

DEVARA HARSHA

20P31A04J4

DEVOPS ASSIGNMENT :

1.STASH COMMAND

Git stash :

It is used to save the files temporarily. It is stored safely in a hidden place.

you have any important work to do, in that time this command is used

you can come back and re-apply them later.

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22621.1194]
(c) Microsoft Corporation. All rights reserved.

C:\Users\DEVARA HARSHA\OneDrive\Desktop\FRIENDS>git branch
* master

C:\Users\DEVARA HARSHA\OneDrive\Desktop\FRIENDS>git branch sta

C:\Users\DEVARA HARSHA\OneDrive\Desktop\FRIENDS>git checkout sta
Switched to branch 'sta'
M    chaitanya.txt
M    santosh.txt

C:\Users\DEVARA HARSHA\OneDrive\Desktop\FRIENDS>git stash
Saved working directory and index state WIP on sta: ff137ee pandaga cheyyandi bro

C:\Users\DEVARA HARSHA\OneDrive\Desktop\FRIENDS>git stash save "modified"
No local changes to save

C:\Users\DEVARA HARSHA\OneDrive\Desktop\FRIENDS>git stash list
stash@{0}: WIP on sta: ff137ee pandaga cheyyandi bro
stash@{1}: WIP on master: ff137ee pandaga cheyyandi bro

C:\Users\DEVARA HARSHA\OneDrive\Desktop\FRIENDS>git stash pop
On branch sta
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   chaitanya.txt
        modified:   santosh.txt

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (8fb63ad39fabcb81869985e70cfd63528e017fd5)

C:\Users\DEVARA HARSHA\OneDrive\Desktop\FRIENDS>git stash apply
error: Your local changes to the following files would be overwritten by merge:
chaitanya.txt
santosh.txt
Please commit your changes or stash them before you merge.
Aborting
```

2.GIT FETCH AND GIT MERGE

Git fetch :

Gives the information of a new change from a remote repository without merging into the current branch.

It tells the local repository that there are changes available in the remote repository without changes into the local repository, It is the copy of the remote changes in the local repository.

```
C:\Windows\System32\cmd.exe x + v
C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git commit -m "done"
[master (root-commit) 244f5c3] done
1 file changed, 1 insertion(+)
create mode 100644 Task.txt

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git remote add origin https://github.com/devaraharsha/total.git
error: remote origin already exists.

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git push origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 211 bytes | 211.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/devaraharsha/total.git
 * [new branch]      master -> master

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git log
commit 244f5c3ede437b3b7f16447c9c8943ec924a466c (HEAD -> master, origin/master)
Author: devaraharsha <devaraharsha79114@gmail.com>
Date:   Sun Feb 12 12:50:46 2023 +0530

    done

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git fetch
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 645 bytes | 58.00 KiB/s, done.
From https://github.com/devaraharsha/total
 244f5c3..30be5b2  master    -> origin/master

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git log
commit 244f5c3ede437b3b7f16447c9c8943ec924a466c (HEAD -> master)
Author: devaraharsha <devaraharsha79114@gmail.com>
Date:   Sun Feb 12 12:50:46 2023 +0530

    done

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>
```

Git merge :

It is used to integrate changes from another branch.

It is the content refers and heads into a local merge commit.

```
C:\Windows\System32\cmd.exe x + v
done
C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git fetch
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 645 bytes | 58.00 KiB/s, done.
From https://github.com/devaraharsha/total
 244f5c3..30be5b2  master    -> origin/master

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git log
commit 244f5c3ede437b3b7f16447c9c8943ec924a466c (HEAD -> master)
Author: devaraharsha <devaraharsha79114@gmail.com>
Date: Sun Feb 12 12:58:46 2023 +0530

done
C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git merge origi/master
merge: origi/master - not something we can merge

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git merge origin/master
Updating 244f5c3..30be5b2
Fast-forward
 Task.txt | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git log
commit 30be5b243a87836af705497a336fa6bf551be0a2 (HEAD -> master, origin/master)
Author: HARSHA DEVARA <87236546+devaraharsha@users.noreply.github.com>
Date: Sun Feb 12 12:52:18 2023 +0530

    Update Task.txt

commit 244f5c3ede437b3b7f16447c9c8943ec924a466c
Author: devaraharsha <devaraharsha79114@gmail.com>
Date: Sun Feb 12 12:58:46 2023 +0530

done
C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>
```

```
C:\Windows\System32\cmd.exe x + v
C:\Users\DEVARA HARSHA\OneDrive\Desktop\task>git branch
* master
  mergo

