

**SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE**  
**DEPARTMENT OF COMPUTER ENGINEERING**

**Subject: SOL**

**Session Aug-Dec 2021**

**Lab Assignments 4**

**File Permission**

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**Q1. List items in your directory. List directory and files in your directory. Check whether your file have read, write and execute permission or not. Assign rwx permission to your file.**

Ans.

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ cat mradulShells.cript.sh
#!/bin/bash
echo "-----ls command-----"
ls >> /dev/pts/0
echo "-----ls -l command-----"
ls -l >> /dev/pts/0
echo -n "Enter file name : "
read file

# check execute permission
[ -x $file ] && X="Execute = Y" || X="Execute = N"

# check write permission
[ -w $file ] && W="Write = Y" || W="Write = N"

# check read permission
[ -r $file ] && R="Read = Y" || R="Read = N"

echo "-----$file permissions-----"
echo "$W"
echo "$R"
echo "$X"
chmod +rwx ./ $fileName >> /dev/pts/0
```

```

mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ bash ./mradulShellScript.sh
-----ls command-----
mradulShellScript.sh test1 test1Dir test2 test2Dir test3 test3Dir
-----ls -l command-----
total 16
-rw-rw-r-- 1 mradul mradul 496 Oct 1 16:20 mradulShellScript.sh
----- 1 mradul mradul 0 Oct 1 11:45 test1
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test1Dir
-r--r--r-- 1 mradul mradul 0 Oct 1 11:45 test2
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test2Dir
-rw-rw-r-- 1 mradul mradul 0 Oct 1 11:45 test3
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test3Dir
Enter file name : test3Dir
-----test3Dir permissions-----
Write = Y
Read = Y
Execute = Y

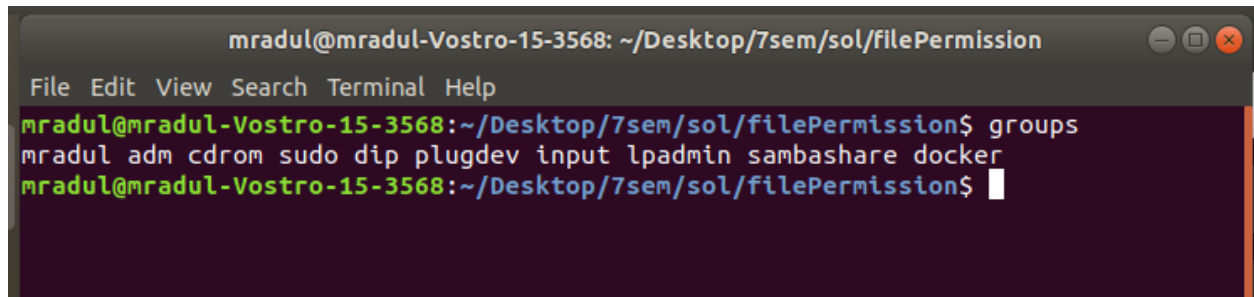
```

```

mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ bash ./mradulShellScript.sh
-----ls command-----
mradulShellScript.sh test1 test1Dir test2 test2Dir test3 test3Dir
-----ls -l command-----
total 16
-rw-rw-r-- 1 mradul mradul 496 Oct 1 16:20 mradulShellScript.sh
----- 1 mradul mradul 0 Oct 1 11:45 test1
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test1Dir
-r--r--r-- 1 mradul mradul 0 Oct 1 11:45 test2
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test2Dir
-rw-rw-r-- 1 mradul mradul 0 Oct 1 11:45 test3
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test3Dir
Enter file name : test3
-----test3 permissions-----
Write = Y
Read = Y
Execute = N
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$

