24 27 نف s2.sh
nathan@nathan-G3-3500:~/BashCommands$ myls -i -l /home/nathan
total 64
4194424 drwxrwxr-x  2 nathan nathan 4096 15:53 27 نف BashCommands
4194341 -rwxr-xr-x  1 nathan nathan  110 20:20 25 نف bash.sh
4194486 drwxrwxr-x  2 nathan nathan 4096 13:58 23 نف compress
4851043 drwxr-xr-x  2 nathan nathan 4096 15:24  2 نف Desktop
4195003 drwxrwxr-x  3 nathan nathan 4096 16:24 24 نف DevOps
4851047 drwxr-xr-x  2 nathan nathan 4096 15:15 27 نف Documents
4851044 drwxr-xr-x  4 nathan nathan 4096 15:02 27 نف Downloads
4194343 -rw-rw-r--  1 nathan nathan    0 20:48 26 نف fileeeeeee
4851048 drwxr-xr-x  2 nathan nathan 4096 00:29  1 نف Music
4194600 -rw-rw-r--  1 nathan nathan   41 23:55 24 نف personal-access-token.txt
4851049 drwxr-xr-x  3 nathan nathan 4096 12:44 25 نف Pictures
4851046 drwxr-xr-x  2 nathan nathan 4096 00:29  1 نف Public
4196124 drwx-----  6 nathan nathan 4096 13:35  1 نف snap
4851045 drwxr-xr-x  2 nathan nathan 4096 00:29  1 نف Templates
4194582 drwxrwxr-x  3 nathan nathan 4096 23:27 24 نف vc-lab-devops
4851050 drwxr-xr-x  2 nathan nathan 4096 00:29  1 نف Videos
4194357 drwxrwxr-x  3 nathan nathan 4096 23:04 25 نف vmware
nathan@nathan-G3-3500:~/BashCommands$ █

```

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

```
home > nathan > BashCommands > $ mytest
1  if [[ -d $1 ]]; then
2      echo "$1 is Directory and his Permissions is:"
3      ls -ld $1
4  else
5      echo "$1 is file and his Permissions is:"
6      ls -l $1
7  fi
8
```

```
nathan@nathan-G3-3500:~/BashCommands$ mytest myls
mysls is file and his Permissions is:
-rwxrwxrwx 1 nathan nathan 302 16:48 27 نفي myls
nathan@nathan-G3-3500:~/BashCommands$ mytest ~/BashCommands/
/home/nathan/BashCommands/ is Directory and his Permissions is:
drwxrwxr-x 2 nathan nathan 4096 17:13 27 نفي /home/nathan/BashCommands/
nathan@nathan-G3-3500:~/BashCommands$
```

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

```
home > nathan > BashCommands > ≡ myinfo
1  read -p "Please Enter You Login Name:" lname
2
3  ls -l /home/$lname
4  cp -R /home/$lname /tmp/backup
5  ps -u $lname
6
7
```