

ASSIGNMENT

Ques) DATA ANALYSIS / MANIPULATION AWK

```
Activities Terminal May 4 13:33 misti@misti-VirtualBox:~
misti@misti-VirtualBox:~$ cat data3.txt
Id EmployeeName JobTitle BasePay OvertimePay OtherPay TotalPay TotalPayBenefits
1 Nathaniel GM 167411 0 400184 567595 567595
2 Gary CAPTAIN 155966 245131 137811 538909 538909
3 Albert CAPTAIN 212739 106088 16452 335279 335279
4 christopher MECHANIC 77916 56120 198366 332343 32343
5 Patrick DEPUTYCHEIF 134401 9737 182234 326373 326373
6 David ASSTDEPUTY 118602 8601 189082 316285 316285
7 Alson BATTALIONCHIEF 92492 89062 134426 315981 315981
8 David DEPUTYDIRECTOR 256576 0 51322 307899 307899
9 Joanne CHIEF 285262 0 17115 302377 302377
10 Patricia CAPTAIN 99722 87082 110804 297668 297668
11 Edward EXECUTIVE 294580 0 0 294580 294580

A misti@misti-VirtualBox:~$ cat data3.txt | awk -F " " '{if($4>10000) print $2 " ----- " $7}'
EmployeeName ----- TotalPay
Nathaniel ----- 567595
Gary ----- 538909
Albert ----- 335279
christopher ----- 332343
Patrick ----- 326373
David ----- 316285
Alson ----- 315981
David ----- 307899
Joanne ----- 302377
Patricia ----- 297668
Edward ----- 294580
misti@misti-VirtualBox:~$ cat data3.txt | awk -F " " '{if($4>20000) print $2 " ----- " $7}'
EmployeeName ----- TotalPay
Albert ----- 335279
David ----- 307899
Joanne ----- 302377
Edward ----- 294580
misti@misti-VirtualBox:~$ 
```

```
Activities Terminal May 4 13:34 misti@misti-VirtualBox:~
misti@misti-VirtualBox:~$ cat data3.txt
Id EmployeeName JobTitle BasePay OvertimePay OtherPay TotalPay TotalPayBenefits
1 Nathaniel GM 167411 0 400184 567595 567595
2 Gary CAPTAIN 155966 245131 137811 538909 538909
3 Albert CAPTAIN 212739 106088 16452 335279 335279
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5 Patrick DEPUTYCHEIF 134401 9737 182234 326373 326373
6 David ASSTDEPUTY 118602 8601 189082 316285 316285
7 Alson BATTALIONCHIEF 92492 89062 134426 315981 315981
8 David DEPUTYDIRECTOR 256576 0 51322 307899 307899
9 Joanne CHIEF 285262 0 17115 302377 302377
10 Patricia CAPTAIN 99722 87082 110804 297668 297668
11 Edward EXECUTIVE 294580 0 0 294580 294580

A misti@misti-VirtualBox:~$ grep CAPTAIN data3.txt
2 Gary CAPTAIN 155966 245131 137811 538909 538909
3 Albert CAPTAIN 212739 106088 16452 335279 335279
10 Patricia CAPTAIN 99722 87082 110804 297668 297668
misti@misti-VirtualBox:~$ 
393529
misti@misti-VirtualBox:~$ cat data3.txt | awk '{sum+=$7} END {print sum}'
357748
misti@misti-VirtualBox:~$ 
misti@misti-VirtualBox:~$ cat data3.txt| grep CAPTAIN | awk '{sum+=$7} {aggregate=sum/11} END {print aggregate}'
390559
misti@misti-VirtualBox:~$ 
```

```
Activities Terminal May 4 13:38 misti@misti-VirtualBox:~
misti@misti-VirtualBox:~$ cat data3.txt
Id EmployeeName JobTitle BasePay OvertimePay OtherPay TotalPay TotalPayBenefits
1 Nathaniel GM 167411 0 400184 567595 567595
2 Gary CAPTAIN 155966 245131 137811 538909 538909
3 Albert CAPTAIN 212739 106088 16452 335279 335279
4 christopher MECHANIC 77916 56120 198366 332343 32343
5 Patrick DEPUTYCHEIF 134401 9737 182234 326373 326373
6 David ASSTDEPUTY 118602 8601 189082 316285 316285
7 Alson BATTALIONCHIEF 92492 89062 134426 315981 315981
8 David DEPUTYDIRECTOR 256576 0 51322 307899 307899
9 Joanne CHIEF 285262 0 17115 302377 302377
10 Patricia CAPTAIN 99722 87082 110804 297668 297668
11 Edward EXECUTIVE 294580 0 0 294580 294580

A misti@misti-VirtualBox:~$ cat data3.txt | awk -F " " '{if(($5>7000) && ($5<10000)) print $3 " ----- " $5}'
DEPUTYCHEIF ----- 9737
ASSTDEPUTY ----- 8601
misti@misti-VirtualBox:~$ 
```

QUES) MOVE FILES FROM ONE FOLDER TO RESPECTIVE FOLDERS

The screenshot shows a Linux desktop environment with a terminal window open. The terminal title is "filetofolder.sh". The content of the file is:

```
GNU nano 4.8
for file in *.txt;
do
    foldername=`echo $file | awk -F "." '{print $1}'`;
    echo $foldername;
    rm -r $foldername;
    mkdir $foldername;
    mv $file $foldername;
done
```

The terminal window has a dark background and a light-colored text area. At the bottom, there is a menu bar with various keyboard shortcuts for text operations like Cut, Copy, Paste, etc.

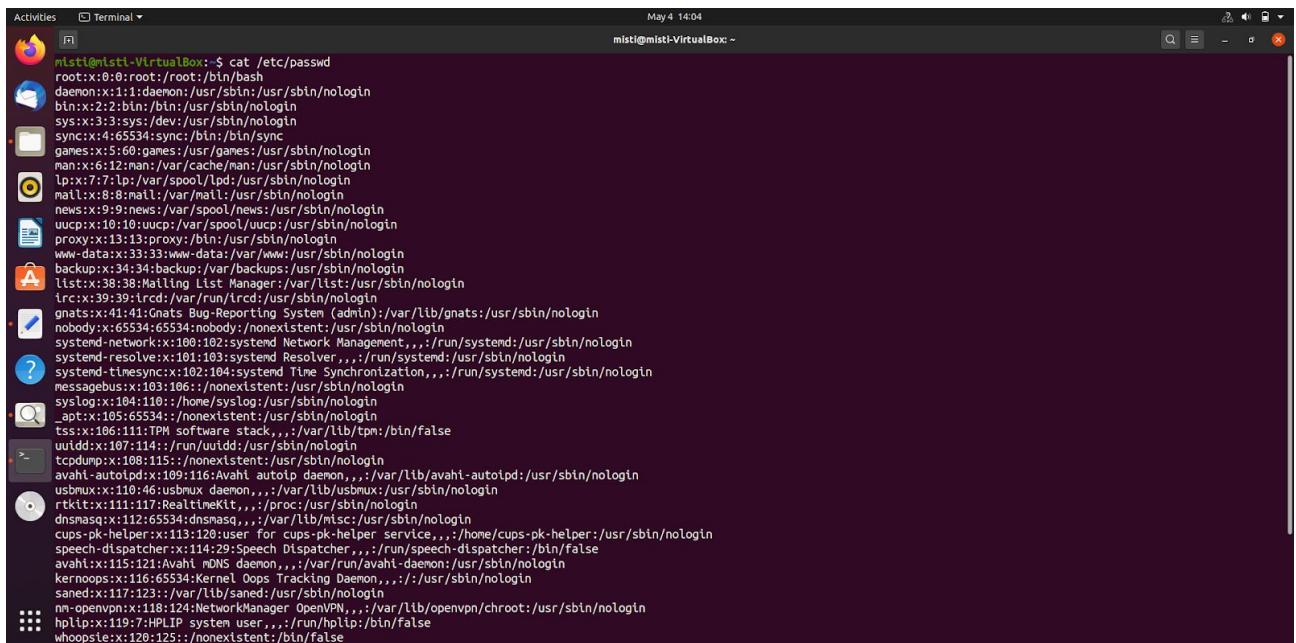
The screenshot shows a Linux desktop environment with a terminal window open. The terminal title is "filetofolder.sh". The user has run several commands to move files from one folder to another:

```
misti@mistli-VirtualBox:~$ mkdir movefilestofolder
mistli@mistli-VirtualBox:~$ ls
2 abc.sh      copy.sh    def       Downloads  f2      helloworld.java  movefilestofolder  num      Public      terminal1  xyz2.sh
abc access.log  copy.sh    Desktop   etcpw.sh  f2.txt    java1.sh      Music      otp.sh     raj.sh      terminal2  xyz.sh
abc1 calculator.sh data3.txt directory1 f1      hello1.java  May-2      mvabc      Pictures   retrvdate.sh  Videos
abc2 copy      data.txt   Documents  f1.txt   hello.java  May-3      mvfilestofolder  progi.sh   Templates  xyz1.sh
abc
def
ghi
jkl
mistli@mistli-VirtualBox:~/movefilestofolder$ cd movefilestofolder
mistli@mistli-VirtualBox:~/movefilestofolder$ touch abc.txt def.txt ghi.txt jkl.txt
mistli@mistli-VirtualBox:~/movefilestofolder$ ls
abc.txt def.txt ghi.txt jkl.txt
mistli@mistli-VirtualBox:~/movefilestofolder$ nano filetofolder.sh
mistli@mistli-VirtualBox:~/movefilestofolder$ sh filetofolder.sh
abc
def
ghi
jkl
mistli@mistli-VirtualBox:~/movefilestofolder$ nano filetofolder.sh
mistli@mistli-VirtualBox:~/movefilestofolder$ sh filetofolder.sh
rm: cannot remove 'abc': No such file or directory
rm: cannot remove 'def': No such file or directory
rm: cannot remove 'ghi': No such file or directory
rm: cannot remove 'jkl': No such file or directory
mistli@mistli-VirtualBox:~/movefilestofolder$ ls
abc abc.txt def def.txt filetofolder.sh ghi ghi.txt jkl jkl.txt
mistli@mistli-VirtualBox:~/movefilestofolder$ nano filetofolder.sh
mistli@mistli-VirtualBox:~/movefilestofolder$ sh filetofolder.sh
mistli@mistli-VirtualBox:~/movefilestofolder$ ls
abc def filetofolder.sh ghi jkl
mistli@mistli-VirtualBox:~/movefilestofolder$ cd abc
mistli@mistli-VirtualBox:~/movefilestofolder/abc$ ls
abc.txt
mistli@mistli-VirtualBox:~/movefilestofolder/abc$ cd ..
mistli@mistli-VirtualBox:~/movefilestofolder$ tree
.
+-- abc
    +-- abc.txt
+-- def
    +-- def.txt
+-- filetofolder.sh
+-- ghi
    +-- ghi.txt
+-- jkl
    +-- jkl.txt

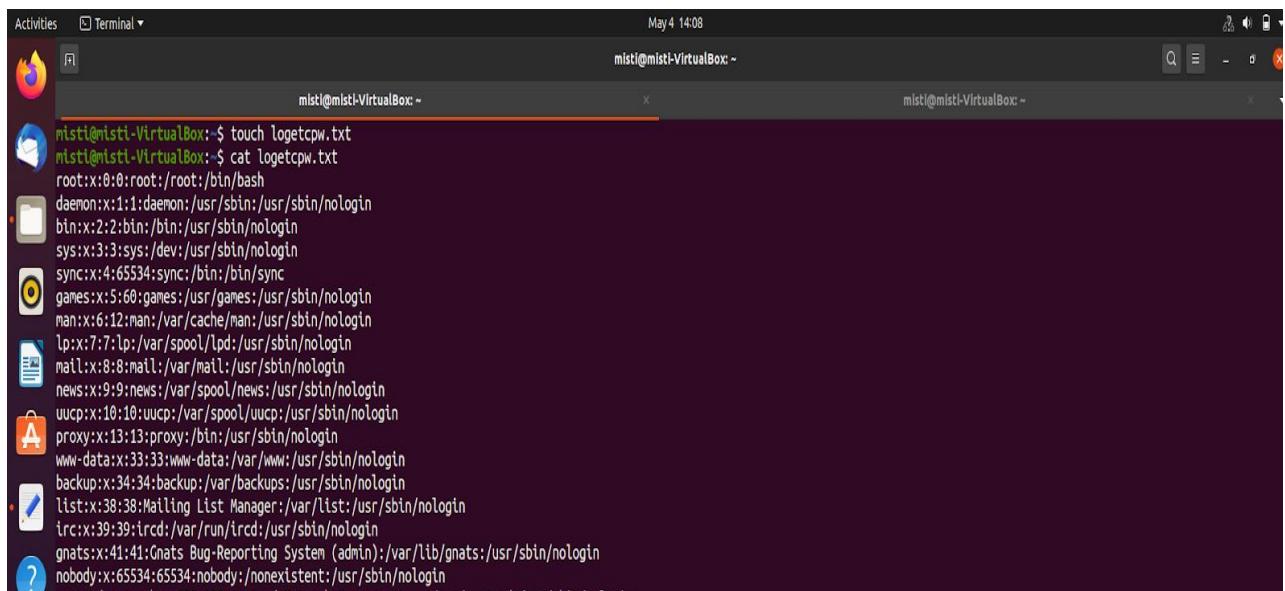
4 directories, 5 files
```

The terminal window has a dark background and a light-colored text area. At the bottom, there is a menu bar with various keyboard shortcuts for text operations like Cut, Copy, Paste, etc.

