

Linux assignment 5

1. Write a shell script to display a directory listing.

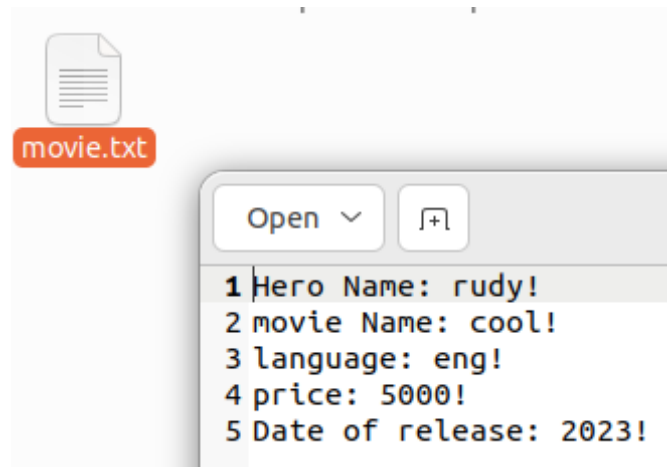
```
rudolph@rudolph-VirtualBox: ~  
#!/bin/bash  
echo "list of all files in current directory"  
for file in *; do  
    echo $file  
done  
~  
~  
~
```

```
rudolph@rudolph-VirtualBox: ~  
rudolph@rudolph-VirtualBox:~$ vim l51.sh  
rudolph@rudolph-VirtualBox:~$ ./l51.sh  
list of all files in current directory  
Desktop  
Documents  
Downloads  
hello.sh  
l51.sh  
linuxsasst5  
Music  
Pictures  
Public  
shellasst  
snap  
Templates  
Videos  
rudolph@rudolph-VirtualBox:~$
```

2. Write a shell script for accepting the following information and store it in a file. Hero Name., Movie Name, Language, Price and Date of release.

```
rudolph@rudolph-VirtualBox: ~  
rudolph@rudolph-VirtualBox:~$ ./l52.sh  
Enter Your Name:  
rudy  
Welcome rudy!  
rudolph@rudolph-VirtualBox:~$ ./l52.sh  
Enter Your Name:  
rudy  
rudolph@rudolph-VirtualBox:~$ ./l52.sh  
Enter Hero Name:  
rudy  
Enter Movie Name:  
cool  
rudolph@rudolph-VirtualBox:~$ ./l52.sh  
Enter Hero Name:  
rudy  
Enter Movie Name:  
cool  
Enter language:  
eng  
Enter price:  
5000  
Enter Date of release:  
2023  
rudolph@rudolph-VirtualBox:~$
```

```
rudolph@rudolph-VirtualBox: ~  
#!/bin/bash  
  
echo "Enter Hero Name: "  
read var  
  
echo "Enter Movie Name: "  
read var1  
  
echo "Enter language: "  
read var2  
  
echo "Enter price: "  
read var3  
  
echo "Enter Date of release: "  
read var4  
  
echo "Hero Name: ${var}!" >> movie.txt  
echo "movie Name: ${var1}!" >> movie.txt  
echo "language: ${var2}!" >> movie.txt  
echo "price: ${var3}!" >> movie.txt  
echo "Date of release: ${var4}!" >> movie.txt  
~  
"l52.sh" 22L, 396B
```



3. Write a shell script to examine all the number from 1 to 999 and display all those number whose sum of cube of the digit is equal to the number. e.g. $371 = 3 \times 3 \times 3 + 7 \times 7 \times 7 + 1 \times 1 \times 1$ (armstrong)

```
rudolph@rudolph-VirtualBox: ~  
rudolph@rudolph-VirtualBox:~$ pwd  
/home/rudolph  
rudolph@rudolph-VirtualBox:~$ vim l53.sh  
rudolph@rudolph-VirtualBox:~$ chmod a+x l53.sh  
rudolph@rudolph-VirtualBox:~$ ./l53.sh  
test  
rudolph@rudolph-VirtualBox:~$ ./l53.sh  
153  
370  
371  
407  
rudolph@rudolph-VirtualBox:~$ ./l53.sh  
displaying armstrong numbers bet 1 to 999  
153  
370  
371  
407  
rudolph@rudolph-VirtualBox:~$
```

```
l53.sh  
~/  
1 #!/bin/bash  
2 echo "displaying armstrong numbers bet 1 to 999"  
3 i=100  
4 while [ $i -lt 1000 ]  
5 do  
6     x=$i  
7     sum=0  
8     r=0  
9     n=0  
10  
11     while [ $x -gt 0 ]  
12     do  
13         r=`expr $x % 10`  
14         n=`expr $r \* $r \* $r`  
15         sum=`expr $sum + $n`  
16         x=`expr $x / 10`  
17     done  
18     if [ $sum -eq $i ]  
19     then  
20         echo $sum  
21     fi  
22     i=`expr $i + 1`  
23 done  
24
```

