# Bash Script LAB 3

1. Write a script called mycase, using the case utility to checks the type of character entered by a user:

a. Upper Case.  b. Lower Case.  c. Number.  d. Nothing.

```
1   export LC_COLLATE=C
2   shopt -s extglob
3
4   read -p "Please Enter One Charachter: " char
5
6   case $char in
7   @([A-Z]) )
8       echo "Capital Leter"
9       ;;
10  @([a-z]) )
11      echo "Small Leter"
12      ;;
13  @([0-9]) )
14      echo "Number"
15      ;;
16  *)
17  echo "Nothing"
18  esac
```

```
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mycase
Please Enter One Charachter: a
Small Leter
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mycase
Please Enter One Charachter: A
Capital Leter
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mycase
Please Enter One Charachter: 4
Number
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mycase
Please Enter One Charachter: 445cdsaAA
Nothing
nathan@nathan-G3-3500:~/BashCommands/Day-3$
```

2. Enhanced the previous script, by checking the type of string entered by a user:

a. Upper Cases. b. Lower Cases. c. Numbers. d. Mix. e. Nothing

```
4   read -p "Please Enter a String: " str
5
6   case $str in
7   +([A-Z]) )
8       echo "Capital Leters"
9       ;;
10  +([a-z]) )
11      echo "Small Leters"
12      ;;
13  +([0-9]) )
14      echo "Numbers"
15      ;;
16  +([a-zA-Z0-9]) )
17      echo "Mixed"
18      ;;
19  *)
20  echo "Nothing"
21  esac
```

```
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mycase
Please Enter a String: nathan
Small Leters
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mycase
Please Enter a String: NathaN
Mixed
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mycase
Please Enter a String: NATHAN
Capital Leters
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mycase
Please Enter a String: 01246
Numbers
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mycase
Please Enter a String: Nathan012
Mixed
nathan@nathan-G3-3500:~/BashCommands/Day-3$
```

3. Write a script called mychmod using for utility to give execute permission to all files and directories in your home directory.

```
4   for i in `ls /home/nathan/`
5   do
6   if [ ! -x $i ]; then
7       chmod +x $i
8   fi
9   done
10
11
```