QUES) GET USER INFO FROM /etc/passwd AND CHANGE THE OWNERSHIP OF USER'S HOME DIRECTORY



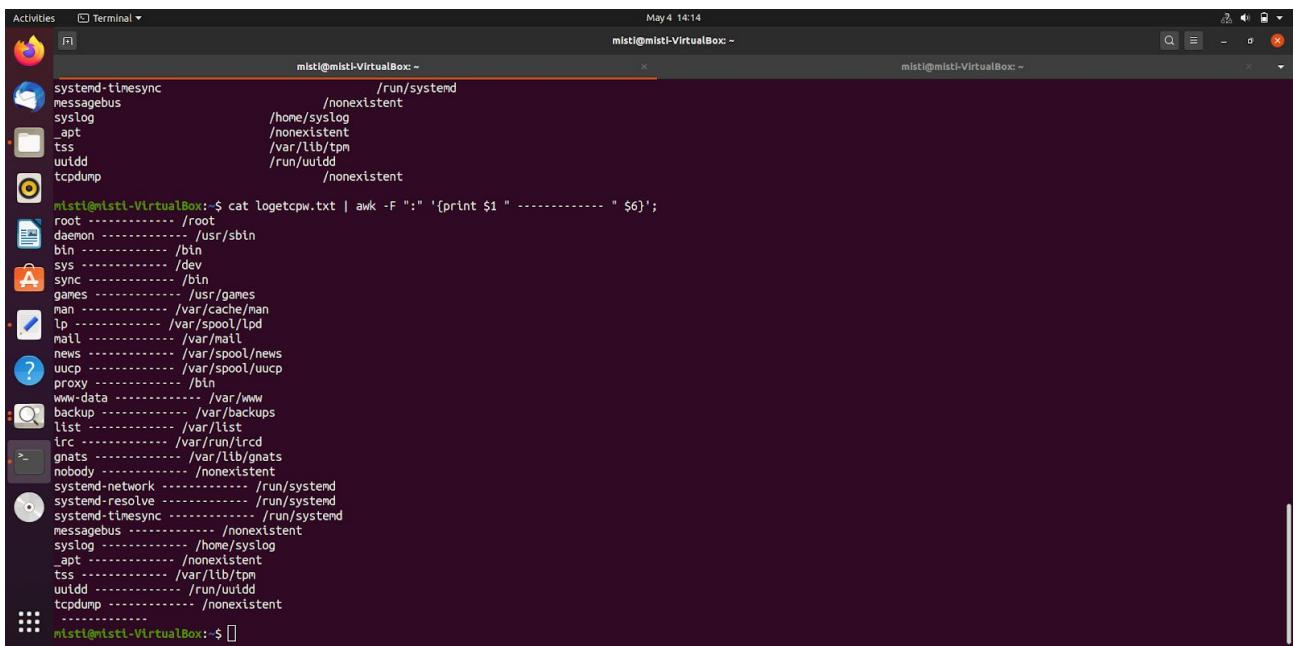
```
Activities Terminal May 4 14:04
misti@misti-VirtualBox:~$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
ircx:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-networkd:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolved:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
systemd-timesyncd:x:102:104:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:103:106:/:/nonexistent:/usr/sbin/nologin
syslog:x:104:108:/Home/syslog:/usr/sbin/nologin
_apt:x:105:65534:/:/nonexistent:/usr/sbin/nologin
tss:x:106:111:TPM software stack,,,:/var/lib/tpm:/bin/false
uidd:x:107:114:/run/uuid:/usr/sbin/nologin
tcpdump:x:108:115:/:/nonexistent:/usr/sbin/nologin
avahi-autopid:x:109:116:Avahi autopid daemon,,,:/var/lib/avahi-autopid:/usr/sbin/nologin
usbmux:x:110:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
rtkit:x:111:117:RealtimeKit,,,:/proc:/usr/sbin/nologin
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/dnsmasq:/usr/sbin/nologin
cups-pk-helper:x:113:120:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin
speech-dispatcher:x:114:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
avahi:x:115:121:Avahi mDNS daemon,,,:/var/run/avahi-daemon:/usr/sbin/nologin
kernoops:x:116:65534:Kernel Ooops Tracking Daemon,,,:/usr/sbin/nologin
saned:x:117:123:/:/var/lib/saned:/usr/sbin/nologin
nm-openvpn:x:118:124:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
hplip:x:119:7:HPLIP system user,,,:/run/hplip:/bin/false
whoopsie:x:120:125:/:/nonexistent:/bin/false
```



```
Activities Terminal May 4 14:08
misti@misti-VirtualBox:~$ touch logetcpw.txt
misti@misti-VirtualBox:~$ cat logetcpw.txt
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
ircx:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:nobody:/nonexistent:/usr/sbin/nologin
```

```
Activities Terminal May 4 14:10
misti@mistil-VirtualBox:~ misti@mistil-VirtualBox:~ misti@mistil-VirtualBox:~
systemd-timesyncx:102:104:system Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
messagebusx:103:106::/noneexistent:/usr/sbin/nologin
syslogx:104:110::/home/syslog:/usr/sbin/nologin
_apt:x:105:65534::/noneexistent:/usr/sbin/nologin
tssx:106:111:TPM software stack,,,:/var/lib/tpm:/bin/false
uiddx:107:114::/run/uidd:/usr/sbin/nologin
tcpdumpx:108:115::/noneexistent:/usr/sbin/nologin
root
daemon
bln
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
irc
gnats
nobody
systemd-network
systemd-resolve
systemd-timesync
messagebus
syslog
_apt
tss
uidd
tcpdump
misti@mistil-VirtualBox:~ $
```

```
Activities Terminal May 4 14:13
misti@mistil-VirtualBox:~ misti@mistil-VirtualBox:~ misti@mistil-VirtualBox:~
_apt
tss
uidd
tcpdump
root
/usr/sbin
/bin
/dev
/bin
/usr/games
/var/cache/man
/var/spool/lpd
/var/mail
/var/spool/news
/var/spool/uucp
/bln
/var/www
/var/backups
/var/list
/var/run/racd
/var/lib/gnats
/noneexistent
/run/systemd
/run/systemd
/run/systemd
/noneexistent
/home/syslog
/noneexistent
/var/lib/tpm
/run/uidd
/noneexistent
root
misti@mistil-VirtualBox:~ $ cat logetcpw.txt | awk -F ":" '{print $1 " \t\t\t\t" $6}';
misti@mistil-VirtualBox:~ $ cat logetcpw.txt | awk -F ":" '{print $1 " \t\t\t\t" $6}';
root
```

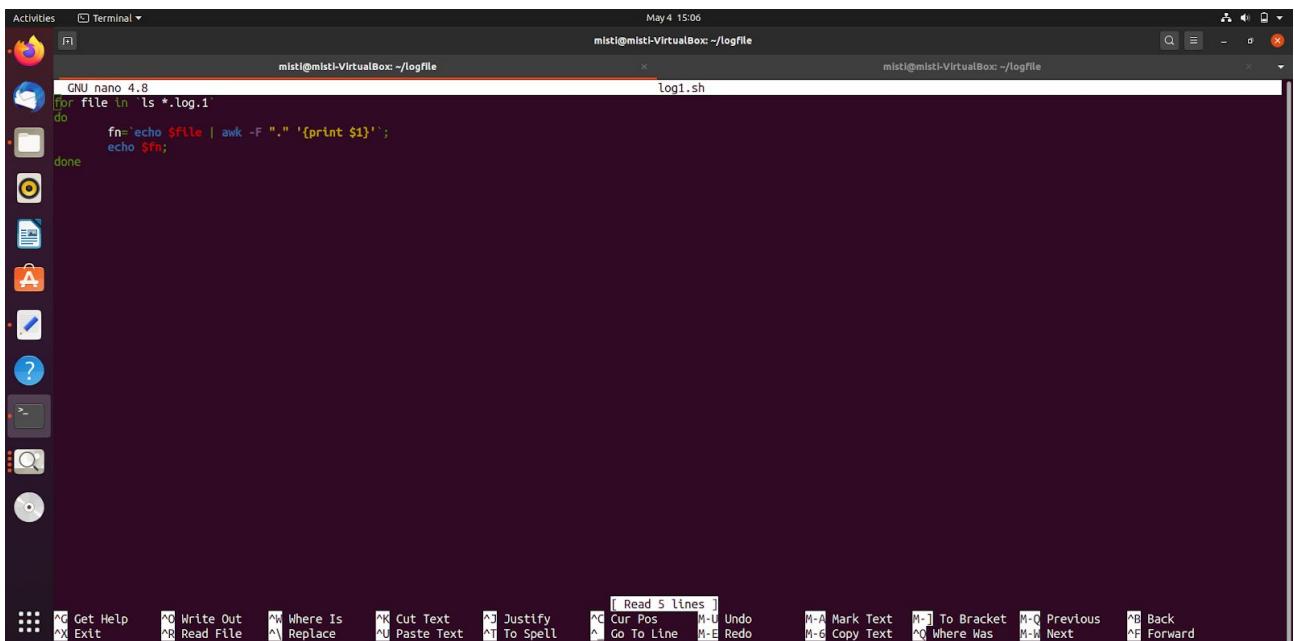


A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "Terminal". The terminal window has two tabs: "Activities" and "Terminal". The "Terminal" tab is active and displays a command-line session. The command entered is:

```
misti@misti-VirtualBox:~$ cat logetcpw.txt | awk -F ":" '{print $1" ----- "$6}';
```

The output of the command is a list of user accounts and their home directories, such as root (/root), daemon (/usr/sbin), bin (/bin), sys (/dev), sync (/bin), games (/usr/games), man (/var/cache/man), lp (/var/spool/lpd), mail (/var/mail), news (/var/spool/news), uucp (/var/spool/uucp), proxy (/bin), www-data (/var/www), backup (/var/backups), list (/var/list), irc (/var/run/ircd), gnats (/var/lib/gnats), nobody (/nonexistent), systemd-network (/run/systemd), systemd-resolve (/run/systemd), systemd-timesync (/run/systemd), messagebus (/nonexistent), syslog (/home/syslog), apt (/nonexistent), tss (/var/lib/tpm), uidd (/run/uidd), tcpdump (/nonexistent). The terminal window is located in the top panel of the desktop environment.

QUES)APPEND CURRENTDATE TO ALL LOG FILENAME WHICH HAS EXTENSION .log.1 FROM A FOLDER



A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "Terminal". The terminal window has two tabs: "Activities" and "Terminal". The "Terminal" tab is active and displays a command-line session. The command entered is:

```
misti@misti-VirtualBox:~/logfile
```

The output of the command is a shell script named "log1.sh" containing the following code:

```
GNU nano 4.8
for file in `ls *.log.1
do
    fn=`echo $file | awk -F "." '{print $1}'`;
    echo $fn;
done
```

The terminal window is located in the top panel of the desktop environment. The status bar at the bottom shows various keyboard shortcuts for the terminal.

