OS-ASSIGNMENT-04

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1) Write a shell script which takes filename as argument and checks whether file is regular file, directory, block special file, character special file, named pipe, symbolic link, socket, device file etc.

```bash
#question 1

echo -e "Please enter file name : \c"
read filename
if [ -e $filename ]
then
        if [ -f $filename ]
        then
                echo "'$filename' file found"
        elif [ -d $filename ]
        then
                echo "'$filename' directory found"
        elif [ -b $filename ]
        then
                echo "'$filename' is device special file"
        elif [ -c $filename ]
        then
                echo "'$filename' is character special file"
        elif [ -p $filename ]
        then
                echo "'$filename' is named piped file"
        elif [ -h $filename ]
        then
                echo "'$filename' is symbolic linked"
        elif [ -S $filename ]
        then
                echo "'$filename' is socket"
        fi
else
        echo "'$filename' does not exist"
fi
```

```
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ls
abcd.txt  folder1  folder2  q1.sh  q2.sh  q3.sh  q4.sh
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ./q1.sh
Please enter file name : folder1
'folder1' directory found
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ./q1.sh
Please enter file name : q1.sh
'q1.sh' file found
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ./q1.sh
Please enter file name : abcd.png
'abcd.png' does not exist
```

2) Write a shell script which will take file name as argument and check whether the file name is a dir or not and then proceed further only if it is a dir, else give usage message. The script should then print in the tabular format, name of each sub-dir (within the argument dir) and a count of the number of top level files in that sub-dir. Modify the program to work with multiple numbers of arguments, too.

```
#question 2

for dirname in $@
do
if [ -d $dirname ]
then
        find $dirname -type d |
        while read -r dir
        do printf "%10s:\t" "$dir"; find "$dir" -maxdepth 1 -type f | wc ->
        done
        echo ""
elif [ -f $dirname ]
then
        echo -e "./2.sh '$dirname'"
else
        echo -e "No such file or directory exist!"
fi
done
```

```
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ./q2.sh folder1
   folder1:     4
folder1/folder1-1:      4
folder1/folder1-3:      3
folder1/folder1-2:      2

brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ./q2.sh q1.sh
./2.sh 'q1.sh'
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ls
abcd.txt  folder1  folder2  o1.png  q1.sh  q2.sh  q3.sh  q4.sh
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ./q2.sh q1.sht
No such file or directory exist!
```

3) Write a script that will search for a specific word in all the files in the current dictionary and then prompt with the file name in which word is found.

```
  GNU nano 4.8                              q3.sh
#question 3

echo -e "Enter a word to search in files : \c"
read str
grep -l "$str" *.*
```

```
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ./q3.sh
Enter a word to search in files : file
q1.sh
q2.sh
q3.sh
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ./q3.sh
Enter a word to search in files : files
q3.sh
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ./q3.sh
Enter a word to search in files : brijesh
abcd.txt
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ cat abcd.txt
hello guys
this is brijesh
making this fun!
```

4) Write a script to print only the number of executable files in each sub-dir of the argument directory specified.

```
  GNU nano 4.8                              q4.sh
#question 4

dirargu="."
echo -e "Enter sub-dir to find executable files [enter for current] : \c"
read dirargu
find $dirargu -mindepth 2 -executable -type f
```

5) Write a non-interactive script that takes in any no. of directory name as argument and calculates total no. of blocks of disk space occupied by the ordinary files in all the directories.

```
  GNU nano 4.8                              q5.sh
#question 5

for dirargu in $@
do
        if [ -d $dirargu ]
        then
                echo -e "number of blocks occupied by $dirargu : \c"
                ls -s $dirargu | sed 's/^ *//' | grep total
        else
                echo "$dirargu directory not found"
        fi
done
```

```
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$ ./q5.sh folder
1 folder2
number of blocks occupied by folder1 : total 12
number of blocks occupied by folder2 : total 4
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$
```

6) Write a shell script file named exercise2.sh that makes a list of files in your home directory that were changed less than 24 hours ago, but leave out directories.

```
  GNU nano 4.8                              q6.sh
#question 6

find ~ -type f -mtime -1 -ls
```

```
me/brijesh/.thunderbird/44gn1gpm.default-release/datareporting/archived/202
1-08/1630400566797.a37235d4-431a-482a-9229-ebabb24ac8d8.main.jsonlz4
 10487522    320 -rw-r--r--   1 brijesh  brijesh    327680 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/history.sqlite
 10486663      0 -rw-rw-r--   1 brijesh  brijesh         0 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/SecurityPreloadState.txt
 10486657      4 -rw-------   1 brijesh  brijesh      2291 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/addonStartup.json.lz4
 10487525      4 -rw-------   1 brijesh  brijesh      1784 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/xulstore.json
 10486651   1216 -rw-r--r--   1 brijesh  brijesh   1245184 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/global-messages-db.sqlite
 10487521    320 -rw-r--r--   1 brijesh  brijesh    327680 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/abook.sqlite
 10487519      4 -rw-------   1 brijesh  brijesh      1714 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/search.json.mozlz4
 10486637    224 -rw-------   1 brijesh  brijesh    229376 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/cert9.db
 10486658      0 -rw-rw-r--   1 brijesh  brijesh         0 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/AlternateServices.txt
 10487533      4 -rw-------   1 brijesh  brijesh        23 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/folderTree.json
 10486659      4 -rw-------   1 brijesh  brijesh      3100 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/prefs.js
 10487534     48 -rw-------   1 brijesh  brijesh     45469 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/extensions.json
 10487527   5120 -rw-r--r--   1 brijesh  brijesh   5242880 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/places.sqlite
 10486646   2248 -rw-r--r--   1 brijesh  brijesh   2301952 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/storage/permanent/chrome/i
db/3870112724rsegmnoittet-es.sqlite
 10487529   5120 -rw-r--r--   1 brijesh  brijesh   5242880 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/favicons.sqlite
 10486661      0 -rw-rw-r--   1 brijesh  brijesh         0 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/SiteSecurityServiceState.t
xt
 10486649      4 -rw-------   1 brijesh  brijesh       668 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/extension-preferences.json
 10487526    512 -rw-r--r--   1 brijesh  brijesh    524288 Aug 31 14:32 /ho
me/brijesh/.thunderbird/44gn1gpm.default-release/blist.sqlite
brijesh@brijesh-GF75-Thin-9SCSR:~/Documents/os/OS-ASSIGN-04$
```