4. Write a script called mybackup using for utility to create a backup of only files in your home directory

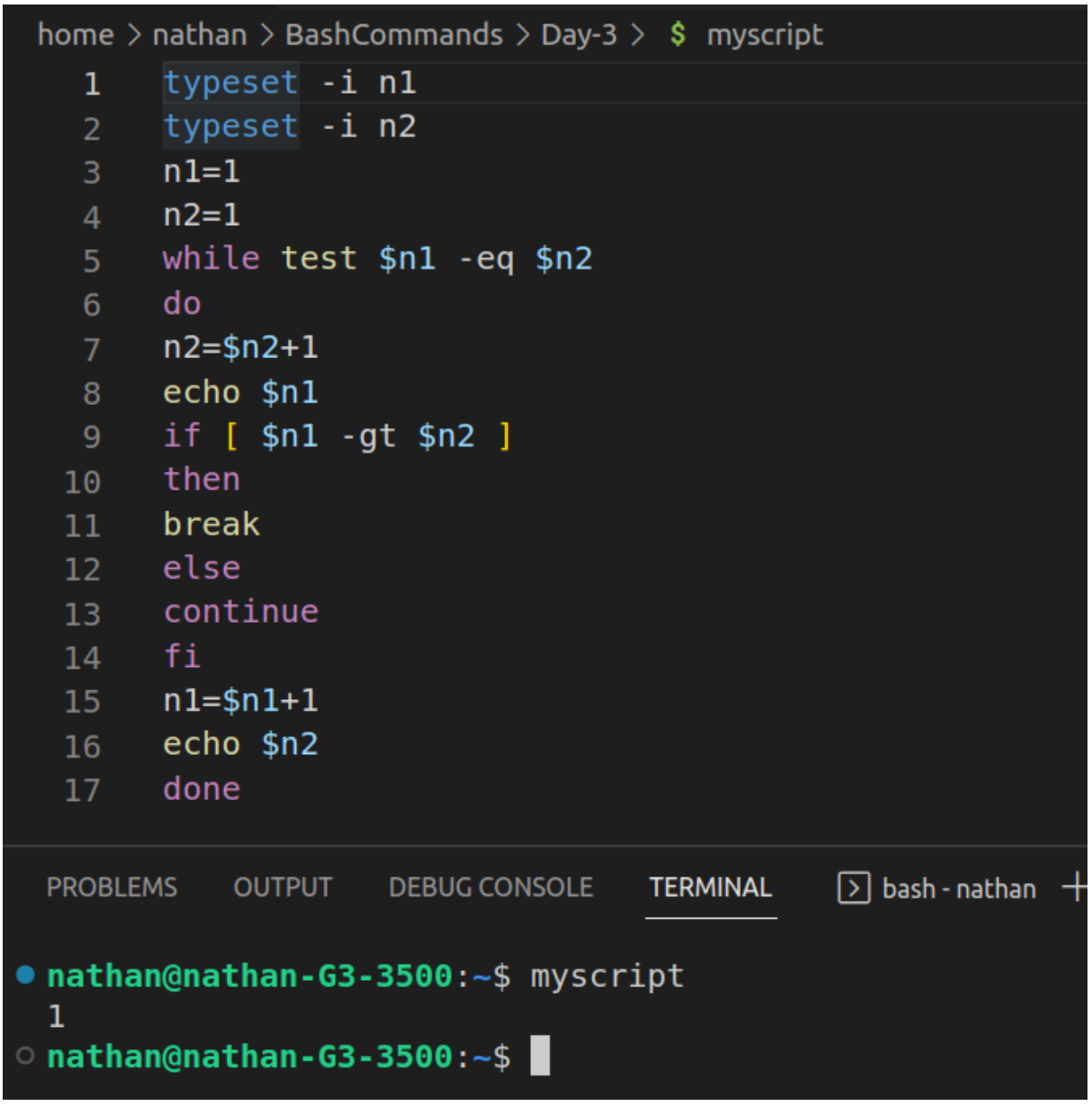
```
home > nathan > BashCommands > Day-3 > $ mybackup
1   for i in `ls /home/nathan/*`
2   do
3   if [ -f $i ]; then
4       ln $i $i.backup
5   fi
6   done
7
```

```
nathan@nathan-G3-3500:~/BashCommands/Day-3$ ls $HOME
BashCommands  DevOps     Music                     Pictures   vc-lab-devops
bash.sh       Documents  newfile                   Public     Videos
compress      Downloads  newfile2                  snap       vmware
Desktop       fileeeeee  personal-access-token.txt  Templates
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mybackup
nathan@nathan-G3-3500:~/BashCommands/Day-3$ ls $HOME
BashCommands     Documents         newfile2                        Public
bash.sh          Downloads         newfile2.backup                 snap
bash.sh.backup   fileeeeee         newfile.backup                  Templates
compress         fileeeeee.backup  personal-access-token.txt       vc-lab-devops
Desktop          Music             personal-access-token.txt.backup  Videos
DevOps           newfile           Pictures                        vmware
nathan@nathan-G3-3500:~/BashCommands/Day-3$
```

5. Write a script called mymail using for utility to send a mail to all users in the system. Note: write the mail body in a file called mtemplate.