Activities Terminal ▾

May 4 16:00

```
misti@misti-VirtualBox:~/logfile
misti@misti-VirtualBox:~/logfile$ touch abc.log.1 def.log.1 jkl.log.1 mno.log.1
misti@misti-VirtualBox:~/logfile$ ls
abc.log.1 access.log.1 def.log.1 jkl.log.1 mno.log.1
misti@misti-VirtualBox:~/logfile$ nano log1.sh
misti@misti-VirtualBox:~/logfile$ sh log1.sh
abc
access
def
jkl
mno
misti@misti-VirtualBox:~/logfile$ date
Monday 04 May 2020 03:18:05 PM IST
misti@misti-VirtualBox:~/logfile$ date +"%d%b%Y"
040520
misti@misti-VirtualBox:~/logfile$ nano log1.sh
abc.040520
access.040520
def.040520
jkl.040520
mno.040520
misti@misti-VirtualBox:~/logfile$ nano log1.sh
misti@misti-VirtualBox:~/logfile$ sh log1.sh
abc.040520.log
access.040520.log
def.040520.log
jkl.040520.log
mno.040520.log
misti@misti-VirtualBox:~/logfile$ sh log1.sh
abc.040520.log
access.040520.log
def.040520.log
jkl.040520.log
mno.040520.log
misti@misti-VirtualBox:~/logfile$ []
```

Activities Terminal ▾

May 4 16:03

```
misti@misti-VirtualBox:~/logfile
misti@misti-VirtualBox:~/logfile$ log1.sh
misti@misti-VirtualBox:~/logfile$ Modified
```

GNU nano 4.8

```
for file in `ls *.log.1
do
    fn=`echo $file | awk -F "." '{print $1}'`;
    #echo $fn;
    today=`date +"%d%b%Y"`;
    echo $fn-$today.log;
done[]
```

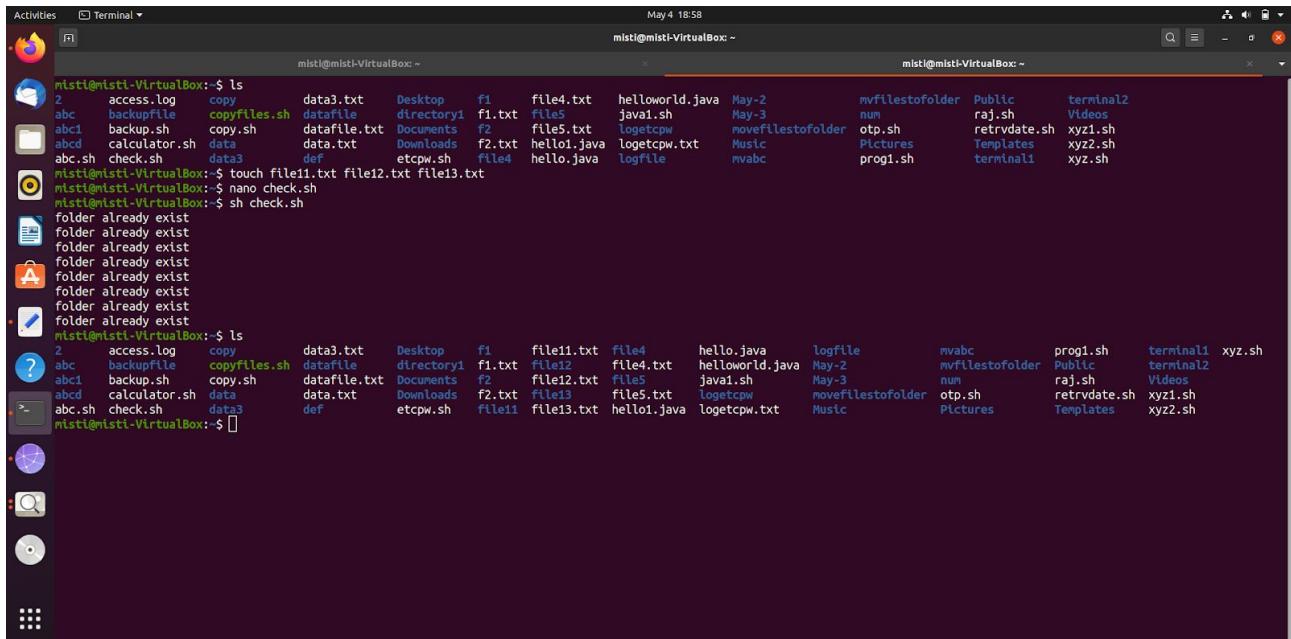
File Edit View Insert Cell Help

log1.sh

Modified

Get Help Write Out Where Is Cut Text Justify Cur Pos Undo Mark Text To Bracket Previous Back Exit Read File Replace Paste Text Go To Line Redo Copy Text Where Was Next Forward

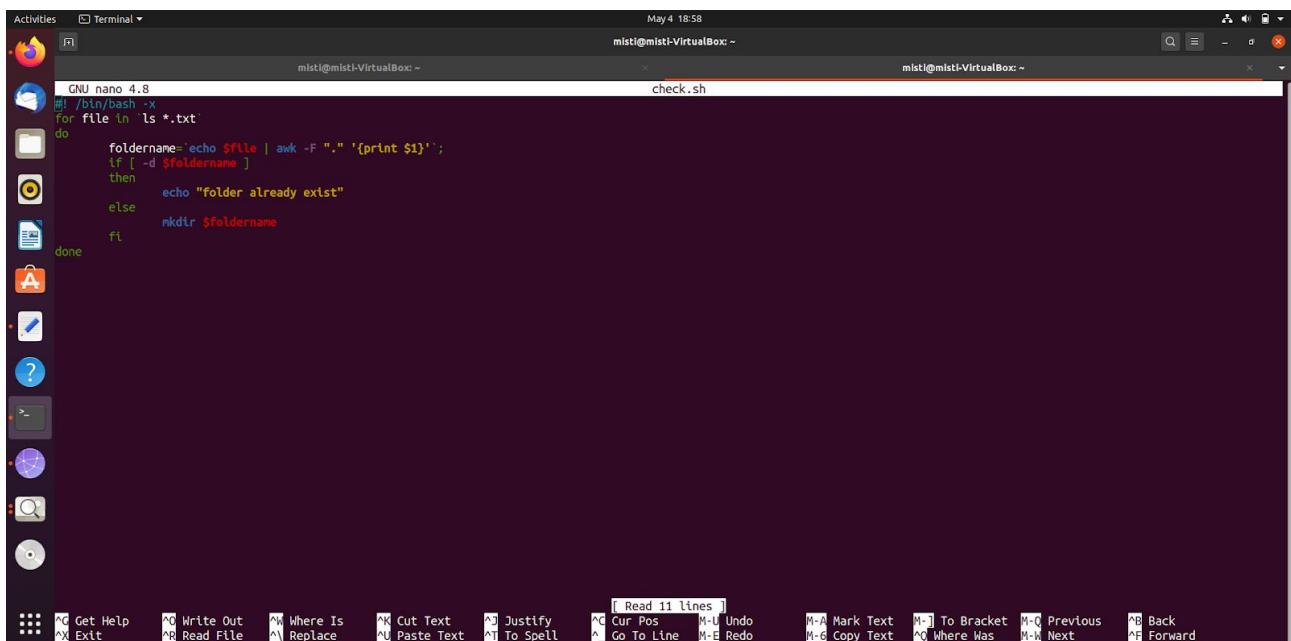
QUES)CHECK IF FOLDER EXIST OR NOT IF NOT THAN CREATE IT



```
misti@misti-VirtualBox:~$ ls
2 access.log copy data3.txt Desktop f1 file4.txt helloworld.java May-2 mvfilestofolder Public terminal2
abc backupfile copyfiles.sh datafile directory1 f1.txt file5.java javal.sh May-3 num raj.sh retrvdate.sh xyz1.sh
abcd backup.sh copy.sh datafile.txt Documents f2 file5.txt logetcow movefilestofolder otp.sh retrvdate.sh xyz2.sh
abc calculator.sh data data.txt Downloads f2.txt hello1.java logetcow.txt Music Pictures Templates terminal1 xyz.sh
abc.sh check.sh data3 def etcpw.sh file4 logfile mvabc prog1.sh terminal1 xyz.sh

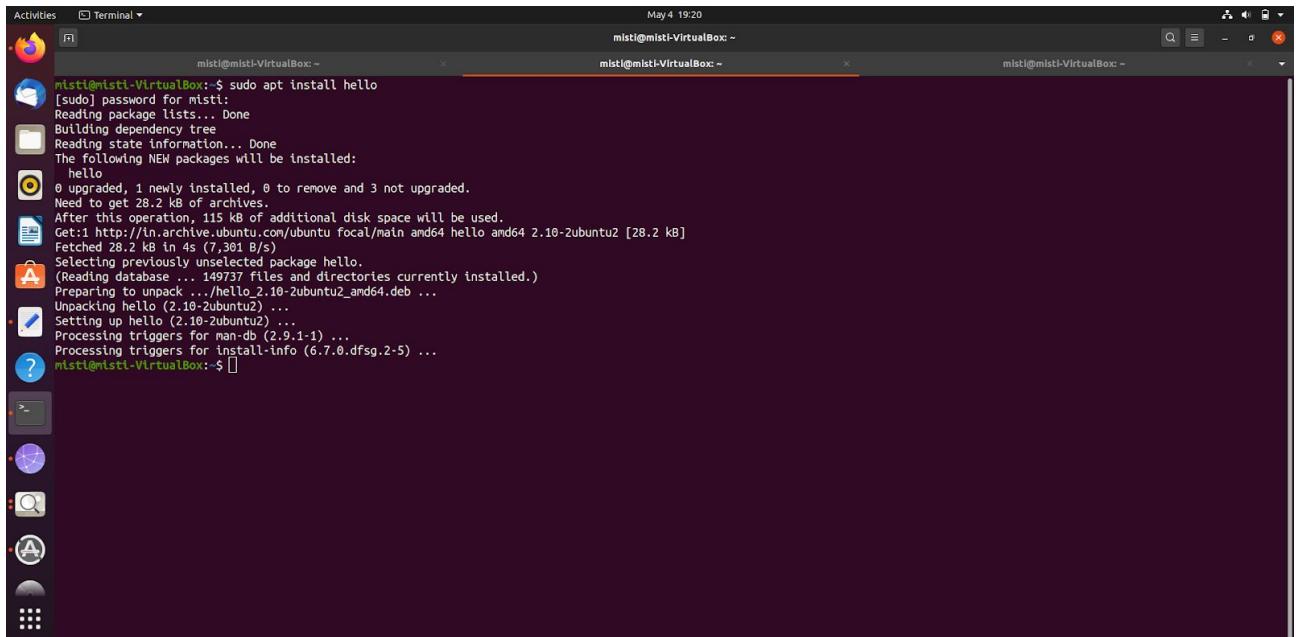
misti@misti-VirtualBox:~$ touch file11.txt file12.txt file13.txt
misti@misti-VirtualBox:~$ nano check.sh
misti@misti-VirtualBox:~$ sh check.sh
folder already exist
misti@misti-VirtualBox:~$ ls
2 access.log copy data3.txt Desktop f1 file11.txt file4.java hello.java logfile mvabc prog1.sh terminal1 xyz.sh
abc backupfile copyfiles.sh datafile directory1 f1.txt file12.txt file5.java javal.sh May-2 mvfilestofolder Public terminal2
abcd backup.sh copy.sh datafile.txt Documents f2 file12.txt file5.java logetcow movefilestofolder otp.sh retrvdate.sh xyz1.sh
abc calculator.sh data data.txt Downloads f2.txt file13.java hello1.java logetcow.txt Music Pictures Templates terminal1 xyz2.sh
abc.sh check.sh data3 def etcpw.sh file11 file13.txt hello1.java logetcow.txt

misti@misti-VirtualBox:~$ 
```