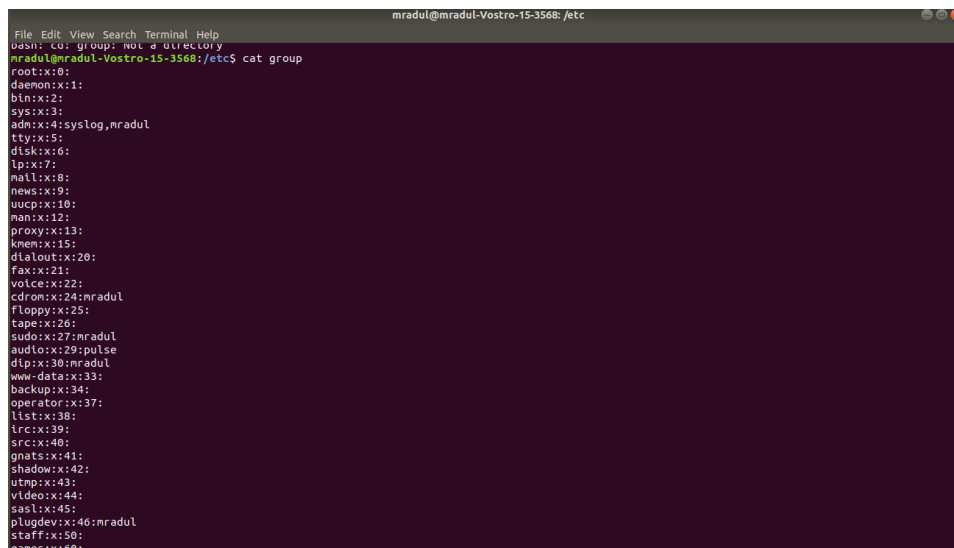
```

## 1. groups



```
mradul@mradul-Vostro-15-3568: ~/Desktop/7sem/sol/filePermission
File Edit View Search Terminal Help
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ groups
mradul adm cdrom sudo dip plugdev input lpadmin sambashare docker
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```

## 2. cat /etc/group



```
mradul@mradul-Vostro-15-3568: /etc
File Edit View Search Terminal Help
basin: cd: group: not a directory
mradul@mradul-Vostro-15-3568:/etc$ cat group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,mradul
tty:x:5:
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:
proxy:x:13:
knet:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:mradul
floppy:x:25:
tape:x:26:
sudo:x:27:mradul
audio:x:29:pulse
dip:x:30:mradul
www-data:x:33:
backup:x:34:
operator:x:37:
list:x:38:
irc:x:39:
src:x:40:
gnats:x:41:
shadow:x:42:
utmp:x:43:
video:x:44:
sasl:x:45:
plugdev:x:46:mradul
staff:x:50:
games:x:60:
```

```
mradul@mradul-Vostro-15-3568: /etc
File Edit View Search Terminal Help
avahi-autoipd:x:112:
bluetooth:x:113:
Srtkit:x:114:
Sssh:x:115:
slpadmin:x:116:mradul
whoopsie:x:117:
scanner:x:118:saned
saned:x:119:
pulse:x:120:
pulse-access:x:121:
avahi:x:122:
colord:x:123:
hgeoclue:x:124:
gdm:x:125:
mradul:x:1000:
sambashare:x:126:mradul
mysql:x:127:
postgres:x:128:
docker:x:999:mradul
xftp:x:129:
mradulrathore:x:1001:
swireshark:x:130:
tvboxusers:x:131:
mradul@mradul-Vostro-15-3568:/etc$ cat /etc/groups
```

### 3. Chmod

```
drwxrwxr-x 2 mradul mradul 4096 Oct  1 11:45 test301
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l test2
-rw-rw-r-- 1 mradul mradul 0 Oct  1 11:45 test2
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ chmod 727 test2
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l test2
-rwx-w-rwx 1 mradul mradul 0 Oct  1 11:45 test2
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l test2
-rwx-w-rwx 1 mradul mradul 0 Oct  1 11:45 test2
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ chmod +r test2
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l test2
-rwxrw-rwx 1 mradul mradul 0 Oct  1 11:45 test2
```

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l test1
-rw-rw-r-- 1 mradul mradul 0 Oct  1 11:45 test1
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ chmod o=wx test
1
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l test1
-rw-rw--wx 1 mradul mradul 0 Oct  1 11:45 test1
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```

```

mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l test1
-rw-rw--wx 1 mradul mradul 0 Oct  1 11:45 test1
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ chmod 000 test1
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l test1
----- 1 mradul mradul 0 Oct  1 11:45 test1
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$

```

### 3.1 Sticky Bit

```

mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -ld test1Dir/
drwxrwxr-x 2 mradul mradul 4096 Oct  1 11:45 test1Dir/
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ chmod +t test1Dir/
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -ld test1Dir/
drwxrwxr-t 2 mradul mradul 4096 Oct  1 11:45 test1Dir/
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ chmod -t test1Dir/
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -ld test1Dir/
drwxrwxr-x 2 mradul mradul 4096 Oct  1 11:45 test1Dir/
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$

```

```

mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ sudo cat /etc/gshadow
root:*::
daemon:*::
bin:*::
sys:*::
adm:*::syslog,mradul
tty:*::
disk:*::
lp:*::
mail:*::
news:*::
uucp:*::
man:*::
proxy:*::
kmem:*::
dialout:*::
fax:*::
voice:*::
cdrom:*::mradul
floppy:*::
tape:*::
sudo:*::mradul

```

#### 4. Chown

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l
total 16
-rw-rw-r-- 1 mradul mradul 496 Oct 1 16:20 mradulShellScript.sh
----- 1 mradul mradul 0 Oct 1 11:45 test1
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test1Dir
-r--r--rw- 1 mradul mradul 0 Oct 1 11:45 test2
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test2Dir
-rw-rw-r-- 1 mradul mradul 0 Oct 1 11:45 test3
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test3Dir
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ chown mraduljain
test1
chown: changing ownership of 'test1': Operation not permitted
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ sudo chown mradu
ljain test1
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l
total 16
-rw-rw-r-- 1 mradul mradul 496 Oct 1 16:20 mradulShellScript.sh
----- 1 mraduljain mradul 0 Oct 1 11:45 test1
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test1Dir
-r--r--rw- 1 mradul mradul 0 Oct 1 11:45 test2
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test2Dir
-rw-rw-r-- 1 mradul mradul 0 Oct 1 11:45 test3
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test3Dir
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```

