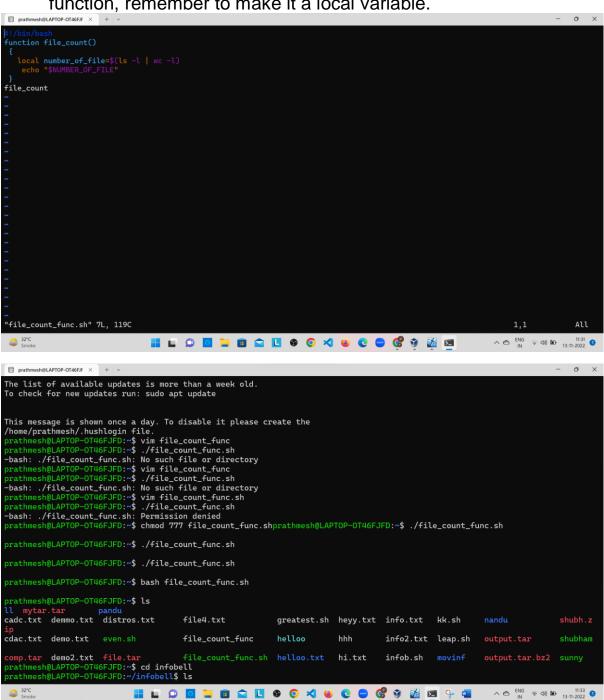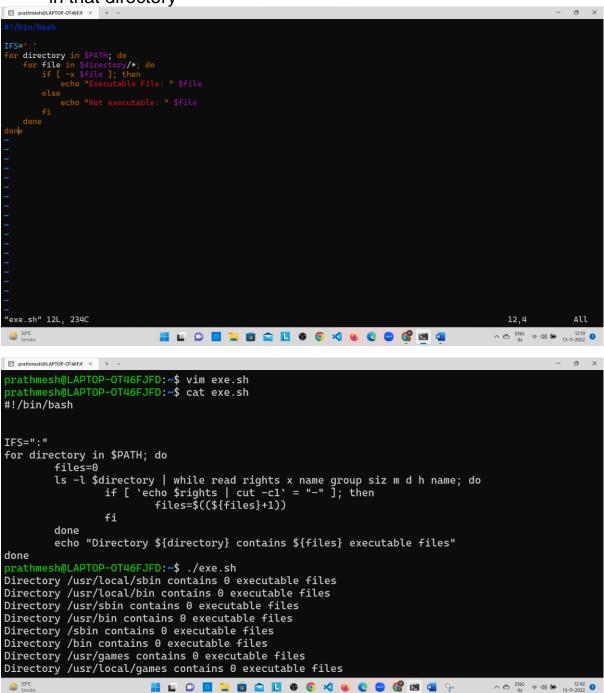1) Write 5 shell scripts for following scenarios, checkin the files and screenshot documents checkin to GIT
  • Create the startup script for an application start and stop

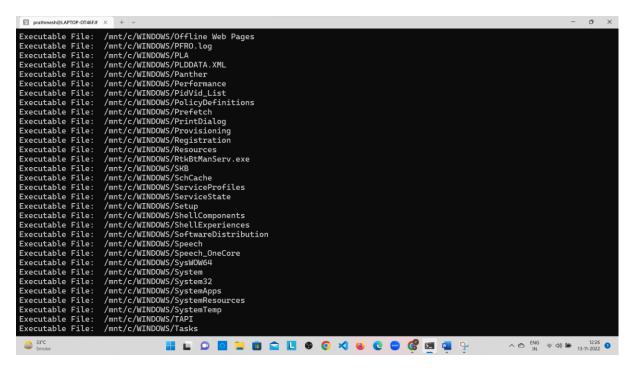---

  • 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.