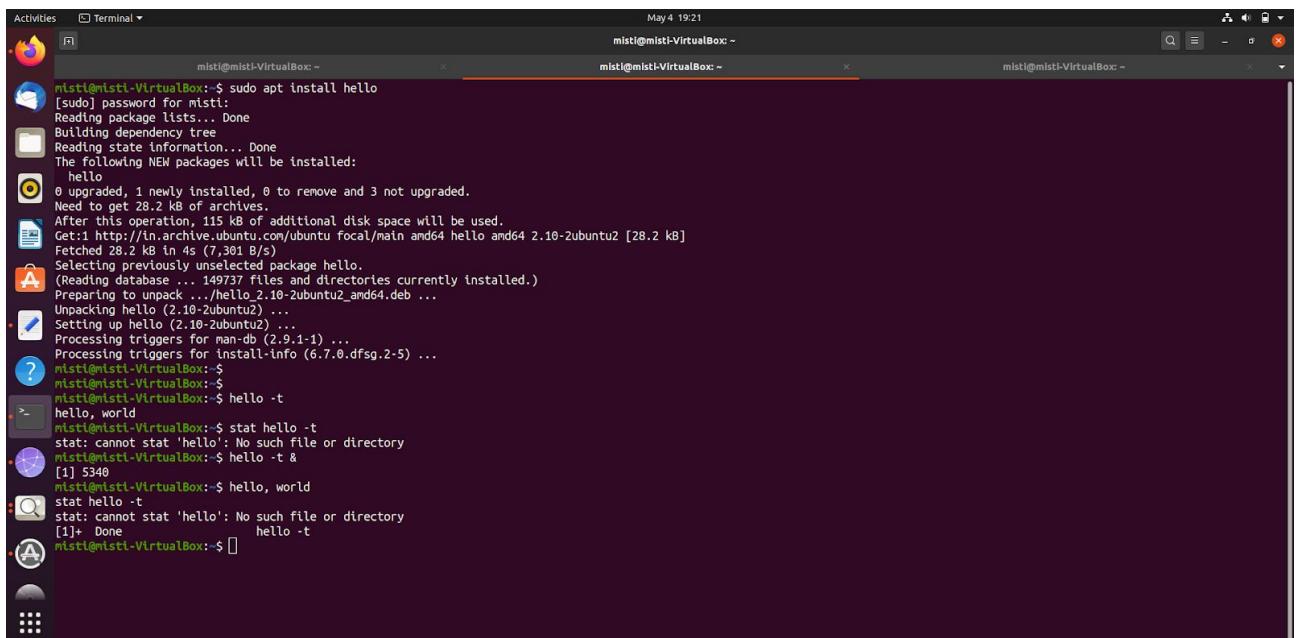
```
GNU nano 4.8
#!/bin/bash -x
for file in `ls *.txt`;
do
    foldername=`echo $file | awk -F "." '{print $1}'`;
    if [ -d $foldername ];
    then
        echo "folder already exist"
    else
        mkdir $foldername
    fi
done
```

QUES) EXECUTE COMMAND “hello” AND “ls” AND CHECK ITS EXECUTION STATUS



```
Activities Terminal May 4 19:20
misti@misti-VirtualBox:~$ sudo apt install hello
[sudo] password for misti:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
  hello
0 upgraded, 1 newly installed, 0 to remove and 3 not upgraded.
Need to get 28.2 kB of archives.
After this operation, 115 kB of additional disk space will be used.
Get:1 http://in.archive.ubuntu.com/ubuntu focal/main amd64 hello amd64 2.10-2ubuntu2 [28.2 kB]
Fetched 28.2 kB in 4s (7,301 B/s)
Selecting previously unselected package hello.
(Reading database ... 149737 files and directories currently installed.)
Preparing to unpack .../hello_2.10-2ubuntu2_amd64.deb ...
Unpacking hello (2.10-2ubuntu2) ...
Setting up hello (2.10-2ubuntu2) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for install-info (6.7.0.dfsg.2-5) ...
misti@misti-VirtualBox:~$ 

Activities Terminal May 4 19:21
misti@misti-VirtualBox:~$ ls
hello world
misti@misti-VirtualBox:~$ 
misti@misti-VirtualBox:~$ hello -t
hello, world
misti@misti-VirtualBox:~$ stat hello -t
stat: cannot stat 'hello': No such file or directory
misti@misti-VirtualBox:~$ hello -t &
[1] 5340
misti@misti-VirtualBox:~$ hello, world
stat hello -t
stat: cannot stat 'hello': No such file or directory
[1]+  Done                  hello -t
misti@misti-VirtualBox:~$ 
```



```
Activities Terminal May 4 19:21
misti@misti-VirtualBox:~$ sudo apt install hello
[sudo] password for misti:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
  hello
0 upgraded, 1 newly installed, 0 to remove and 3 not upgraded.
Need to get 28.2 kB of archives.
After this operation, 115 kB of additional disk space will be used.
Get:1 http://in.archive.ubuntu.com/ubuntu focal/main amd64 hello amd64 2.10-2ubuntu2 [28.2 kB]
Fetched 28.2 kB in 4s (7,301 B/s)
Selecting previously unselected package hello.
(Reading database ... 149737 files and directories currently installed.)
Preparing to unpack .../hello_2.10-2ubuntu2_amd64.deb ...
Unpacking hello (2.10-2ubuntu2) ...
Setting up hello (2.10-2ubuntu2) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for install-info (6.7.0.dfsg.2-5) ...
misti@misti-VirtualBox:~$ 
misti@misti-VirtualBox:~$ 
misti@misti-VirtualBox:~$ hello -t
hello, world
misti@misti-VirtualBox:~$ stat hello -t
stat: cannot stat 'hello': No such file or directory
misti@misti-VirtualBox:~$ hello -t &
[1] 5340
misti@misti-VirtualBox:~$ hello, world
stat hello -t
stat: cannot stat 'hello': No such file or directory
[1]+  Done                  hello -t
misti@misti-VirtualBox:~$ 
```

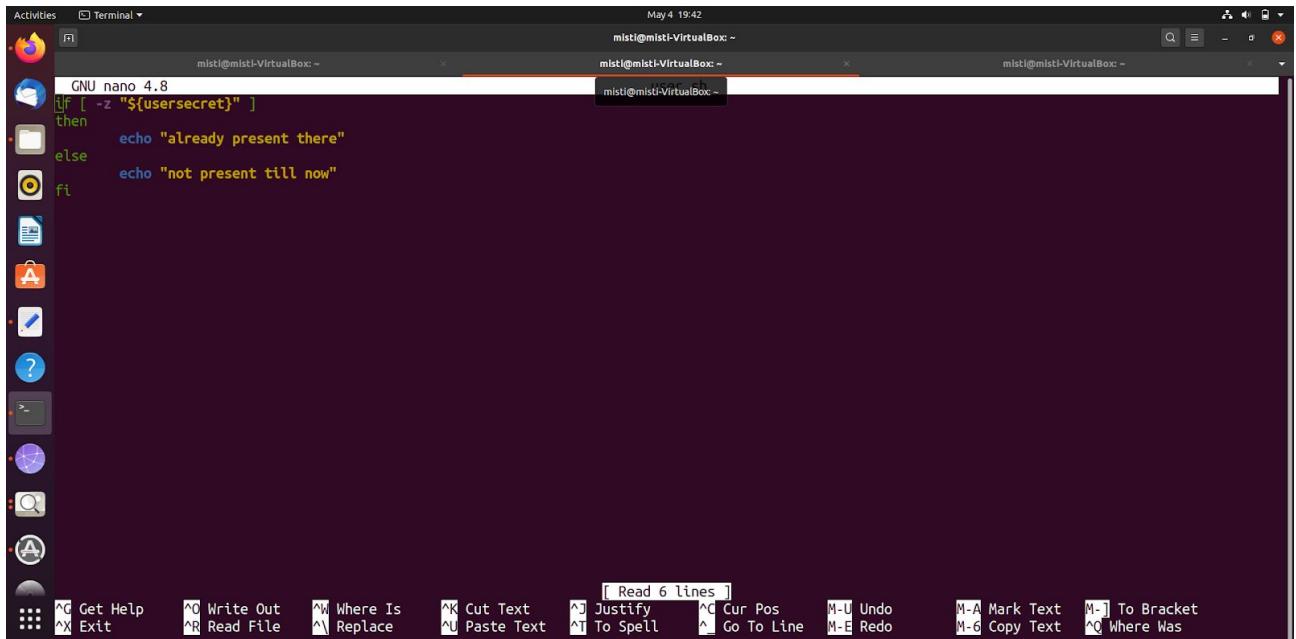
Activities Terminal ▾

```
[1]+ Done                  hello -t
[1] 5375
mistli@misti-VirtualBox:~$ ls -l &
[1] 5375
mistli@misti-VirtualBox:~$ total 488
drwxrwxr-x 3 mistli mistli 4096 May  2 11:45 2
drwxrwxr-x 2 mistli mistli 4096 May  2 10:04 abc
drwxrwxr-x 2 mistli mistli 4096 May  2 09:03 abc1
drwxrwxr-x 2 mistli mistli 4096 May  2 10:23 ahcd
-rw-rw-r-- 1 mistli mistli 59 Apr 28 22:41 abc.sh
-rw-rw-r-- 1 mistli mistli 262146 May  4 06:22 access.log
drwxrwxr-x 2 mistli mistli 4096 May  4 18:14 backupfile
-rw-rw-r-- 1 mistli mistli 75 May  4 18:16 backup.sh
-rw-rw-r-- 1 mistli mistli 291 Apr 29 22:04 calculator.sh
-rw-rw-r-- 1 mistli mistli 188 May  4 18:51 check.sh
drwxrwxr-x 2 mistli mistli 4096 May  2 09:20 copy
-rwxrwxr-x 1 mistli mistli 258 May  4 09:59 copyfiles.sh
-rw-rw-r-- 1 mistli mistli 143 May  2 10:21 copy.sh
drwxrwxr-x 2 mistli mistli 4096 May  4 18:51 data
drwxrwxr-x 2 mistli mistli 4096 May  4 18:51 data3
-rw-rw-r-- 1 mistli mistli 1074 May  3 00:34 data3.txt
drwxrwxr-x 2 mistli mistli 4096 May  4 18:51 datafile
-rw-rw-r-- 1 mistli mistli 2625 May  4 18:05 datafile.txt
-rw-rw-r-- 1 mistli mistli 288 May  1 08:49 data.txt
drwxrwxr-x 2 mistli mistli 4096 May  2 09:03 def
drwxr-xr-x 2 mistli mistli 4096 Apr 27 18:57 Desktop
drwxrwxr-x 2 mistli mistli 4096 Apr 30 07:02 directory1
drwxr-xr-x 3 mistli mistli 4096 Apr 29 28:32 Documents
drwxr-xr-x 2 mistli mistli 4096 Apr 27 18:57 Downloads
-rw-rw-r-- 1 mistli mistli 44 May  3 21:06 fcpcw.sh
drwxrwxr-x 2 mistli mistli 4096 May  4 18:03 f1
-rw-rw-r-- 1 mistli mistli 0 May  4 09:33 f1.txt
drwxrwxr-x 2 mistli mistli 4096 May  4 18:03 f2
-rw-rw-r-- 1 mistli mistli 0 May  4 09:33 f2.txt
drwxrwxr-x 2 mistli mistli 4096 May  4 18:56 file1
-rw-rw-r-- 1 mistli mistli 0 May  4 18:56 file11.txt
drwxrwxr-x 2 mistli mistli 4096 May  4 18:56 file12
-rw-rw-r-- 1 mistli mistli 0 May  4 18:56 file12.txt
drwxrwxr-x 2 mistli mistli 4096 May  4 18:56 file13
```

