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Q.1 Create group and user as given below

Red

apple
banana
cat
dog
elephant

Blue

fish
gun
horse
icecream

green

jelly
kitkat
lolipop
marshmallow

orange

new
oppo
vivo
china

```
dbda@iacsd:~$ sudo addgroup red
Adding group `red' (GID 1001) ...
Done.
dbda@iacsd:~$ sudo addgroup blue
Adding group `blue' (GID 1002) ...
Done.
dbda@iacsd:~$ sudo addgroup green
Adding group `green' (GID 1003) ...
Done.
dbda@iacsd:~$ sudo addgroup orange
Adding group `orange' (GID 1004) ...
Done.
dbda@iacsd:~$
```

```
dbda:x:1000:
sambashare:x:136:dbda
red:x:1001:
blue:x:1002:
green:x:1003:
orange:x:1004:
dbda@iacsd:~$
```

```
dbda@iacsd:~$ sudo useradd apple --gid 1001
dbda@iacsd:~$ sudo useradd banana --gid 1001
dbda@iacsd:~$ sudo useradd cat --gid 1001
dbda@iacsd:~$ sudo useradd dog --gid 1001
dbda@iacsd:~$ sudo useradd elephant --gid 1001
```

```
dbda@iacsd:~$ sudo useradd fish --gid 1002
```

```
dbda@iacsd:~$ sudo useradd gun --gid 1002
dbda@iacsd:~$ sudo useradd horse --gid 1002
dbda@iacsd:~$ sudo useradd icecream --gid 1002
dbda@iacsd:~$ sudo useradd jelly --gid 1003
dbda@iacsd:~$ sudo useradd kitkat --gid 1003
dbda@iacsd:~$ sudo useradd lolipop --gid 1003
dbda@iacsd:~$ sudo useradd marshmallow --gid 1003
dbda@iacsd:~$ sudo useradd new --gid 1004
dbda@iacsd:~$ sudo useradd oppo --gid 1004
dbda@iacsd:~$ sudo useradd vivo --gid 1004
dbda@iacsd:~$ sudo useradd china --gid 1004
```

```
dbda:x:1000:1000:dbda,,,:/home/dbda:/bin/bash
apple:x:1001:1001::/home/apple:/bin/sh
banana:x:1002:1001::/home/banana:/bin/sh
cat:x:1003:1001::/home/cat:/bin/sh
dog:x:1004:1001::/home/dog:/bin/sh
elephant:x:1005:1001::/home/elephant:/bin/sh
fish:x:1006:1002::/home/fish:/bin/sh
gun:x:1007:1002::/home/gun:/bin/sh
horse:x:1008:1002::/home/horse:/bin/sh
icecream:x:1009:1002::/home/icecream:/bin/sh
jelly:x:1010:1003::/home/jelly:/bin/sh
kitkat:x:1011:1003::/home/kitkat:/bin/sh
lolipop:x:1012:1003::/home/lolipop:/bin/sh
marshmallow:x:1013:1003::/home/marshmallow:/bin/sh
new:x:1014:1004::/home/new:/bin/sh
oppo:x:1015:1004::/home/oppo:/bin/sh
vivo:x:1016:1004::/home/vivo:/bin/sh
china:x:1017:1004::/home/china:/bin/sh
dbda@iacsd:~$
```

a. create directory named EVERYONE in /home. Give all permission to EVERYONE

```
dbda@iacsd:~$ sudo mkdir /home/EVERYONE
dbda@iacsd:~$ ls /home
dbda  EVERYONE
dbda@iacsd:~$ sudo chmod 777 /home/EVERYONE
dbda@iacsd:~$ ls -l /home/EVERYONE
total 0
dbda@iacsd:~$ ls -l /home
total 8
drwxr-x--- 14 dbda dbda 4096 Mar 11 18:41 dbda
drwxrwxrwx  2 root root 4096 Mar 11 19:12 EVERYONE
dbda@iacsd:~$
```

b. Create a file with every user (whoami >> username.txt)

```
apple@iacsd:~$ whoami > apple.txt
apple@iacsd:~$ cat apple.txt
apple
apple@iacsd:~$
apple@iacsd:~$
```

```
banana@iacsd:~$ whoami > banana.txt
banana@iacsd:~$ cat banana.txt
banana
banana@iacsd:~$
```

```
cat@iacsd:~$ whoami > cat.txt
cat@iacsd:~$ cat cat.txt
cat
cat@iacsd:~$
```

```
dog@iacsd:~$ whoami > dog.txt
dog@iacsd:~$ cat dog.txt
dog
dog@iacsd:~$
```

```
elephant@iacsd:~$ whoami > elephant.txt
elephant@iacsd:~$ cat elephant
cat: elephant: No such file or directory
elephant@iacsd:~$ cat elephant.txt
elephant
elephant@iacsd:~$
```

```
fish@iacsd:~$ whoami > fish.txt
fish@iacsd:~$ cat fish.txt
fish
fish@iacsd:~$
```

```
gun@iacsd:~$ whoami > gun.txt
gun@iacsd:~$ cat gun.txt
gun
gun@iacsd:~$
```

```
horse@iacsd:~$ whoami > horse.txt
horse@iacsd:~$ cat horse.txt
horse
horse@iacsd:~$
```

```
icecream@iacsd:~$ whoami > icecream.txt
icecream@iacsd:~$ cat icecream.txt
icecream
icecream@iacsd:~$
```

```
jelly@iacsd:~$ whoami > jelly.txt
jelly@iacsd:~$ cat jelly.txt
jelly
jelly@iacsd:~$
```

```
kitkat@iacsd:~$ whoami > kitkat.txt
kitkat@iacsd:~$ cat kitkat.txt
kitkat
kitkat@iacsd:~$
```

```
lolipop@iacsd:~$ whoami > lolipop.txt
lolipop@iacsd:~$ cat lolipop.txt
lolipop
lolipop@iacsd:~$
```

```
marshmallow@iacsd:~$ whoami > marshmallow.txt
marshmallow@iacsd:~$ cat marshmallow.txt
marshmallow
marshmallow@iacsd:~$
```

```
new@iacsd:~$ whoami > new.txt
new@iacsd:~$ cat new.txt
new
new@iacsd:~$
```

```
oppo@iacsd:~$ whoami > oppo.txt
oppo@iacsd:~$ cat oppo.txt
oppo
oppo@iacsd:~$
```

```
vivo@iacsd:~$ whoami > vivo.txt
vivo@iacsd:~$ cat vivo.txt
vivo
vivo@iacsd:~$
```

```
china@iacsd:~$ whoami > china.txt
china@iacsd:~$ cat china.txt
china
china@iacsd:~$
```