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


```bash
#!/bin/bash

IFS=':'
for directory in $PATH; do
    for file in $directory/*; do
        if [ -x $file ]; then
            echo "Executable File: " $file
        else
            echo "Not executable: " $file
        fi
    done
done
```

```
"exe.sh" 12L, 234C                                    12,4        All
```



```
prathmesh@LAPTOP-OT46FJFD:~$ vim exe.sh
prathmesh@LAPTOP-OT46FJFD:~$ cat exe.sh
#!/bin/bash


IFS=":"
for directory in $PATH; do
        files=0
        ls -l $directory | while read rights x name group siz m d h name; do
                if [ `echo $rights | cut -c1` = "-" ]; then
                        files=$((${files}+1))
                fi
        done
        echo "Directory ${directory} contains ${files} executable files"
done
prathmesh@LAPTOP-OT46FJFD:~$ ./exe.sh
Directory /usr/local/sbin contains 0 executable files
Directory /usr/local/bin contains 0 executable files
Directory /usr/sbin contains 0 executable files
Directory /usr/bin contains 0 executable files
Directory /sbin contains 0 executable files
Directory /bin contains 0 executable files
Directory /usr/games contains 0 executable files
Directory /usr/local/games contains 0 executable files
```

```
Executable File:  /mnt/c/WINDOWS/Offline Web Pages
Executable File:  /mnt/c/WINDOWS/PFRO.log
Executable File:  /mnt/c/WINDOWS/PLA
Executable File:  /mnt/c/WINDOWS/PLDDATA.XML
Executable File:  /mnt/c/WINDOWS/Panther
Executable File:  /mnt/c/WINDOWS/Performance
Executable File:  /mnt/c/WINDOWS/PidVid_List
Executable File:  /mnt/c/WINDOWS/PolicyDefinitions
Executable File:  /mnt/c/WINDOWS/Prefetch
Executable File:  /mnt/c/WINDOWS/PrintDialog
Executable File:  /mnt/c/WINDOWS/Provisioning
Executable File:  /mnt/c/WINDOWS/Registration
Executable File:  /mnt/c/WINDOWS/Resources
Executable File:  /mnt/c/WINDOWS/RtkBtManServ.exe
Executable File:  /mnt/c/WINDOWS/SKB
Executable File:  /mnt/c/WINDOWS/SchCache
Executable File:  /mnt/c/WINDOWS/ServiceProfiles
Executable File:  /mnt/c/WINDOWS/ServiceState
Executable File:  /mnt/c/WINDOWS/Setup
Executable File:  /mnt/c/WINDOWS/ShellComponents
Executable File:  /mnt/c/WINDOWS/ShellExperiences
Executable File:  /mnt/c/WINDOWS/SoftwareDistribution
Executable File:  /mnt/c/WINDOWS/Speech
Executable File:  /mnt/c/WINDOWS/Speech_OneCore
Executable File:  /mnt/c/WINDOWS/SysWOW64
Executable File:  /mnt/c/WINDOWS/System
Executable File:  /mnt/c/WINDOWS/System32
Executable File:  /mnt/c/WINDOWS/SystemApps
Executable File:  /mnt/c/WINDOWS/SystemResources
Executable File:  /mnt/c/WINDOWS/SystemTemp
Executable File:  /mnt/c/WINDOWS/TAPI
Executable File:  /mnt/c/WINDOWS/Tasks
```

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

```
#!/bin/bash
df -P | awk '0+$5 >= 80 {print}'
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
                                          2,32          All
```

```
none          288265212 258161008  30104204    90% /run/lock
none          288265212 258161008  30104204    90% /run/shm
none          288265212 258161008  30104204    90% /run/user
tmpfs         288265212 258161008  30104204    90% /sys/fs/cgroup
C:\           288265212 258161008  30104204    90% /mnt/c
prathmesh@LAPTOP-OT46FJFD:~$ touch free.sh
prathmesh@LAPTOP-OT46FJFD:~$ vim free.sh
prathmesh@LAPTOP-OT46FJFD:~$ chmod +x free.sh
prathmesh@LAPTOP-OT46FJFD:~$ ./free.sh
96268      90% /
none          288265212 258168944  30096268    90% /dev
none          288265212 258168944  30096268    90% /run
none          288265212 258168944  30096268    90% /run/lock
none          288265212 258168944  30096268    90% /run/shm
none          288265212 258168944  30096268    90% /run/user
tmpfs         288265212 258168944  30096268    90% /sys/fs/cgroup
C:\           288265212 258168944  30096268    90% /mnt/c
prathmesh@LAPTOP-OT46FJFD:~$ vim free.sh
prathmesh@LAPTOP-OT46FJFD:~$
```