Activities Terminal ▾

```
May 4 19:23
mistli@misti-VirtualBox:~$ ls --color=auto -l
[1] 5375
mistli@misti-VirtualBox:~$ total 488
drwxrwxr-x 2 mistli mistli 4096 May  4 18:56 file13
-rw-rw-r-- 1 mistli mistli 0 May  4 18:51 file13.txt
drwxrwxr-x 2 mistli mistli 4096 May  4 18:51 file4
-rw-rw-r-- 1 mistli mistli 0 May  4 18:50 file4.txt
drwxrwxr-x 2 mistli mistli 4096 May  4 18:51 file5
-rw-rw-r-- 1 mistli mistli 0 May  4 18:58 file5.txt
drwxrwxr-x 1 mistli mistli 186 Apr 28 21:49 hello1.java
-rw-rw-r-- 1 mistli mistli 186 Apr 28 08:16 hello.java
-rw-rw-r-- 1 mistli mistli 193 Apr 28 26:57 helloworld.java
-rw-rw-r-- 1 mistli mistli 1 May  1 08:42 java1.sh
drwxrwxr-x 2 mistli mistli 4096 May  4 18:51 logetcpw
-rw-rw-r-- 1 mistli mistli 1439 May  4 14:07 logetcpw.txt
drwxrwxr-x 2 mistli mistli 4096 May  4 16:07 logfil
drwxrwxr-x 2 mistli mistli 4096 May  4 08:36 May-2
drwxrwxr-x 2 mistli mistli 4096 May  4 08:36 May-3
drwxrwxr-x 6 mistli mistli 4096 May  4 14:01 moveflestofo
drwxr-xr-x 2 mistli mistli 4096 Apr 27 18:57 Music
drwxrwxr-x 2 mistli mistli 4096 May  2 09:47 mvabc
drwxrwxr-x 6 mistli mistli 4096 May  3 18:38 mvflestofo
drwxrwxr-x 2 mistli mistli 4096 May  2 09:03 num
-rw-rw-r-- 1 mistli mistli 1 May  3 02:51 otp.sh
drwxr-xr-x 7 mistli mistli 4096 May  4 19:21 Pictures
drwxr-xr-x 2 mistli mistli 76 May  4 10:14 progi.sh
drwxr-xr-x 2 mistli mistli 4096 Apr 27 18:57 Public
-rw-rw-r-- 1 mistli mistli 0 May  2 11:06 raj.sh
-rw-rw-r-- 1 mistli mistli 137 May  2 11:31 retrvdate.sh
drwxr-xr-x 2 mistli mistli 4096 Apr 27 18:57 Templates
drwxrwxr-x 2 mistli mistli 4096 Apr 28 08:10 terminal1
drwxrwxr-x 2 mistli mistli 4096 Apr 28 08:09 terminal2
drwxr-xr-x 2 mistli mistli 4096 Apr 27 18:57 Videos
-rw-rw-r-- 1 mistli mistli 42 May  1 10:42 xyz1.sh
-rw-rw-r-- 1 mistli mistli 181 May  1 11:22 xyz2.sh
-rw-rw-r-- 1 mistli mistli 9 May  1 10:12 xyz.sh
stat ls -l
stat: invalid option -- 'l'
Try 'stat --help' for more information.
[1]+ Done                  ls --color=auto -l
mistli@misti-VirtualBox:~$
```

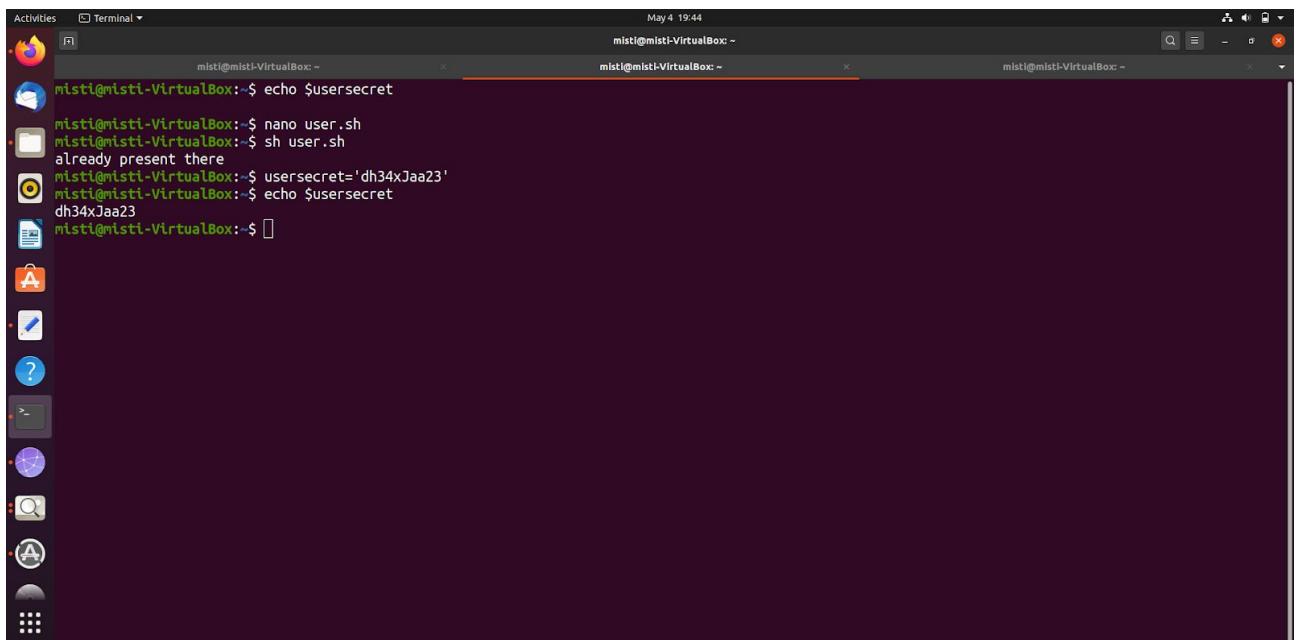
QUES) SET ENVIRONMENT usersecret="dh34xJaa23" IF ITS ALREADY NOT SET



The screenshot shows a Linux desktop environment with a dark theme. A terminal window is open, displaying a nano editor session. The code in the editor is:

```
GNU nano 4.8
if [ -z "${usersecret}" ]
then
    echo "already present there"
else
    echo "not present till now"
fi
```

The terminal window has three tabs at the top, all labeled "mist@mist1-VirtualBox: ~". The bottom of the terminal window shows a series of keyboard shortcuts.



The screenshot shows a Linux desktop environment with a dark theme. A terminal window is open, showing a user interaction session. The commands entered are:

```
mist1@mist1-VirtualBox:~$ echo $usersecret
mist1@mist1-VirtualBox:~$ nano user.sh
mist1@mist1-VirtualBox:~$ sh user.sh
already present there
mist1@mist1-VirtualBox:~$ usersecret='dh34xJaa23'
mist1@mist1-VirtualBox:~$ echo $usersecret
dh34xJaa23
mist1@mist1-VirtualBox:~$
```

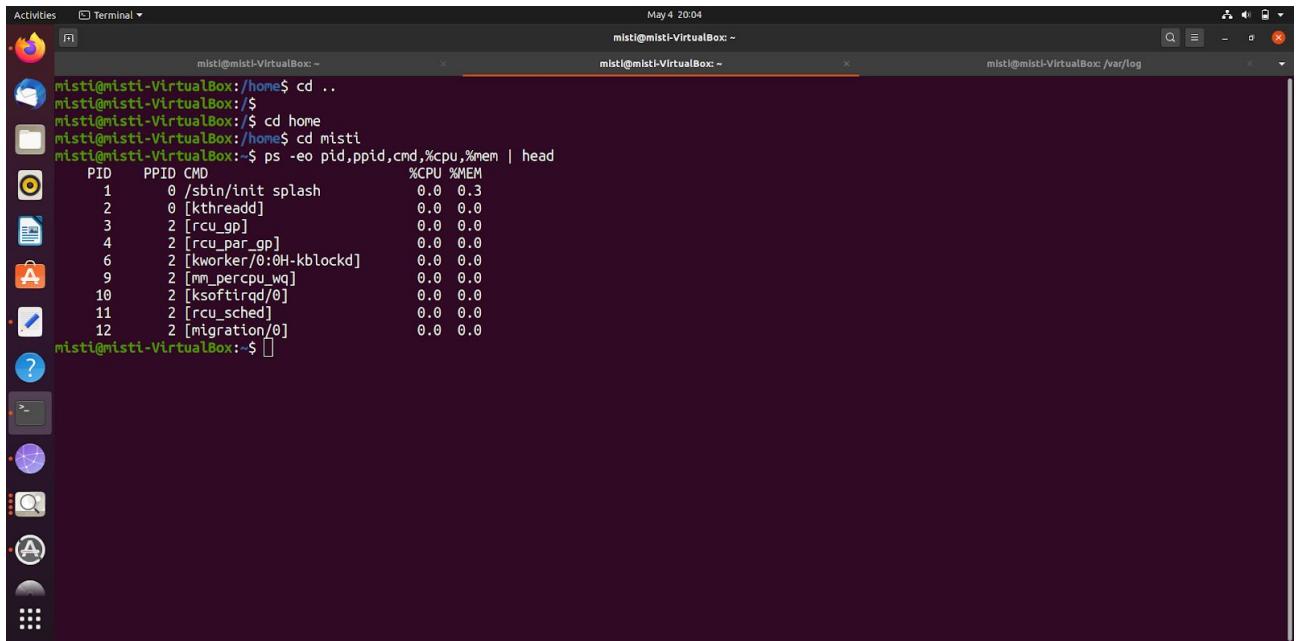
The terminal window has three tabs at the top, all labeled "mist1@mist1-VirtualBox: ~". The bottom of the terminal window shows a series of keyboard shortcuts.

QUES) FIND A WORD "systemd" FROM ALL LOG FILES IN A FOLDER /var/log AND PRINT NO OF OCCURENCES IN FROM OF EACH FILE

```
Activities Terminal May 4 19:53
misti@mistl-VirtualBox: ~
misti@mistl-VirtualBox: $ cd ..
misti@mistl-VirtualBox: $ cd /var/log
misti@mistl-VirtualBox: /var/log$ grep -c -R 'systemd'
syslog.3.gz:0
grep: private: Permission denied
alternatives.log.0
kern.log.0
lastlog:0
fontconfig.log:0
grep: btmp: Permission denied
alternatives.log.1:0
dmesg.1.gz:0
grep: boot.log: Permission denied
syslog:5929
syslog.1:5399
grep: boot.log.2: Permission denied
kern.log:0
vboxadd-install.log:0
dmesg.0:44
wtmp:0
grep: gdm3: Permission denied
auth.log.1:155
dmesg.3.gz:0
gpu-manager.log:0
cups/access_log:0
cups/error_log:0
cups/access_log.2.gz:0
cups/access_log.1:0
cups/access_log.3.gz:0
grep: btmp.1: Permission denied
faillog:0
vboxadd-setup.log:0
misti@mistl-VirtualBox: /var/log$
```