C:\Users\DEVARA HARSHA\OneDrive\Desktop\task>git checkout mergo
Switched to branch 'mergo'

C:\Users\DEVARA HARSHA\OneDrive\Desktop\task>git add m2.txt

C:\Users\DEVARA HARSHA\OneDrive\Desktop\task>git commit -m "third"
[mergo cb03f61] third
 1 file changed, 1 insertion(+)
 create mode 100644 m2.txt

C:\Users\DEVARA HARSHA\OneDrive\Desktop\task>git push origin mergo
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 262 bytes | 262.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/devaraharsha/repo.git
 6467264..cb03f61  mergo -> mergo

C:\Users\DEVARA HARSHA\OneDrive\Desktop\task>git checkout master
Switched to branch 'master'

C:\Users\DEVARA HARSHA\OneDrive\Desktop\task>git merge mergo
Updating 6467264..cb03f61
Fast-forward
 m2.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 m2.txt

C:\Users\DEVARA HARSHA\OneDrive\Desktop\task>git push origin master
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/devaraharsha/repo.git
 6467264..cb03f61  master -> master

C:\Users\DEVARA HARSHA\OneDrive\Desktop\task>
```

3.GIT FETCH VS GIT PULL

Git Fetch:

Gives the information of a new change from a remote repository without merging into the current branch.

```
C:\Windows\System32\cmd.exe x + v
C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git commit -m "done"
[master (root-commit) 244f5c3] done
1 file changed, 1 insertion(+)
create mode 100644 Task.txt

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git remote add origin https://github.com/devaraharsha/total.git
error: remote origin already exists.

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git push origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 211 bytes | 211.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/devaraharsha/total.git
* [new branch] master -> master

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git log
commit 244f5c3ede437b3b7f16447c9c8943ec924a466c (HEAD -> master, origin/master)
Author: devaraharsha <devaraharsha79114@gmail.com>
Date: Sun Feb 12 12:50:46 2023 +0530

    done

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git fetch
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 645 bytes | 58.00 KiB/s, done.
From https://github.com/devaraharsha/total
244f5c3..30be5b2 master -> origin/master

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git log
commit 244f5c3ede437b3b7f16447c9c8943ec924a466c (HEAD -> master)
Author: devaraharsha <devaraharsha79114@gmail.com>
Date: Sun Feb 12 12:50:46 2023 +0530

    done

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>
```

Git Pull:

Brings the copy of all the changes from a remote repository and merges them into the current branch.

```
C:\Windows\System32\cmd.exe x + v
commit 244f5c3ede437b3b7f16447c9c8943ec924a466c
Author: devaraharsha <devaraharsha79114@gmail.com>
Date: Sun Feb 12 12:50:46 2023 +0530

    done

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git pull origin master
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 672 bytes | 56.00 KiB/s, done.
From https://github.com/devaraharsha/total
* branch master -> FETCH_HEAD
30be5b2..fb61997 master -> origin/master
Updating 30be5b2..fb61997
Fast-forward
 Task.txt | 1 +
1 file changed, 1 insertion(+)

C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>git log
commit fb6199791b400b7522dfec7960a135fe1e94d397 (HEAD -> master, origin/master)
Author: HARSHA DEVARA <87236546+devaraharsha@users.noreply.github.com>
Date: Sun Feb 12 12:56:55 2023 +0530

    Update Task.txt

commit 30be5b243a87836af705497a336fa6bf551be0a2
Author: HARSHA DEVARA <87236546+devaraharsha@users.noreply.github.com>
Date: Sun Feb 12 12:52:18 2023 +0530

    Update Task.txt

commit 244f5c3ede437b3b7f16447c9c8943ec924a466c
Author: devaraharsha <devaraharsha79114@gmail.com>
Date: Sun Feb 12 12:50:46 2023 +0530