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

```
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script/d3$ cat Q5dircontent.sh
#!/bin/bash
for dir in "$@"
do
        cd $dir
        ls -lh
done
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script/d3$ bash Q5dircontent.sh d3
Q5dircontent.sh: line 4: cd: d3: No such file or directory
total 0
-rw-r--r-- 1 prathmesh prathmesh  67 Nov 15 12:42 Q5dircontent.sh
drwxr-xr-x 1 prathmesh prathmesh 512 Nov 15 11:28 d2
-rw-r--r-- 1 prathmesh prathmesh  53 Nov 15 12:40 dircontent5
-rw-r--r-- 1 prathmesh prathmesh  68 Nov 15 12:41 dircontent5.sh
-rwxr-xr-x 1 prathmesh prathmesh   0 Nov 15 12:37 file11.txt
-rw-r--r-- 1 prathmesh prathmesh   0 Nov 15 12:37 file22.txt
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script/d3$
```

==

```
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ cat Q1pattern.sh
number=1
rows=6
for((i=1; i<=rows; i++))
do
        for((j=1; j<=i; j++))
        do
                echo -n $number
                number=$((number+1))
        done
        echo
        number=1
done
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ bash Q1pattern.sh
1
12
123
1234
12345
123456
```

```
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ cat Q2pattern.sh
number=1
rows=4
for((i=1; i<=rows; i++))
do
        for((j=1; j<=i; j++))
        do
                echo -n $number
                number=$((number+1))
        done
        echo
done
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ bash Q2pattern.sh
1
23
456
78910
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$
```

```
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ cat Q3add.sh
read -p "Enter first number : " a
read -p "Enter second number : " b
c=`echo $a+$b | bc`
echo "the sum of $a and $b is $c"
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ bash Q3add.sh
Enter first number : 20
Enter second number : 30
the sum of 20 and 30 is 50
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$
```

```
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_scr
ipt$ bash 15rename.sh d2 d3
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_scr
ipt$ ls
15rename.sh    Q3add.sh      Q6reverse.sh
Q1pattern.sh   Q4array.sh    d3
Q2pattern.sh   Q5large.sh
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_scr
ipt$ cat 15rename.sh
mv $1 $2
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_scr
ipt$
```

```
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ cat Q4array.sh
#! bin/bash

echo "Enter a expression : "
read -a arr
e=`echo ${arr[@]} | bc`
echo "the result of given expression is $e"
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ bash Q4array.sh
Enter a expression :
20 + 55
the result of given expression is 75
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$
```

```
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ cat 17line_num.sh
read -p "file name : " f
read -p "enter start and end :" s e
for i in $(sed -n $s,$e\p $f)
do
        echo $i
done
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ bash 17line_num.sh
file name : demo.txt
enter start and end :3 6
line3
line4
line5
line6
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$
```

```
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ cat Q5large.sh
#! bin/bash

read -a arr
c=0
for i in "${arr[@]}"
do
        if (($i>$c))
        then
                c=$i
        fi

done
echo "largest number is $c"
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ bash Q5large.sh
55 20 967 5
largest number is 967
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$
```

```
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ cat Q6reverse.sh
#! bin/bash
read -p "Enter a number to reverse : " a
n=0
while [ $a -gt 0 ]
do
        d=$(( $a % 10 ))
        n=$(( $n * 10 + $d ))
        a=$(( $a / 10))
done
echo $n
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ bash Q6reverse.sh
Enter a number to reverse : 56987
78965
```

```
prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ cat Q14upper_lower.sh
#!/bin/bash
read a;
b= cat $a | tr 'a-z' 'A-Z'
echo $b

prathmesh@LAPTOP-OT46FJFD:~/infobellit/shell_script$ bash Q14upper_lower.sh
demo.txt
HELLO
LINE 2
LINE3
LINE4
LINE5
LINE6
```

```
root@LAPTOP-OT46FJFD:/# vim Q18large_user.sh
root@LAPTOP-OT46FJFD:/# cat Q18large_user.sh
#!/bin/bash
cat /etc/shadow | awk -F ':' '{print length($1), $1}' | sort -rn | head -n 1
cat /etc/shadow | awk -F ':' '{print length($1), $1}' | sort -rn | tail -n 1
root@LAPTOP-OT46FJFD:/# bash Q18large_user.sh
16 systemd-timesync
2 lp
root@LAPTOP-OT46FJFD:/#
```