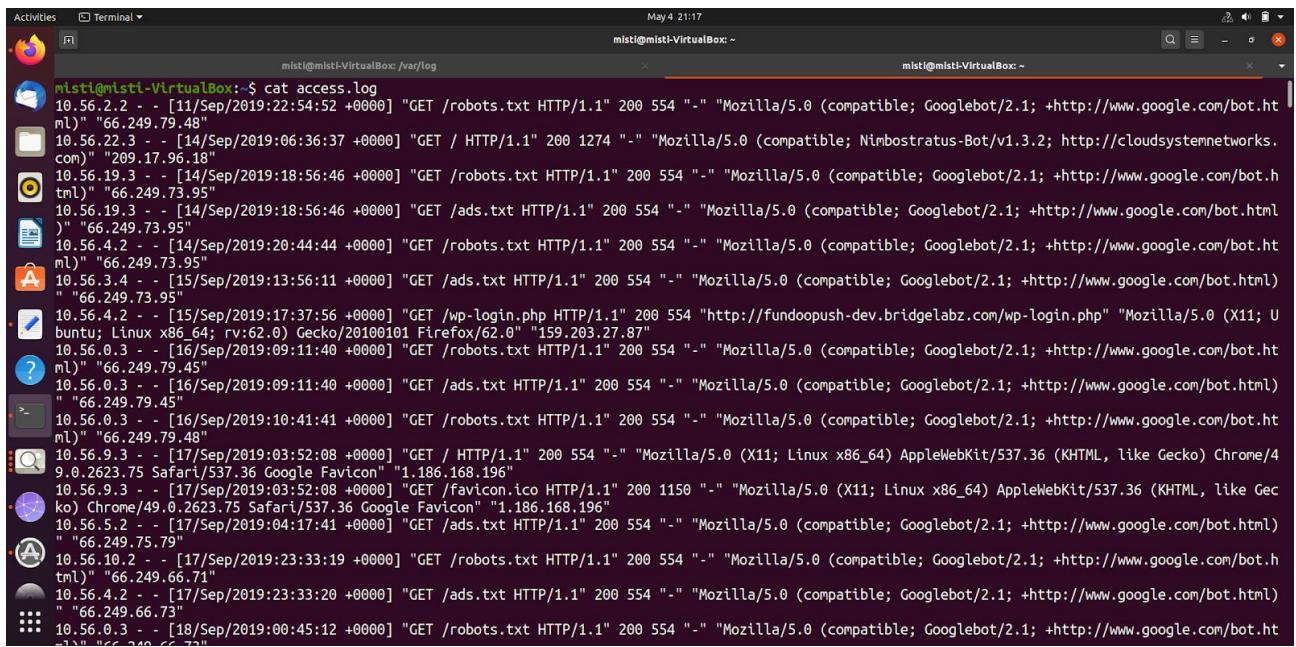
```
Activities Terminal May 4 19:53
misti@mistl-VirtualBox: ~
misti@mistl-VirtualBox: /home
misti@mistl-VirtualBox: /var/log May 4 19:53
misti@mistl-VirtualBox: /var/log
journal/2880fdc5631a4c498280a95947e5e25b/user-1000@0005a498280a95947e5e25b/.journal:-:41
journal/2880fdc5631a4c498280a95947e5e25b/system@0005a4d15fa34e0-534d8d103b277b72.journal:-:151
journal/2880fdc5631a4c498280a95947e5e25b/system.journal:128
journal/2880fdc5631a4c498280a95947e5e25b/system@040ff051b13ac44b78a873f36118d2a33-00000000000000001-0005a4508e3caed2.journal:223
journal/2880fdc5631a4c498280a95947e5e25b/user-1000@0005a48d717720b1-deee0f885598f675.journal:-:41
journal/2880fdc5631a4c498280a95947e5e25b/user-1000@cb901c29014b6fb5b4b2db35ae3dd4-000000000000051d-0005a45092f132db.journal:92
journal/2880fdc5631a4c498280a95947e5e25b/system@0005a449810580bb-c642bac44555af76.journal:-:138
journal/2880fdc5631a4c498280a95947e5e25b/system@0005a48d66dc79-487f962de2088838.journal:-:172
journal/2880fdc5631a4c498280a95947e5e25b/user-1000@0005a4c996b40dd1-99b211d4049d1c8d.journal:-:46
journal/2880fdc5631a4c498280a95947e5e25b/user-1000@0005a45092f147c7-8ad450f66fa3bac5.journal:-:57
journal/2880fdc5631a4c498280a95947e5e25b/user-1000@0005a4b7b41a6fe-f018beaa3284eab6.journal:-:58
journal/2880fdc5631a4c498280a95947e5e25b/user-1000@0005a4d16760683d-16a661c92143cb9c.journal:-:60
journal/2880fdc5631a4c498280a95947e5e25b/system@0005a4481f336941-f3e5ce8fc2b978bd.journal:-:51
journal/2880fdc5631a4c498280a95947e5e25b/system@0005a4bf753d5130-ca3f6a96c415ca98.journal:-:158
journal/2880fdc5631a4c498280a95947e5e25b/user-1000@0005a4c824b7885-6c1ae8e367f08b53.journal:-:39
journal/2880fdc5631a4c498280a95947e5e25b/user-1000@0005a477ad4fe23-1d5234f3a0a09174.journal:-:44
journal/2880fdc5631a4c498280a95947e5e25b/system@0005a4a257ef749-dd8bed708df8c96.journal:-:120
journal/2880fdc5631a4c498280a95947e5e25b/system@f7d708a9eafa4278a09fb464cbff0a40-0000000000000001-0005a445a22ff09b.journal:108
journal/2880fdc5631a4c498280a95947e5e25b/user-1000@0005a4d26a05c99a-4a47cff5908ff367.journal:-:58
journal/2880fdc5631a4c498280a95947e5e25b/system@0005a4cbc012cac8-a6e7f14892c64571.journal:-:149
grep: boot.log.3: Permission denied
installer/telemetry:0
grep: installer/syslog: Permission denied
grep: installer/partman: Permission denied
grep: installer/version: Permission denied
installer/initial-status.gz:0
grep: installer/debug: Permission denied
installer/media-info:0
grep: installer/casper.log: Permission denied
dmesg.2.gz:0
dpkg.log:0
misti@mistl-VirtualBox: /var/log$
```

QUES) CREATE PROCESS LIST TABLE DISPLAYS PID, PPID, COMMAND , %CPU UTILIZATION,%MEMORY UTILIZATION



```
Activities Terminal
misti@misti-VirtualBox:~$ cd ..
misti@misti-VirtualBox:/$ cd home
misti@misti-VirtualBox:~/home$ cd misti
misti@misti-VirtualBox:~/home/misti$ ps -eo pid,ppid,cmd,%cpu,%mem | head
PID  PPID CMD          %CPU %MEM
 1    0 /sbin/init splash      0.0  0.3
 2    0 [kthreadd]           0.0  0.0
 3    2 [rcu_gp]             0.0  0.0
 4    2 [rcu_par_gp]         0.0  0.0
 6    2 [kworker/0:0H-kblockd] 0.0  0.0
 9    2 [mm_percpu_wq]       0.0  0.0
10   2 [ksoftirqd/0]         0.0  0.0
11   2 [rcu_sched]           0.0  0.0
12   2 [migration/0]         0.0  0.0
misti@misti-VirtualBox:~$
```

QUES) PRINT LAST 4 FREQUENTLY USED URL IN SORTED ORDER



```
Activities Terminal
misti@misti-VirtualBox:~$ cat access.log
10.56.2.2 - - [11/Sep/2019:22:54:52 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.48"
10.56.2.2 - - [14/Sep/2019:06:36:37 +0000] "GET / HTTP/1.1" 200 1274 "-" "Mozilla/5.0 (compatible; Nimbostratus-Bot/v1.3.2; http://cloudsystemnetworks.com)" "209.17.96.18"
10.56.19.3 - - [14/Sep/2019:18:56:46 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.19.3 - - [14/Sep/2019:18:56:46 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.4.2 - - [14/Sep/2019:20:44:44 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.3.4 - - [15/Sep/2019:13:56:11 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.4.2 - - [15/Sep/2019:17:37:56 +0000] "GET /wp-login.php HTTP/1.1" 200 554 "http://fundopush-dev.bridgelabz.com/wp-login.php" "Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:62.0) Gecko/201001 Firefox/62.0" "159.203.27.87"
10.56.0.3 - - [16/Sep/2019:09:11:40 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.45"
10.56.0.3 - - [16/Sep/2019:09:11:40 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.45"
10.56.0.3 - - [16/Sep/2019:10:41:41 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.48"
10.56.9.3 - - [17/Sep/2019:03:52:08 +0000] "GET / HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/9.0.2623.75 Safari/537.36 Google Favicon" "1.186.168.196"
10.56.9.3 - - [17/Sep/2019:03:52:08 +0000] "GET /favicon.ico HTTP/1.1" 200 1150 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.168.196"
10.56.5.2 - - [17/Sep/2019:04:17:41 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.75.79"
10.56.10.2 - - [17/Sep/2019:23:33:19 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.71"
10.56.4.2 - - [17/Sep/2019:23:33:20 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.73"
10.56.0.3 - - [18/Sep/2019:00:45:12 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.72"
```

Activities Terminal May 4 21:20 misti@misti-VirtualBox: /var/log misti@misti-VirtualBox: ~

```
misti@misti-VirtualBox:~$ 
misti@misti-VirtualBox:~$ cat access.log | awk '{print $11}'
```

```
"http://fundoopush-dev.bridgeLabz.com/wp-login.php"
...
"https://fundoopush-dev.bridgeLabz.com/login"
"https://fundoopush-dev.bridgeLabz.com/login"
"https://fundoopush-dev.bridgeLabz.com/login"
"https://fundoopush-dev.bridgeLabz.com/login"
"https://fundoopush-dev.bridgeLabz.com/login"
"https://fundoopush-dev.bridgeLabz.com/login"
...
"https://fundoopush-dev.bridgeLabz.com/login"
"https://fundoopush-dev.bridgeLabz.com/login"
"https://fundoopush-dev.bridgeLabz.com/login"
"https://fundoopush-dev.bridgeLabz.com/login"
"https://fundoopush-dev.bridgeLabz.com/login"
...
"https://fundoopush-dev.bridgeLabz.com/dashboard/article"
"https://fundoopush-dev.bridgeLabz.com/dashboard/article"
"https://fundoopush-dev.bridgeLabz.com/dashboard/article"
"https://fundoopush-dev.bridgeLabz.com/dashboard/article"
"https://fundoopush-dev.bridgeLabz.com/dashboard/article"
...
"https://fundoopush-dev.bridgeLabz.com/dashboard/article"
"https://fundoopush-dev.bridgeLabz.com/dashboard/article"
```

Activities Terminal May 4 21:28 misti@misti-VirtualBox: /var/log misti@misti-VirtualBox: ~

```
misti@misti-VirtualBox:~$ cat access.log | awk '{print $11}' | sort | uniq -c | sort -n
```

```
1 "http://fundoopush-dev.bridgeLabz.com/wp-login.php"
2 "http://fundoopush-dev.bridgeLabz.com/.well-known/acme-challenge/4xM-Y18998rBIJ76PSEr2sj2VhEtyi_DFvfo6xLMXXw"
93 "."
153 "https://fundoopush-dev.bridgeLabz.com/add-post"
356 "https://fundoopush-dev.bridgeLabz.com/login"
416 "https://fundoopush-dev.bridgeLabz.com/dashboard/article"
...
misti@misti-VirtualBox:~$ []
```

The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "mistli@mistli-VirtualBox: /var/log". The command entered is "cat access.log | awk -F " " '{print \$11} NR==4{exit}'". The output of the command is four blank lines. The desktop interface includes a dock on the left with icons for various applications like a browser, file manager, and system tools.

