

## Question1 :

Create the startup script for an application start and stop.

```

(saurabh@ LenovoLegion5) - [~/ShellScripting/ShellQuestions/Assignment]
$ vi 1_start_stop_app.sh

(saurabh@ LenovoLegion5) - [~/ShellScripting/ShellQuestions/Assignment]
$ chmod u+x 1_start_stop_app.sh

(saurabh@ LenovoLegion5) - [~/ShellScripting/ShellQuestions/Assignment]
$ ./1_start_stop_app.sh start
Application started.

(saurabh@ LenovoLegion5) - [~/ShellScripting/ShellQuestions/Assignment]
$ ./1_start_stop_app.sh stop
Application Stopped.

(saurabh@ LenovoLegion5) - [~/ShellScripting/ShellQuestions/Assignment]
$

```

```

Select saurabh@LenovoLegion5: ~/ShellScripting/ShellQuestions/Assignment
(saurabh@ LenovoLegion5) - [~/ShellScripting/ShellQuestions/Assignment]
$ cat 1_start_stop_app.sh
#!/bin/bash

function start(){
    echo "Application started."
}

function stop(){
    echo "Application Stopped."
}

function restart(){
    echo "Application Restarted."
}

if [ $# -eq 1 ]
then
    choice=$1
    case $choice in
        "start")
            start
            ;;
        "stop")
            stop
            ;;
        "restart")
            restart
            ;;
        *)
            echo "Please enter valid option."
    esac
else
    echo "Please provide the start/stop operation in command line."
fi

```

## Question2:

Write a shell script that consists of a function that displays the number of files

in the present working directory. Name this function “file\_count” and call it in your script. If you use variable in your function, remember to make it a local variable.

```
Select saurabh@LenovoLegion5: ~/ShellScripting/ShellQuestions/Assignment
(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ vi 2_file_count.sh
(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ chmod u+x 2_file_count.sh
(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ cat 2_file_count.sh
#!/bin/bash

file_count(){
    count=$(ls -l | wc -l)
    echo "There are $count files in the current directory."
}

file_count

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ ./2_file_count.sh
There are 5 files in the current directory.

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ ls -l
total 20
-rwxr--r-- 1 saurabh saurabh 124 Apr 20 15:55 2_file_count.sh
-rwxr--r-- 1 saurabh saurabh 232 Apr 20 15:53 5_list_content.sh
drwxr-xr-x 2 saurabh saurabh 4096 Apr 20 15:49 dir1
drwxr-xr-x 2 saurabh saurabh 4096 Apr 20 15:51 dir2
drwxr-xr-x 2 saurabh saurabh 4096 Apr 20 15:52 dir3

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$
```

### Question3:

For each directory in the \$PATH, display the number of executable in that directory

```
Select saurabh@LenovoLegion5: ~/ShellScripting/ShellQuestions/Assignment
(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ vi 3_executable.sh
(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ chmod u+x 3_executable.sh
(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ cat 3_executable.sh
#!/bin/bash

IFS=":" read -ra dirs <<< "$PATH"

for dir in "${dirs[@]}";
do
    count=$(find "$dir" -maxdepth 1 -type f -executable | wc -l)
    echo "$dir: $count"
done

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ ./3_executable.sh
/usr/local/sbin: 0
/usr/local/bin: 0
/usr/sbin: 281
/usr/bin: 970
/sbin: 0
/bin: 0
/usr/games: 0
/usr/local/games: 0
/usr/lib/wsl/lib: 3
/mnt/c/oracle/app/oracle/product/11.2.0/server/bin: 395
find: '/mnt/c/mysql-connector-java-8.0.30.jar': No such file or directory
/mnt/c/mysql-connector-java-8.0.30.jar: 0
/mnt/c/Program Files/Common Files/Oracle/Java/javapath: 0
/mnt/c/windows/system32: 4555
/mnt/c/windows: 40
/mnt/c/windows/System32/Wbem: 347
/mnt/c/windows/System32/WindowsPowerShell/v1.0/: 21
/mnt/c/windows/System32/OpenSSH/: 7
/mnt/c/Program Files (x86)/NVIDIA Corporation/PhysX/Common: 8
/mnt/c/Program Files/NetBeans/BuCharm_Community_Edition_2023_1/bin: 24

35°C
Sunny
```

### Question4:

Display the names of any file-system which have less than 10% free space available

(actually none of my file-system are 90% used so to show result I used 60% as the Parameter which shows the file system whose 40% space are free)

```
Select saurabh@LenovoLegion5: ~/ShellScripting/ShellQuestions

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions]
$ vi 29_free_space.sh

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions]
$ chmod u+x 29_free_space.sh

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions]
$ cat 29_free_space.sh
#!/bin/bash

echo "These are the files whose usage is more than 60 % : "

df -h | awk '{if($5>60) print $0}'

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions]
$ ./29_free_space.sh
These are the files whose usage is more than 60 % :
Filesystem      Size  Used Avail Use% Mounted on
tools           238G  156G   82G   66% /init
drivers         238G  156G   82G   66% /usr/lib/wsl/drivers
lib             238G  156G   82G   66% /usr/lib/wsl/lib
drvfs           238G  156G   82G   66% /mnt/c

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions]
$
```

#### Question05:

Write a script that takes any number of directories as command-line arguments and then lists the contents of each of these directories.

```
Select saurabh@LenovoLegion5: ~/ShellScripting/ShellQuestions/Assignment

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment]
$ vi 5_list_content.sh

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment]
$ chmod u+x 5_list_content.sh

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment]
$ cat 5_list_content.sh
#!/bin/bash

if [ $# -ne 0 ]
then
    directories=$@
    for directory in $directories
    do
        echo -e "\nShowing content of $directory : \n"
        ls -l $directory
    done
else
    echo "Please provide the directory names in command-line."
fi

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment]
$ ./5_list_content.sh
Please provide the directory names in command-line.

(saurabh@ LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment]
$ ./5_list_content.sh dir1 dir2 dir3

Showing content of dir1 :

total 0
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:49 bye.txt
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:49 hello.txt
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:49 hi.txt

Showing content of dir2 :
```

```
Select saurabh@LenovoLegion5: ~/ShellScripting/ShellQuestions/Assignment
for directory in $directories
do
    echo -e "\nShowing content of $directory : \n"
    ls -l $directory
done
else
    echo "Please provide the directory names in command-line."
fi

(saurabh@LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ ./5_list_content.sh
Please provide the directory names in command-line.

(saurabh@LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$ ./5_list_content.sh dir1 dir2 dir3

Showing content of dir1 :

total 0
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:49 bye.txt
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:49 hello.txt
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:49 hi.txt

Showing content of dir2 :

total 0
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:51 a.txt
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:51 b.txt
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:51 c.txt

Showing content of dir3 :

total 0
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:52 demo.txt
-rw-r--r-- 1 saurabh saurabh 0 Apr 20 15:52 file.txt

(saurabh@LenovoLegion5)~/ShellScripting/ShellQuestions/Assignment
$
```