4. Write a shell script to define a function line count that counts the number of lines in the file provided as a command line argument.

```
rudolph@rudolph-VirtualBox: ~  
#!/bin/bash  
  
echo "Enter the filename"  
read file  
  
l=`grep -c "." $file`  
  
echo "Number of lines in $file is $l"  
~  
~  
~
```

```
rudolph@rudolph-VirtualBox: ~  
rudolph@rudolph-VirtualBox:~$ vim l54.sh  
rudolph@rudolph-VirtualBox:~$ ./l54.sh  
Enter the filename  
random.txt  
Number of lines in random.txt is 8  
rudolph@rudolph-VirtualBox:~$ cat random.txt  
Prog languages  
python  
ruby  
c  
c++  
go  
java  
javascript  
rudolph@rudolph-VirtualBox:~$
```

5. Write a shell script to find the Greatest Common Divisor (GCD) of two given numbers A and B.

```
rudolph@rudolph-VirtualBox: ~  
#!/bin/bash  
  
printf "Enter first number: "  
read n1  
printf "Enter second number: "  
read n2  
m=$n1  
n=$n2  
r=$n2  
while [ $r -ne 0 ];do  
    r=$(( n1%n2 ))  
    if [ $r -eq 0 ];then  
        break  
    else  
        ((n1=$n2))  
        ((n2=$r))  
    fi  
done  
printf "GCD of %d and %d is %d \n" $m $n $n2
```

```
rudolph@rudolph-VirtualBox: ~  
^C  
rudolph@rudolph-VirtualBox:~$ ./l55.sh  
Enter first nuumber: 4  
Enter second nuumber: 8  
GCD of 4 and 8 is 4  
LCM Of 4 and 8 is 8  
rudolph@rudolph-VirtualBox:~$ ./l55.sh  
Enter first nuumber: 88  
Enter second nuumber: 100  
GCD of 88 and 100 is 4  
rudolph@rudolph-VirtualBox:~$ ./l55.sh  
Enter first nuumber: 90  
Enter second nuumber: 45  
GCD of 90 and 45 is 45
```

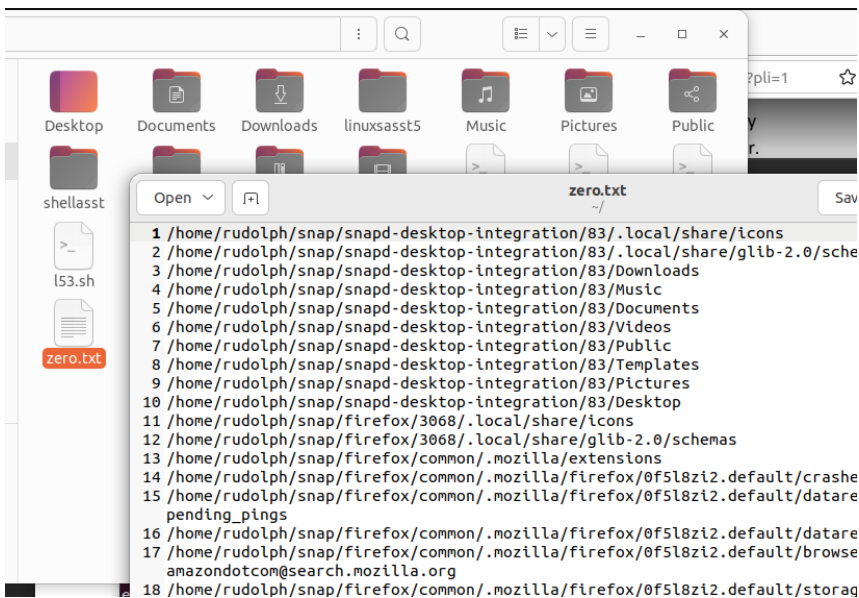
6. Write a shell script takes the name a path, and counts all the sub directories. (done)

```
rudolph@rudolph-VirtualBox: ~  
rudolph@rudolph-VirtualBox:~/Desktop$ cd  
rudolph@rudolph-VirtualBox:~$ cd  
rudolph@rudolph-VirtualBox:~$ pwd  
/home/rudolph  
rudolph@rudolph-VirtualBox:~$ ./ls56.sh  
bash: ./ls56.sh: No such file or directory  
rudolph@rudolph-VirtualBox:~$ ./ls56.sh  
bash: ./ls56.sh: No such file or directory  
rudolph@rudolph-VirtualBox:~$ ./l56.sh  
Please enter path to scan:  
/home/rudolph  
26  
rudolph@rudolph-VirtualBox:~$
```

```
rudolph@rudolph-VirtualBox:~$ cat l56.sh  
#!/bin/bash  
  
echo "Please enter path to scan:"  
read path  
ls -l -R $path | grep -c ^d  
rudolph@rudolph-VirtualBox:~$
```