6. Write a script called chkmail to check for new mails every 10 seconds. Note: mails are saved in /var/mail/username.

7. What is the output of the following script



8. Create the following menu: Using select utility then while utility.

a. Press 1 to ls  b. Press 2 to ls –a  c. Press 3 to exit

```
<<Comment
select op in "Press 1 to ls" "Press 2 to ls -a" "Press 3 to exit"
do
    case $op in
        "Press 1 to ls" )
        ls
        ;;
        "Press 2 to ls -a" )
        ls -a
        ;;
        "Press 3 to exit" )
        break
        ;;
    esac
done
Comment

read -p $'Press 1 to ls\nPress 2 to ls -a\nPress 3 to exit\n>> ' op
while true
do
    if [ $op = 1 ]; then
    ls
    read -p ">> " op
    elif [ $op = 2 ]; then
    ls -a
    read -p ">> " op
    else
    break
    fi
done
```

```
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mymenu
1) Press 1 to ls
2) Press 2 to ls -a
3) Press 3 to exit
#? 1
mybackup  mycase  mychmod  mymail  mymenu  myscript
#? 2
.  ..  mybackup  mycase  mychmod  mymail  mymenu  myscript
#? 1
mybackup  mycase  mychmod  mymail  mymenu  myscript
#? 2
.  ..  mybackup  mycase  mychmod  mymail  mymenu  myscript
#? 3
nathan@nathan-G3-3500:~/BashCommands/Day-3$
```

```
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mymenu
Press 1 to ls
Press 2 to ls -a
Press 3 to exit
>> 1
mybackup  mycase  mychmod  mymail  mymenu  myscript
>> 2
.  ..  mybackup  mycase  mychmod  mymail  mymenu  myscript
>> 3
nathan@nathan-G3-3500:~/BashCommands/Day-3$
```

9. Write a script called myarr that ask a user how many elements he wants to enter in an array, fill the array and then print it.

home > nathan > BashCommands > Day-3 > $ myarr

```
1   arr=()
2   typeset -i i=0
3   read -p "Please Enter the Lenth of the Array: " lenth
4   while true
5   do
6       if [[ $i < $lenth ]]; then
7           read -p "Enter the Element: " ele
8           arr+=($ele)
9           i=$i+1
10      else
11          break
12      fi
13  done
14  echo "The Array You Enterd is (${arr[@]})"
```

```
nathan@nathan-G3-3500:~/BashCommands/Day-3$ myarr
Please Enter the Lenth of the Array: 5
Enter the Element: 4
Enter the Element: 65
Enter the Element: 32
Enter the Element: 95
Enter the Element: 2
The Array You Enterd is (4 65 32 95 2)
nathan@nathan-G3-3500:~/BashCommands/Day-3$
```

10.Write a script called myavg that calculate average of all numbers entered by a user. Note: use arrays

```
arr=()
typeset -i i=0
typeset -i sum=0
typeset -i avg=0

read -p "Please Enter How Many Numbers you want to calculate's they Averag: " lenth
while true
do
    if [[ $i < $lenth ]]; then
        read -p "Enter the Element: " ele
        arr+=($ele)
        i=$i+1
        sum=$sum+$ele
    else
        break
    fi
done
avg=$sum/$lenth
echo "The Average of this numbers: $avg"
```

```
nathan@nathan-G3-3500:~/BashCommands/Day-3$ myavg
Please Enter How Many Numbers you want to calculate's they Averag: 5
Enter the Element: 6
Enter the Element: 1
Enter the Element: 24
Enter the Element: 3
Enter the Element: 5
The Average of this numbers: 7
nathan@nathan-G3-3500:~/BashCommands/Day-3$
```

11.Write a function called mysq that calculate square if its argument.

```
2   read -p "Enter the Number: " num
3   mysq () {
4    sq=`expr $num "*" $num`
5    echo "$num^2 = $sq"
6   }
7
8   mysq $num
```

```
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mysq
Enter the Number: 2
2^2 = 4
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mysq
Enter the Number: 4
4^2 = 16
nathan@nathan-G3-3500:~/BashCommands/Day-3$ mysq
Enter the Number: 8
8^2 = 64
nathan@nathan-G3-3500:~/BashCommands/Day-3$
```