Ques) Print last 4 frequently used URL from particular hour

```
Activities Terminal ▾ May 4 21:36
misti@misti-VirtualBox:~
```

misti@misti-VirtualBox:~ cat access.log

```
10.56.2.2 - - [11/Sep/2019:22:54:52 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.48"
10.56.22.3 - - [14/Sep/2019:06:36:37 +0000] "GET / HTTP/1.1" 200 1274 "-" "Mozilla/5.0 (compatible; Nimbustros-Bot/v1.3.2; http://cloudsystemsnetworks.com)" "209.17.96.18"
10.56.19.3 - - [14/Sep/2019:18:56:46 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.19.3 - - [14/Sep/2019:18:56:46 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.4.2 - - [14/Sep/2019:20:44:44 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.34.4 - - [15/Sep/2019:13:56:11 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.4.2 - - [15/Sep/2019:17:37:37 +0000] "GET /wp-login.php HTTP/1.1" 200 554 "https://fundoopush-dev.bridgelabz.com/wp-login.php" "Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:62.0) Gecko/20100101 Firefox/62.0" "190.203.27.87"
10.56.0.3 - - [16/Sep/2019:09:11:48 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.45"
10.56.0.3 - - [16/Sep/2019:09:11:48 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.45"
10.56.0.3 - - [16/Sep/2019:10:41:41 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.48"
10.56.9.3 - - [17/Sep/2019:03:52:08 +0000] "GET / HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.168.196"
10.56.9.3 - - [17/Sep/2019:03:52:08 +0000] "GET /favicon.ico HTTP/1.1" 200 1150 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.168.196"
10.56.5.2 - - [17/Sep/2019:04:17:41 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.75.79"
10.56.10.2 - - [17/Sep/2019:23:33:39 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.71"
10.56.4.2 - - [17/Sep/2019:23:33:20 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.73"
10.56.0.3 - - [18/Sep/2019:00:45:12 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.73"
10.56.1.3 - - [18/Sep/2019:04:01:26 +0000] "GET / HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.179.114"
10.56.9.3 - - [18/Sep/2019:04:01:27 +0000] "GET /favicon.ico HTTP/1.1" 200 1150 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.179.114"
10.56.4.2 - - [18/Sep/2019:18:26:48 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.42"
10.56.3.4 - - [19/Sep/2019:06:14:58 +0000] "GET / HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "45.113.248.199"
10.56.10.2 - - [19/Sep/2019:06:14:58 +0000] "GET /favicon.ico HTTP/1.1" 200 1150 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "45.113.248.199"
10.56.9.3 - - [20/Sep/2019:06:34:27 +0000] "GET /login HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - - [20/Sep/2019:06:34:27 +0000] "GET /runtime.js HTTP/1.1" 200 1710 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - - [20/Sep/2019:06:34:27 +0000] "GET /polyfills.js HTTP/1.1" 200 45365 "https://Fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - - [20/Sep/2019:06:34:27 +0000] "GET /styles.js HTTP/1.1" 200 49526 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - - [20/Sep/2019:06:34:27 +0000] "GET /scripts.js HTTP/1.1" 200 79309 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
```

Activities Terminal May 4 21:38 misti@misti-VirtualBox: /var/log misti@misti-VirtualBox: ~

```
misti@misti-VirtualBox:~$ cat access.log | awk '{print $4}' | sort -n | uniq -c
1 [11/Sep/2019:22:54:52
1 [14/Sep/2019:06:36:37
2 [14/Sep/2019:18:56:46
1 [14/Sep/2019:20:44:44
1 [15/Sep/2019:13:56:11
1 [15/Sep/2019:17:37:56
2 [16/Sep/2019:09:11:40
1 [16/Sep/2019:10:41:41
2 [17/Sep/2019:03:52:08
1 [17/Sep/2019:04:17:41
1 [17/Sep/2019:23:33:19
1 [17/Sep/2019:23:33:20
1 [18/Sep/2019:00:45:12
1 [18/Sep/2019:04:01:26
1 [18/Sep/2019:04:01:27
1 [18/Sep/2019:18:26:48
1 [19/Sep/2019:06:14:58
1 [19/Sep/2019:06:14:59
6 [20/Sep/2019:06:34:27
1 [20/Sep/2019:06:34:28
1 [20/Sep/2019:06:34:32
1 [20/Sep/2019:06:34:33
3 [20/Sep/2019:06:34:36
6 [20/Sep/2019:06:34:37
2 [20/Sep/2019:06:34:43
1 [20/Sep/2019:06:34:47
6 [20/Sep/2019:06:37:04
1 [20/Sep/2019:06:37:05
2 [20/Sep/2019:06:37:08
3 [20/Sep/2019:06:37:11
6 [20/Sep/2019:06:37:12
2 [20/Sep/2019:06:37:19
1 [20/Sep/2019:06:37:22
1 [20/Sep/2019:07:11:32
1 [20/Sep/2019:07:11:33
5 [21/Sep/2019:06:38:53
```

Activities Terminal May 4 21:39 misti@misti-VirtualBox: /var/log misti@misti-VirtualBox: ~

```
misti@misti-VirtualBox:~$ cat access.log | awk -F " " '{print $4}' | sort -n | uniq -c
1 [23/Sep/2019:13:30:33
1 [11/Sep/2019:22:54:52
1 [14/Sep/2019:06:36:37
2 [14/Sep/2019:18:56:46
1 [14/Sep/2019:20:44:44
1 [15/Sep/2019:13:56:11
1 [15/Sep/2019:17:37:56
2 [16/Sep/2019:09:11:40
1 [16/Sep/2019:10:41:41
2 [17/Sep/2019:03:52:08
1 [17/Sep/2019:04:17:41
1 [17/Sep/2019:23:33:19
1 [17/Sep/2019:23:33:20
1 [18/Sep/2019:00:45:12
1 [18/Sep/2019:04:01:26
1 [18/Sep/2019:04:01:27
1 [18/Sep/2019:18:26:48
1 [19/Sep/2019:06:14:58
1 [19/Sep/2019:06:14:59
6 [20/Sep/2019:06:34:27
1 [20/Sep/2019:06:34:28
1 [20/Sep/2019:06:34:32
1 [20/Sep/2019:06:34:33
3 [20/Sep/2019:06:34:36
6 [20/Sep/2019:06:34:37
2 [20/Sep/2019:06:34:43
1 [20/Sep/2019:06:34:47
6 [20/Sep/2019:06:37:04
1 [20/Sep/2019:06:37:05
2 [20/Sep/2019:06:37:08
3 [20/Sep/2019:06:37:11
6 [20/Sep/2019:06:37:12
2 [20/Sep/2019:06:37:19
1 [20/Sep/2019:06:37:22
1 [20/Sep/2019:07:11:32
1 [20/Sep/2019:07:11:33
1 [21/Sep/2019:06:38:53
```

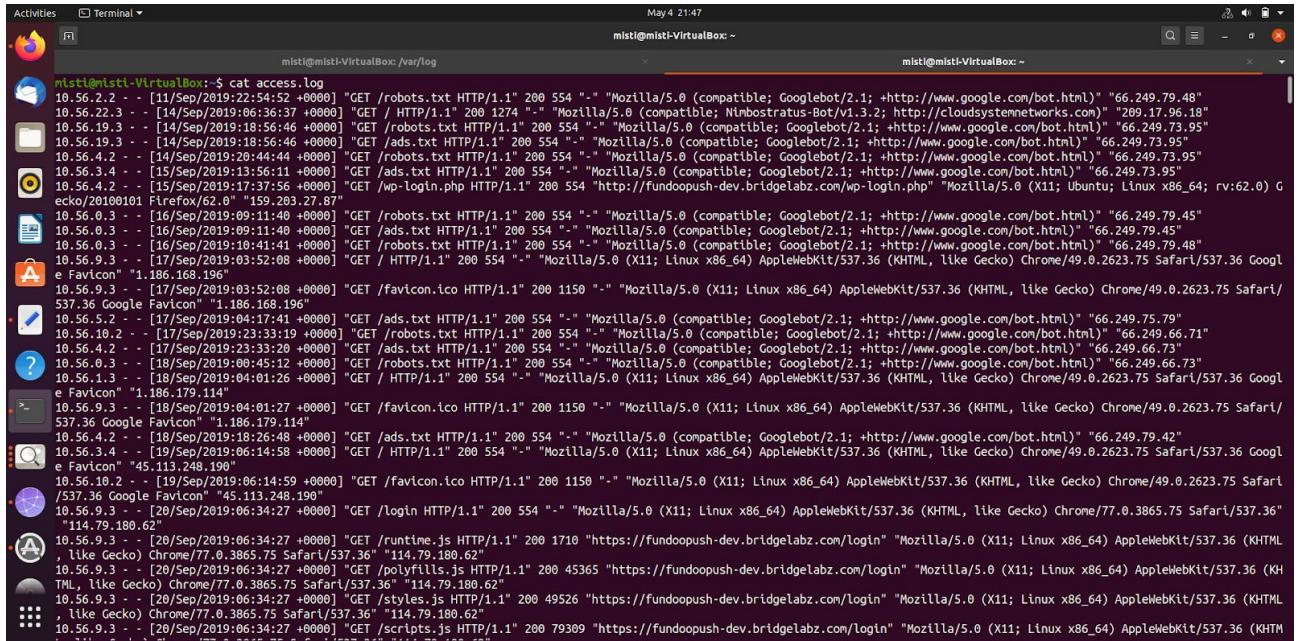
Activities Terminal May 4 21:42 misti@misti-VirtualBox: ~

```
misti@misti-VirtualBox:~$ cat access.log | awk " " '{if($4) print $11}' | sort -n | uniq -c
1
93 "-"
2 "http://fundoopush-dev.bridgeLabz.com/.well-known/acme-challenge/4xM-Y1899BrBIJ76PSEr2sj2VhEtyi_DFvfo6xLMXXw"
1 "http://fundoopush-dev.bridgeLabz.com/wp-login.php"
153 "https://fundoopush-dev.bridgeLabz.com/add-post"
416 "https://fundoopush-dev.bridgeLabz.com/dashboard/article"
356 "https://fundoopush-dev.bridgeLabz.com/login"
misti@misti-VirtualBox:~$ 
```

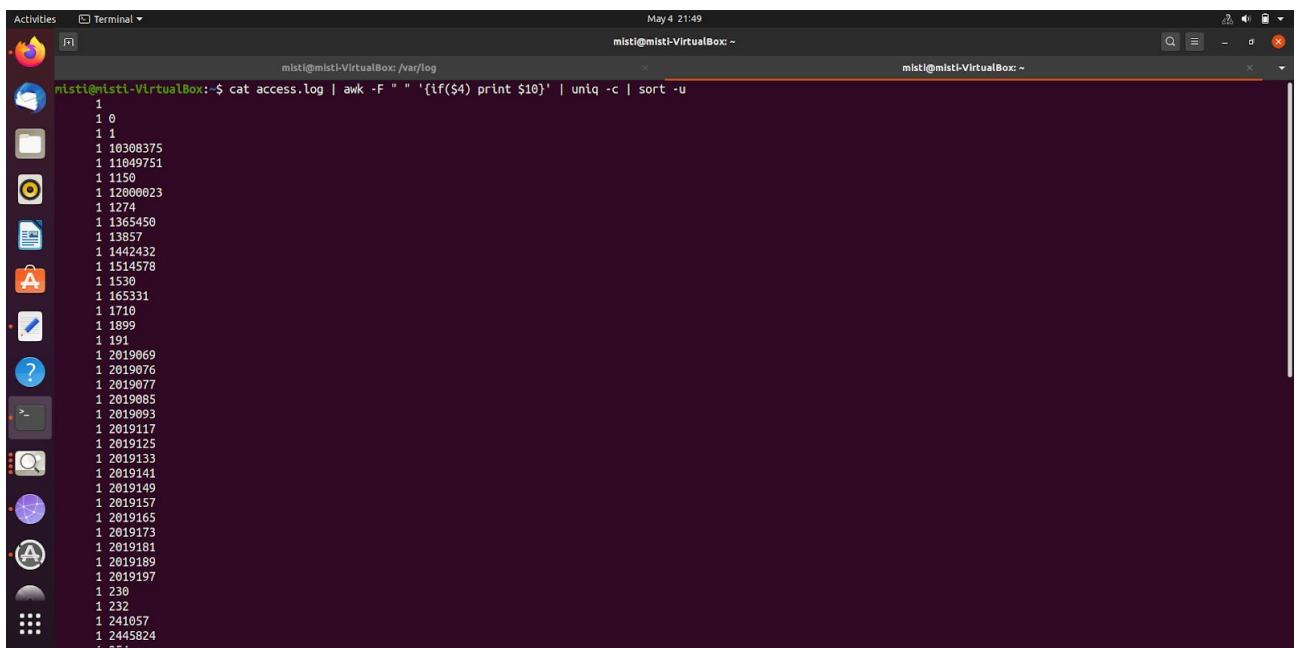
Activities Terminal May 4 21:43 misti@misti-VirtualBox: ~

```
misti@misti-VirtualBox:~$ cat access.log | awk " " '{if($4) print $11}' | sort -n | uniq -c
1
93 "-"
2 "http://fundoopush-dev.bridgeLabz.com/.well-known/acme-challenge/4xM-Y1899BrBIJ76PSEr2sj2VhEtyi_DFvfo6xLMXXw"
153 "https://fundoopush-dev.bridgeLabz.com/add-post"
416 "https://fundoopush-dev.bridgeLabz.com/dashboard/article"
356 "https://fundoopush-dev.bridgeLabz.com/login"
misti@misti-VirtualBox:~$ cat access.log | awk " " '{if($4) print $11}' | sort -u | uniq -c
1
1 "-"
1 "http://fundoopush-dev.bridgeLabz.com/.well-known/acme-challenge/4xM-Y1899BrBIJ76PSEr2sj2VhEtyi_DFvfo6xLMXXw"
1 "http://fundoopush-dev.bridgeLabz.com/wp-login.php"
1 "https://fundoopush-dev.bridgeLabz.com/add-post"
1 "https://fundoopush-dev.bridgeLabz.com/dashboard/article"
1 "https://fundoopush-dev.bridgeLabz.com/login"
misti@misti-VirtualBox:~$ 
```