7. Write a shell script that takes a name of a folder as a command line argument, and produce a file that contains the names of all sub folders with size 0.

```
rudolph@rudolph-VirtualBox:~$ ./l57.sh  
enter path  
/home/rudolph  
rudolph@rudolph-VirtualBox:~$ cat l57.sh  
#!/bin/bash  
  
echo "enter path"  
read path  
find $path -type d -empty >> zero.txt  
rudolph@rudolph-VirtualBox:~$
```



8. Write a shell script that takes a name of a folder, and delete all sub folders of size 0.

```
rudolph@rudolph-VirtualBox: ~  
#!/bin/bash  
  
# Taking directory name as input from user  
echo -n "Enter name of the directory : "  
read directory_name  
  
# If directory exists it will print  
# Directory exists  
# and remove the zero-sized files.  
# Or if directory doesn't exist it will print  
# Directory does not exist.  
if [ -d "$directory_name" ];  
then  
    echo "Directory exist"  
    for i in `find $directory_name -size 0`  
    do  
        rm $i  
        echo "Zero-sized files are Successfully deleted"  
    done  
else  
    echo "Directory does not exist"  
fi  
rudolph@rudolph-VirtualBox:~$
```

9. Write a shell script that will take an input file and remove identical lines.

```
rudolph@rudolph-VirtualBox: ~  
rudolph@rudolph-VirtualBox:~$ cat l59.sh  
#!/bin/bash  
echo "enter file name"  
read file  
sort $file | uniq > output9.txt  
rudolph@rudolph-VirtualBox:~$
```

```
Open ▾ [F1] random.txt ~/
1 Prog languages
2 python
3 ruby
4 c
5 c++
6 go
7 java
8 javascript
9 javascript
10 javascript
```

```
Open ▾ [F1] output9.txt ~/
random.txt ×
1 c
2 c++
3 go
4 java
5 javascript
6 Prog languages
7 python
8 ruby
```

10. Write a shell scripts to count number of vowels in “vowels.txt” file ignoring the case.

```
rudolph@rudolph-VirtualBox: ~
rudolph@rudolph-VirtualBox:~/Desktop$ cd
rudolph@rudolph-VirtualBox:~$ cat ls510.sh
cat: ls510.sh: No such file or directory
rudolph@rudolph-VirtualBox:~$ cat l510.sh
#!/bin/bash

cnt=0
while read line;
do

IFS=' ' read -a lines <<< "${line}"
for i in "${lines[@]}"
do
vowels=$(echo $i | grep -io [aeiou]|wc -l)
if [ "$vowels" > "0" ]
then
let cnt=cnt+vowels
fi
done
done <vowels.txt
echo "$cnt vowels"
rudolph@rudolph-VirtualBox:~$
```

```
rudolph@rudolph-VirtualBox:~$ ./l510.sh
10 vowels
rudolph@rudolph-VirtualBox:~$
```