oppo -> primary group change -> one

```
dbda@iacsd:~$ sudo addgroup one
[sudo] password for dbda:
```

```
Adding group `one' (GID 1005) ...
Done.
dbda@iacsd:~$
```

```
dbda@iacsd:~$ sudo -s
root@iacsd:/home/dbda# usermod -g one oppo
root@iacsd:/home/dbda# cat /etc/passwd
```

```
new:x:1014:1004::/home/new:/bin/sh
oppo:x:1015:1005::/home/oppo:/bin/sh
vivo:x:1016:1004::/home/vivo:/bin/sh
china:x:1017:1004::/home/china:/bin/sh
root@iacsd:/home/dbda#
```

vivo -> primary group change -> two

```
root@iacsd:/home/dbda# exit
exit
dbda@iacsd:~$ sudo addgroup two
Adding group `two' (GID 1006) ...
Done.
dbda@iacsd:~$ sudo -s
root@iacsd:/home/dbda# usermod -g two vivo
root@iacsd:/home/dbda# cat /etc/passwd
```

```
new:x:1014:1004::/home/new:/bin/sh
oppo:x:1015:1005::/home/oppo:/bin/sh
vivo:x:1016:1006::/home/vivo:/bin/sh
china:x:1017:1004::/home/china:/bin/sh
root@iacsd:/home/dbda#
```

jelly,kitkat, lolipop, marshmallow -> add these users to sudo group

```
root@iacsd:/home/dbda# usermod -g sudo jelly
root@iacsd:/home/dbda# usermod -g sudo kitkat
root@iacsd:/home/dbda# usermod -g sudo lolipop
root@iacsd:/home/dbda# usermod -g sudo marshmallow
root@iacsd:/home/dbda# cat /etc/passwd
```

```
horse:x:1008:1002::/home/horse:/bin/sh
icecream:x:1009:1002::/home/icecream:/bin/sh
jelly:x:1010:27::/home/jelly:/bin/sh
kitkat:x:1011:27::/home/kitkat:/bin/sh
lolipop:x:1012:27::/home/lolipop:/bin/sh
marshmallow:x:1013:27::/home/marshmallow:/bin/sh
new:x:1014:1004::/home/new:/bin/sh
oppo:x:1015:1005::/home/oppo:/bin/sh
vivo:x:1016:1006::/home/vivo:/bin/sh
china:x:1017:1004::/home/china:/bin/sh
root@iacsd:/home/dbda#
```

fish,gun -> add these users to one group as well (secondary group)

```
root@iacsd:/home/dbda# usermod -aG one fish
root@iacsd:/home/dbda# usermod -aG one gun
root@iacsd:/home/dbda#
```

```
green:x:1003:
orange:x:1004:
one:x:1005:fish,gun
two:x:1006:
root@iacsd:/home/dbda#
```

Q.2 Create Numbers.txt which will contain numbers from 1-50

```
dbda@iacsd:~$ nano Numbers.txt
```

a. display first 15 numbers

```
dbda@iacsd:~$ head -n 15 Numbers.txt
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
```

b. display last 10 numbers

```
dbda@iacsd:~$ tail -n 10 Numbers.txt
```

```
41  
42  
43  
44  
45  
46  
47  
48  
49  
50
```

c. display numbers in reverse order.

```
dbda@iacsd:~$ tac Numbers.txt
```

```
50  
49  
48  
47  
46  
45
```

d. display numbers which includes 4 in it

```
dbda@iacsd:~$ cat Numbers.txt | grep '4'
```

```
4  
14  
24  
34  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49
```


Q.3 create Student.txt file as given below

Rollno:name:marks

1111:Ram:87

2222:Sham:69

3333:Teena:58

4444:Priya:74

a. Display only details of sham

```
dbda@iacsd:~$ nano Student.txt
dbda@iacsd:~$ cat Student.txt
Rollno:name:marks
1111:Ram:87
2222:Sham:87
3333:Teena:58
4444:Priya:74
dbda@iacsd:~$ cat Student.txt | grep 'Sham'
2222:Sham:87
dbda@iacsd:~$
```

b. Display only marks of Priya

```
dbda@iacsd:~$ cat Student.txt | grep 'Priya' | cut -d':' -f3
74
dbda@iacsd:~$
```

c. Display total number of lines in student.txt

```
dbda@iacsd:~$ wc -l Student.txt
5 Student.txt
```