QUSE)PRINT LIST OF WEB RESPONSE COUNT IN UNIQUE SORTED ORDER



```
misti@misti-VirtualBox:~$ cat access.log
10.56.2.2 - - [11/Sep/2019:22:54:52 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.48"
10.56.22.3 - - [14/Sep/2019:06:36:37 +0000] "GET / HTTP/1.1" 200 1274 "-" "Mozilla/5.0 (compatible; Nimbusstratus-Rot/v1.3.2; http://cloudsystemnetworks.com)" "289.17.96.18"
10.56.19.3 - - [14/Sep/2019:18:56:46 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.4.2 - - [14/Sep/2019:20:44:44 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.4.2 - - [15/Sep/2019:13:56:11 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.4.2 - - [15/Sep/2019:17:37:56 +0000] "GET /wp-login.php HTTP/1.1" 200 554 "http://fundoopush-dev.bridgelabz.com/wp-login.php" "Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:62.0) Gecko/20100101 Firefox/62.0" "159.203.27.87"
10.56.0.3 - - [16/Sep/2019:09:11:49 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.45"
10.56.0.3 - - [16/Sep/2019:09:11:49 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.45"
10.56.0.3 - - [16/Sep/2019:10:41:41 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.48"
10.56.9.3 - - [17/Sep/2019:03:52:08 +0000] "GET / HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.168.196"
10.56.9.3 - - [17/Sep/2019:03:52:08 +0000] "GET /favicon.ico HTTP/1.1" 200 1150 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.168.196"
10.56.9.3 - - [17/Sep/2019:04:17:41 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.75.79"
10.56.10.2 - - [17/Sep/2019:23:33:19 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.71"
10.56.4.2 - - [17/Sep/2019:23:33:29 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.73"
10.56.0.3 - - [18/Sep/2019:09:45:12 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.73"
10.56.1.3 - - [18/Sep/2019:04:01:26 +0000] "GET / HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.179.114"
10.56.9.3 - - [18/Sep/2019:04:01:27 +0000] "GET /favicon.ico HTTP/1.1" 200 1150 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.179.114"
10.56.4.2 - - [18/Sep/2019:18:26:48 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.42"
10.56.3.4 - - [19/Sep/2019:06:14:58 +0000] "GET / HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "45.113.248.199"
10.56.10.2 - - [19/Sep/2019:06:14:59 +0000] "GET /favicon.ico HTTP/1.1" 200 1150 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "45.113.248.199"
10.56.9.3 - - [20/Sep/2019:06:34:27 +0000] "GET /login HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - - [20/Sep/2019:06:34:27 +0000] "GET /runtime.js HTTP/1.1" 200 1710 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - - [20/Sep/2019:06:34:27 +0000] "GET /polyfills.js HTTP/1.1" 200 45365 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - - [20/Sep/2019:06:34:27 +0000] "GET /styles.js HTTP/1.1" 200 49526 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - - [20/Sep/2019:06:34:27 +0000] "GET /scripts.js HTTP/1.1" 200 79309 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
```



```
misti@misti-VirtualBox:~$ cat access.log | awk -F " " '{if($4) print $10}' | uniq -c | sort -u
1 0
1 1
1 10308375
1 11849751
1 1150
1 12000023
1 1274
1 1365450
1 13857
1 1442432
1 1514578
1 1530
1 165331
1 1710
1 1899
1 191
1 2019669
1 2019876
1 2019877
1 2019885
1 2019893
1 2019117
1 2019125
1 2019133
1 2019141
1 2019149
1 2019157
1 2019165
1 2019173
1 2019181
1 2019189
1 2019197
1 238
1 232
1 241057
1 2445824
```

```
Activities Terminal May 4 21:51
misti@mistil-VirtualBox:~$ cat access.log | awk -F " " '{if($4) print $10} NR==4{exit}'
```

```
554
554
554
554
```

QUES)PRINT LIST OF LAST 10 SORTED UNIQUE CLIENT IP

```
Activities Terminal May 4 21:55
misti@mistil-VirtualBox:~$ cat access.log | awk -F " " '{if($4) print $10} NR==4{exit}'
```

```
10.56.2.2 - [11/Sep/2019:22:54:52 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.49"
10.56.22.3 - [14/Sep/2019:06:36:37 +0000] "GET / HTTP/1.1" 200 1274 "-" "Mozilla/5.0 (compatible; Nimbostratus-Bot/v1.3.2; http://cloudsystemnetworks.com)" "209.17.96.48"
10.56.19.3 - [14/Sep/2019:18:56:46 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.19.3 - [14/Sep/2019:18:56:46 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.4.2 - [14/Sep/2019:20:44:44 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.4.2 - [15/Sep/2019:13:56:11 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.4.2 - [15/Sep/2019:17:37:56 +0000] "GET /wp-login.php HTTP/1.1" 200 554 "http://fundoopush-dev.bridgelabz.com/wp-login.php" "Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:62.0) Gecko/20100101 Firefox/62.0" "159.203.27.87"
10.56.0.3 - [16/Sep/2019:09:11:40 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.45"
10.56.0.3 - [16/Sep/2019:09:11:40 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.45"
10.56.0.3 - [16/Sep/2019:10:41:41 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.73.95"
10.56.9.3 - [17/Sep/2019:03:52:08 +0000] "GET / HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.168.196"
10.56.9.3 - [17/Sep/2019:03:52:08 +0000] "GET /favicon.ico HTTP/1.1" 200 1150 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.168.196"
10.56.5.2 - [17/Sep/2019:04:17:41 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.75.79"
10.56.10.2 - [17/Sep/2019:23:33:19 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.71"
10.56.4.2 - [17/Sep/2019:23:33:20 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.73"
10.56.0.3 - [18/Sep/2019:08:45:12 +0000] "GET /robots.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.66.73"
10.56.1.3 - [18/Sep/2019:04:01:26 +0000] "GET / HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.179.114"
10.56.9.3 - [18/Sep/2019:04:01:27 +0000] "GET /favicon.ico HTTP/1.1" 200 1150 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "1.186.179.114"
10.56.4.2 - [18/Sep/2019:18:26:48 +0000] "GET /ads.txt HTTP/1.1" 200 554 "-" "Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)" "66.249.79.42"
10.56.3.4 - [19/Sep/2019:06:14:58 +0000] "GET / HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "45.113.248.199"
10.56.10.2 - [19/Sep/2019:06:14:59 +0000] "GET /favicon.ico HTTP/1.1" 200 1150 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/49.0.2623.75 Safari/537.36 Google Favicon" "45.113.248.199"
10.56.9.3 - [20/Sep/2019:06:34:27 +0000] "GET /login HTTP/1.1" 200 554 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - [20/Sep/2019:06:34:27 +0000] "GET /runtime.js HTTP/1.1" 200 1710 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - [20/Sep/2019:06:34:27 +0000] "GET /polyfills.js HTTP/1.1" 200 45365 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - [20/Sep/2019:06:34:27 +0000] "GET /styles.js HTTP/1.1" 200 49526 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
10.56.9.3 - [20/Sep/2019:06:34:27 +0000] "GET /scripts.js HTTP/1.1" 200 79309 "https://fundoopush-dev.bridgelabz.com/login" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.75 Safari/537.36" "114.79.180.62"
```

Activities Terminal May 4 21:57 misti@mistil-VirtualBox: ~

```
misti@mistil-VirtualBox:~$ head cat access.log | awk -F " " '{print $1}'  
head: cannot open 'cat' for reading: No such file or directory  
==>  
10.56.2.2  
10.56.22.3  
10.56.19.3  
10.56.19.3  
10.56.4.2  
10.56.3.4  
10.56.4.2  
10.56.0.3  
10.56.0.3  
10.56.0.3  
10.56.0.3  
misti@mistil-VirtualBox:~$ cat access.log | awk -F " " '{print $1}' | sort -u | uniq -c  
1 10.56.0.3  
1 10.56.16.2  
1 10.56.1.3  
1 10.56.19.3  
1 10.56.21.2  
1 10.56.2.2  
1 10.56.22.3  
1 10.56.3.4  
1 10.56.4.2  
1 10.56.5.2  
1 10.56.6.4  
1 10.56.9.3  
misti@mistil-VirtualBox:~$ 
```

Activities Terminal May 4 22:02 misti@mistil-VirtualBox: ~

```
misti@mistil-VirtualBox:~$ cat access.log | awk -F " " '{print $1} NR==4{exit}'  
10.56.2.2  
10.56.22.3  
10.56.19.3  
10.56.19.3  
misti@mistil-VirtualBox:~$ 
```

QUES)FIND THE CHANGES B/W ORIGNAL FILE AND UPDATED FILE AND APPLY THE CHANGES TO IT

```
Activities Terminal ▾ May 4 23:08
misti@misti-VirtualBox:~$ cd last
misti@misti-VirtualBox:~/last$ mkdir original updated
misti@misti-VirtualBox:~/last$ ls
original updated
misti@misti-VirtualBox:~/last$ nano original.sh
misti@misti-VirtualBox:~/last$ nano updated.sh
misti@misti-VirtualBox:~/last$ nano check.sh
misti@misti-VirtualBox:~/last$ ls
check.sh original original.sh updated updated.sh
misti@misti-VirtualBox:~/last$ cd original
misti@misti-VirtualBox:~/last/original$ ls
check.sh
misti@misti-VirtualBox:~/last/original$ sh check.sh
sh: 0: Can't open check.sh
misti@misti-VirtualBox:~/last/original$ cd ..
misti@misti-VirtualBox:~/last$ sh check.sh
check
rm: cannot remove 'check': No such file or directory
original
updated
misti@misti-VirtualBox:~/last$ ls
check check.sh original original.sh updated updated.sh
misti@misti-VirtualBox:~/last$ cd original
misti@misti-VirtualBox:~/last/original$ ls
original.sh
misti@misti-VirtualBox:~/last/original$ cd ..
misti@misti-VirtualBox:~/last$ cd updated
misti@misti-VirtualBox:~/last/updated$ ls
updated.sh
misti@misti-VirtualBox:~/last/updated$ cd ..
misti@misti-VirtualBox:~/last$
```

```
Activities Terminal ▾ May 4 23:21
misti@misti-VirtualBox:~$ nano check.sh
misti@misti-VirtualBox:~/last$ ls
check.sh original original.sh updated updated.sh
misti@misti-VirtualBox:~/last$ cd original
misti@misti-VirtualBox:~/last/original$ ls
check.sh
misti@misti-VirtualBox:~/last/original$ sh check.sh
sh: 0: Can't open check.sh
misti@misti-VirtualBox:~/last/original$ cd ..
misti@misti-VirtualBox:~/last$ sh check.sh
check
rm: cannot remove 'check': No such file or directory
original
updated
misti@misti-VirtualBox:~/last$ ls
check check.sh original original.sh updated updated.sh
misti@misti-VirtualBox:~/last$ cd original
misti@misti-VirtualBox:~/last/original$ ls
original.sh
misti@misti-VirtualBox:~/last/original$ cd ..
misti@misti-VirtualBox:~/last$ cd updated
misti@misti-VirtualBox:~/last/updated$ ls
updated.sh
misti@misti-VirtualBox:~/last/updated$ cd ..
misti@misti-VirtualBox:~/last$ cp -r original original_backup
misti@misti-VirtualBox:~/last$ cd original_backup
misti@misti-VirtualBox:~/last/original_backup$ ls
original.sh
misti@misti-VirtualBox:~/last/original_backup$ nano original.sh
misti@misti-VirtualBox:~/last/original_backup$ cd ..
misti@misti-VirtualBox:~/last$ diff -y original_backup/original.sh updated/updated.sh
echo "this is updated"
echo "this is updated"
misti@misti-VirtualBox:~/last$
```