    done

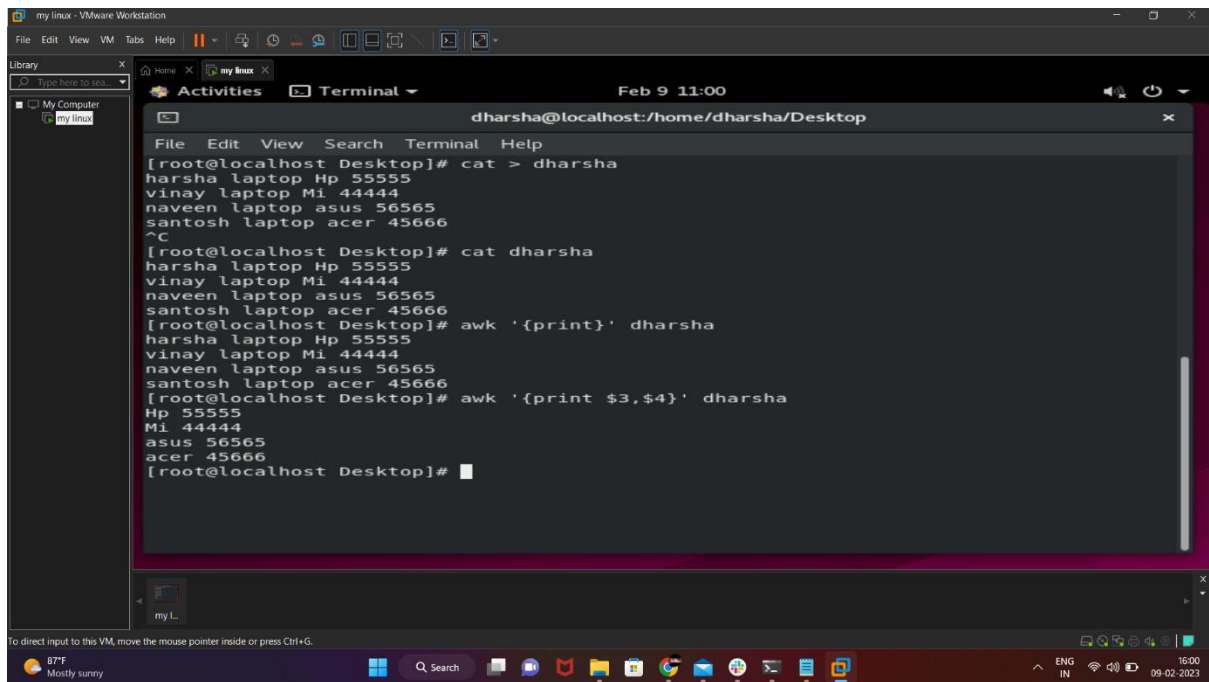
C:\Users\DEVARA HARSHA\OneDrive\Desktop\Hero>
```

4.AWK COMMAND AND BASH SCRIPTING

Awk :

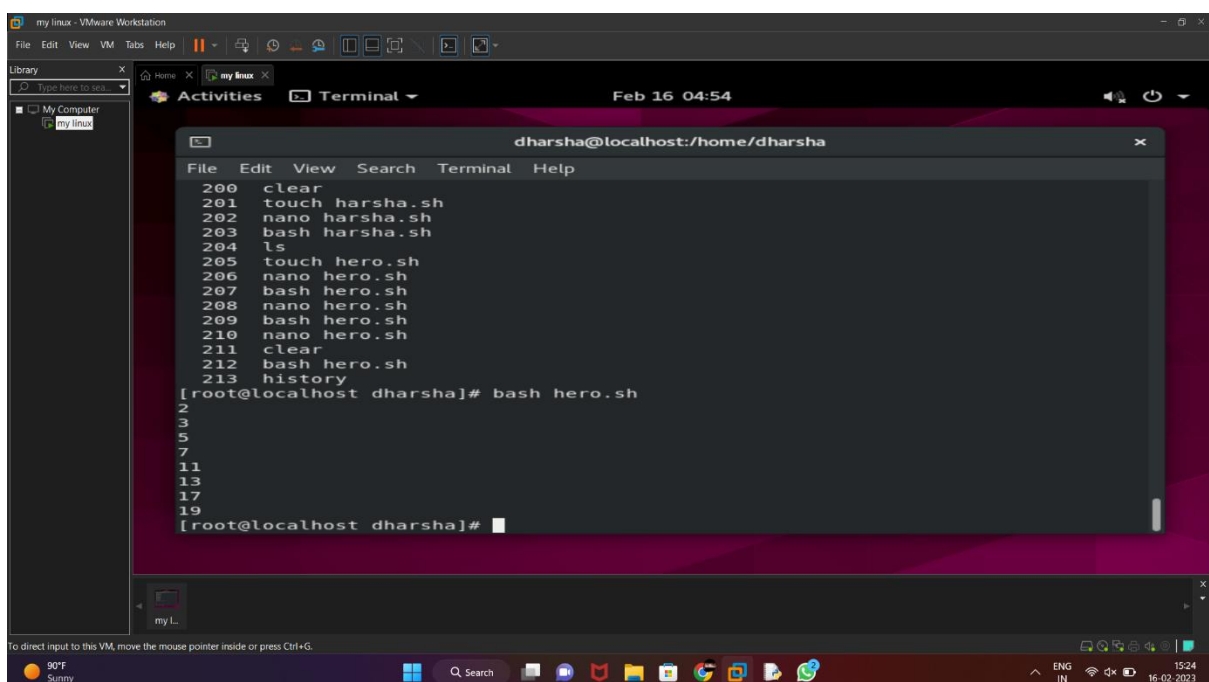
The awk command is a Linux tool and programming language that allows users to process and manipulate data and produce formatted reports.

It is the advanced text processing.