#### 5. chgrp

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l
total 16
-rw-rw-r-- 1 mradul mradul 496 Oct 1 16:20 mradulShellScript.sh
----- 1 mraduljain mradul 0 Oct 1 11:45 test1
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test1Dir
-r--r--rw- 1 mradul mradul 0 Oct 1 11:45 test2
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test2Dir
-rw-rw-r-- 1 mradul mradul 0 Oct 1 11:45 test3
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test3Dir
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ groups
mradul adm cdrom sudo dip plugdev input lpadmin sambashare docker
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ sudo chgrp adm
test2
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ ls -l
total 16
-rw-rw-r-- 1 mradul mradul 496 Oct 1 16:20 mradulShellScript.sh
----- 1 mraduljain mradul 0 Oct 1 11:45 test1
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test1Dir
-r--r--rw- 1 mradul adm 0 Oct 1 11:45 test2
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test2Dir
-rw-rw-r-- 1 mradul mradul 0 Oct 1 11:45 test3
drwxrwxr-x 2 mradul mradul 4096 Oct 1 11:45 test3Dir
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```

## 6. newgrp

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ groups
mradul adm cdrom sudo dip plugdev input lpadmin sambashare docker
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ newgrp dip
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ groups
dip adm cdrom sudo plugdev input lpadmin sambashare docker mradul
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ newgrp mradul
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ groups
mradul adm cdrom sudo dip plugdev input lpadmin sambashare docker
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```

## 7. groups

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ groups mradulrathore
mradulrathore : mradulrathore
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ groups mradul
mradul : mradul adm cdrom sudo dip plugdev input lpadmin sambashare docker
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```

## 8. users

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ users
mradul
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ locate eclipse
eclipse/current
```



## 9. Locate

```
File Edit View Search Terminal Help
/usr/local/n/versions/node/14.17.1/lib/node_modules/npm/node_modules/node-gyp/gyp
p/pylib/gyp/generator/eclipse.py
/usr/local/n/versions/node/16.3.0/lib/node_modules/npm/node_modules/node-gyp/gyp
/pylib/gyp/generator/eclipse.py
/usr/share/npm/node_modules/node-gyp/gyp/pylib/gyp/generator/eclipse.py
/var/cache/apparmor/snap-update-ns.eclipse
/var/cache/apparmor/snap.eclipse.eclipse
/var/lib/app-info/icons/ubuntu-bionic-universe/48x48/redeclipse_redeclipse.png
/var/lib/app-info/icons/ubuntu-bionic-universe/64x64/eclipse-platform_eclipse.pn
g
/var/lib/app-info/icons/ubuntu-bionic-universe/64x64/redeclipse_redeclipse.png
/var/lib/snapd/apparmor/profiles/snap-update-ns.eclipse
/var/lib/snapd/apparmor/profiles/snap.eclipse.eclipse
/var/lib/snapd/desktop/applications/eclipse_eclipse.desktop
/var/lib/snapd/inhibit/eclipse.lock
/var/lib/snapd/seccomp/bpf/snap.eclipse.eclipse.bin
/var/lib/snapd/seccomp/bpf/snap.eclipse.eclipse.src
/var/lib/snapd/sequence/eclipse.json
/var/lib/snapd/snaps/eclipse_48.snap
/var/snap/eclipse
/var/snap/eclipse/48
/var/snap/eclipse/common
/var/snap/eclipse/current
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```

## 10. which

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ users
mradul
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ which go
/usr/local/go/bin/go
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```

## 11. find

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$ find /home/mradu
l/Desktop -name 7sem
/home/mradul/Desktop/7sem
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```



## 12. History

```
1985 groups
1986 cat /etc/groups
1987 ls /etc/groups
1988 cd /etc/groups
1989 cd /etc/
1990 ls
1991 cd group
1992 cat group
1993 cat /Desktop/
1994 cd /Desktop
1995 cd
1996 cat /Desktop/
1997 cd /Desktop/
1998 groups
1999 groups sudo
2000 groups mradulrathore
2001 groups mradul
2002 man chown
2003 man chgrp
2004 users
2005 locate eclipse
2006 man locate
2007 which go
2008 find / -name 7sem
2009 clear
2010 users
2011 locate eclipse
2012 users
2013 locate eclipse
2014 users
2015 which go
2016 find /Desktop -name 7sem
2017 find /home/mradul/Desktop -name 7sem
2018 history
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/filePermission$
```