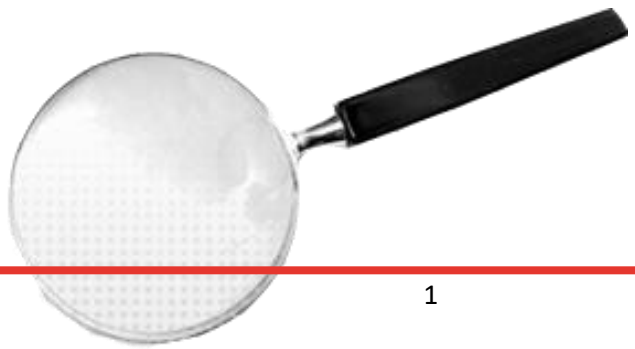
1. Write a script called mycase, using the case utility to checks the type of character entered by a user:
    a. Upper Case.
    b. Lower Case.
    c. Number.
    d. Nothing.

```
#!/bin/bash


read -p "Enter your character:" char

case $char in
[A-Z])
 echo "Your character is Upper case"
;;
[a-z])
echo "Your character is lower case"
;;
[0-9])
echo "your character is number"
;;
" ")
echo "Nothing"
;;
esac
```

```
mohamedtorkey@192:~$ vi mycase.sh
mohamedtorkey@192:~$ chmod +x mycase.sh
mohamedtorkey@192:~$ ./mycase.sh
Enter your character:a
your character is lower case
mohamedtorkey@192:~$ ./mycase.sh
Enter your character:b
your character is lower case
mohamedtorkey@192:~$ ./mycase.sh
Enter your character:V
your character is upper case
mohamedtorkey@192:~$
```

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.

```
#!/bin/ksh

read -p "Enter your string:" string

case $string in
+([a-z])) echo "your string is lower case"
;;
+([A-Z)) echo "Your string is Upper case"
;;
+([0-9])) echo "Your string is number "
;;
+([a-zA-Z0-9])) echo "Your string is mix"
;;
*) echo "Nothing"
;;
esac
```

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

```
#!/bin/bash

for i in "$HOME"/*
 do
    if [ -f "$i" ] || [ -d "$i" ]
 then
         chmod +x "$i"
    fi
done
```

```
mohamedtorkey@192:~$ mkdir f
mohamedtorkey@192:~$ ./mychmod.sh
mohamedtorkey@192:~$ ls -l
total 36
drwxr-xr-x. 1 mohamedtorkey mohamedtorkey 178 Dec 12 12:35  Downloads
drwxr-xr-x. 1 mohamedtorkey mohamedtorkey   0 Dec 12 13:40  f
-rwxr-xr-x. 1 mohamedtorkey mohamedtorkey   0 Dec 12 13:40  f1
-rwxr-xr-x. 1 mohamedtorkey mohamedtorkey   0 Dec 12 13:40  f2
-rwxr-xr-x. 1 mohamedtorkey mohamedtorkey  74 Dec 11 14:19  greating.sh
```

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

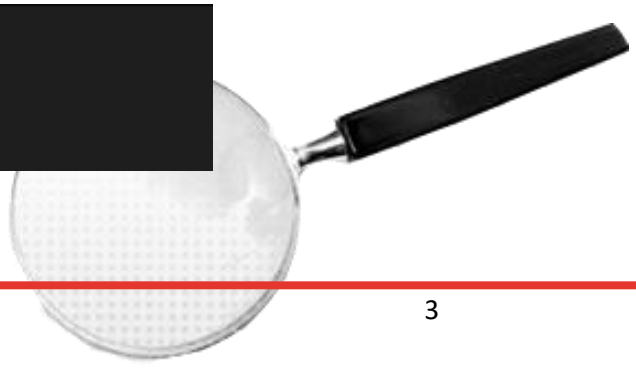
```
#!/bin/bash

#we use timestamp in name directory because don't make confuse when make call
script more than one
timestamp=$(date +"%Y%m%d_%H%M%S")

backup_dir="$HOME/backup_$timestamp"

mkdir "$backup_dir"

for file in "$HOME"/*
 do
    if [ -f "$file" ]
 then
        cp "$file" "$backup_dir"

    fi
done
```

```
mohamedtorkey@192:~$ vi mybackup.sh
mohamedtorkey@192:~$ chmod +x mybackup.sh
mohamedtorkey@192:~$ ./mybackup.sh
mohamedtorkey@192:~$ ls
 backup_20231212_140855   greating.sh   mycp.sh
```

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.

```
#!/bin/bash

template="mailtemp"


if [ ! -f "$template" ]
 then
    echo "the file of mail '$template' is not found."
    exit 1
fi

for user in $(cut -d: -f1 /etc/passwd)
 do
    subject="Hello $user i send this mail by script"

    mail -s "$subject" "$user" < "./$template"

done
```

```
mohamedtorkey@192:~$ vi ./mymail.sh
mohamedtorkey@192:~$ chmod +x mymail.sh
mohamedtorkey@192:~$ ./mymail.sh mailtemp
mohamedtorkey@192:~$
```



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

```
#!/bin/bash

while true
 do
    for user in /var/mail/*
 do
        if [ -s "$user" ]
then
            echo "New mail for user: $user"
       fi
    done


    sleep 10
done
```

```
mohamedtorkey@torkey:~$ vi chmail.sh
mohamedtorkey@torkey:~$ chmod  +x chmail.sh
mohamedtorkey@torkey:~$ ./chmail.sh
New mail for user: /var/mail/abrt
New mail for user: /var/mail/avahi
New mail for user: /var/mail/chrony
```