```
my linux - VMware Workstation
File Edit View VM Tabs Help
Library
Type here to search
My Computer
my linux
Activities Terminal Feb 9 11:00
dharsha@localhost:/home/dharsha/Desktop
File Edit View Search Terminal Help
[root@localhost Desktop]# cat > dharsha
harsha laptop Hp 55555
vinay laptop Mi 44444
naveen laptop asus 56565
santosh laptop acer 45666
^C
[root@localhost Desktop]# cat dharsha
harsha laptop Hp 55555
vinay laptop Mi 44444
naveen laptop asus 56565
santosh laptop acer 45666
[root@localhost Desktop]# awk '{print}' dharsha
harsha laptop Hp 55555
vinay laptop Mi 44444
naveen laptop asus 56565
santosh laptop acer 45666
[root@localhost Desktop]# awk '{print $3,$4}' dharsha
Hp 55555
Mi 44444
asus 56565
acer 45666
[root@localhost Desktop]#
```

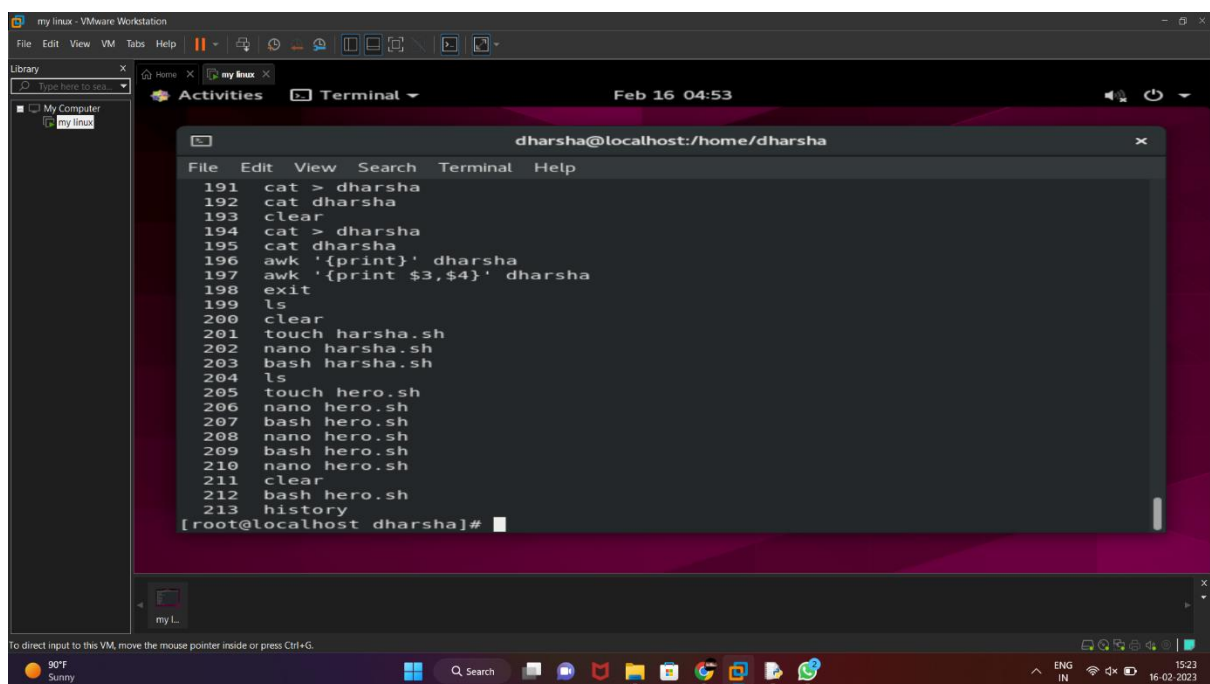
Prime numbers shell scripting upto given range:



```
my linux - VMware Workstation
File Edit View VM Tabs Help
Library
Type here to search
My Computer
my linux
Activities Terminal Feb 16 04:54
dharsha@localhost:/home/dharsha
File Edit View Search Terminal Help
200 clear
201 touch harsha.sh
202 nano harsha.sh
203 bash harsha.sh
204 ls
205 touch hero.sh
206 nano hero.sh
207 bash hero.sh
208 nano hero.sh
209 bash hero.sh
210 nano hero.sh
211 clear
212 bash hero.sh
213 history
[root@localhost dharsha]# bash hero.sh
2
3
5
7
11
13
17
19
[root@localhost dharsha]#
```

History command :

History command is used to display all history of the commands in Linux terminal.



The screenshot shows a VMware Workstation window titled 'my linux - VMware Workstation'. Inside, a Linux virtual machine named 'my linux' is running. The terminal window is titled 'dharsha@localhost:/home/dharsha' and displays a list of commands entered, each preceded by a line number from 191 to 213. The commands include 'cat > dharsha', 'cat dharsha', 'clear', 'awk' commands, 'exit', 'ls', 'touch', and 'nano' commands. The prompt at the bottom is '[root@localhost dharsha]#'. The VMware interface includes a menu bar (File, Edit, View, VM, Tabs, Help), a toolbar, a sidebar with 'Library' and 'My Computer' sections, and a status bar at the bottom showing system information like temperature (90°F), weather (Sunny), and date/time (15:23, 16-02-2023).

```
191 cat > dharsha
192 cat dharsha
193 clear
194 cat > dharsha
195 cat dharsha
196 awk '{print}' dharsha
197 awk '{print $3,$4}' dharsha
198 exit
199 ls
200 clear
201 touch harsha.sh
202 nano harsha.sh
203 bash harsha.sh
204 ls
205 touch hero.sh
206 nano hero.sh
207 bash hero.sh
208 nano hero.sh
209 bash hero.sh
210 nano hero.sh
211 clear
212 bash hero.sh
213 history
[root@localhost dharsha]#
```

5.CONTAINERIZATION

DOCKER : Docker is a tool for providing containers and we can create an isolated environment for our application servers.

```
root@145fd8e827b1:/
$ docker login
Authentication with existing credentials...
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.docker.com/go/access-tokens/

$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
harshadevara/act2   latest             3fa63aa9134d       2 days ago         156MB
act2                 latest             3fa63aa9134d       2 days ago         156MB
harshadevara/bobapp latest             d14366733d6c       3 days ago         919MB
bobapp              latest             d14366733d6c       3 days ago         919MB
python              latest             f92346e0c19e       5 days ago         925MB
ubuntu              latest             58db3eda12be       3 weeks ago        77.0MB

$ winpty docker run -it ubuntu
root@145fd8e827b1:/# ls
bin boot dev etc home lib lib32 lib64 libx32 media mnt opt proc root run sbin srv sys usr var
root@145fd8e827b1:/# ls -la
total 48
drwxr-xr-x 1 root root 7 Jan 26 02:03 bin -> usr/bin
drwxr-xr-x 2 root root 4096 Apr 18 2022 boot
drwxr-xr-x 5 root root 360 Feb 16 12:58 dev
drwxr-xr-x 1 root root 4096 Feb 16 12:58 etc
drwxr-xr-x 2 root root 4096 Apr 18 2022 home
drwxr-xr-x 1 root root 7 Jan 26 02:03 lib -> usr/lib
drwxr-xr-x 1 root root 9 Jan 26 02:03 lib32 -> usr/lib32
drwxr-xr-x 1 root root 9 Jan 26 02:03 lib64 -> usr/lib64
drwxr-xr-x 1 root root 10 Jan 26 02:03 libx32 -> usr/libx32
drwxr-xr-x 2 root root 4096 Jan 26 02:03 media
drwxr-xr-x 2 root root 4096 Jan 26 02:03 mnt
drwxr-xr-x 2 root root 4096 Jan 26 02:03 opt
drwxr-xr-x 461 root root 0 Feb 16 12:58 proc
drwx----- 2 root root 4096 Jan 26 02:06 root
drwxr-xr-x 5 root root 4096 Jan 26 02:06 run
drwxr-xr-x 1 root root 8 Jan 26 02:03 sbin -> usr/sbin
drwxr-xr-x 2 root root 4096 Jan 26 02:03 srv
drwxr-xr-x 11 root root 0 Feb 16 12:58 sys
drwxr-xr-x 2 root root 4096 Jan 26 02:06 usr
drwxr-xr-x 14 root root 4096 Jan 26 02:03 var
drwxr-xr-x 11 root root 4096 Jan 26 02:06 var
root@145fd8e827b1:/#
```

