

## Harj 5

### Tehtävä1

```
user@AE9947-Ubuntu:~$ sudo useradd -m -s /bin/bash second
```

```
second@AE9947-Ubuntu:~$ touch first .txt
```

### Tehtävä2

```
second@AE9947-Ubuntu:~$ chmod 760 first.txt
```

```
second@AE9947-Ubuntu:~$ ls -la first.txt
```

```
-rwxrw---- 1 second second 0 Sep 27 08:20 first.txt
```

```
second@AE9947-Ubuntu:~$
```

### Tehtävä3

```
root@AE9947-Ubuntu:~# usermod -aG sudo second
root@AE9947-Ubuntu:~# su second
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

second@AE9947-Ubuntu:/root$ cd
second@AE9947-Ubuntu:~$ sudo chown root first.txt
[sudo] password for second:
second@AE9947-Ubuntu:~$ ls -la
total 24
drwxr-xr-x 2 second second 4096 Sep 27 09:17 .
drwxr-xr-x 9 root    root    4096 Sep 27 08:50 ..
-rw----- 1 second second  343 Sep 27 09:17 .bash_history
-rw-r--r-- 1 second second  220 Feb 25  2020 .bash_logout
-rw-r--r-- 1 second second 3771 Feb 25  2020 .bashrc
-rw-r--r-- 1 second second  807 Feb 25  2020 .profile
-rw-r--r-- 1 second second    0 Sep 27 09:17 .sudo_as_admin_successful
-rwxrwxrwx 1 root    second   0 Sep 27 08:50 first.txt
-rw-rw-r-- 1 second second   0 Sep 27 08:59 hard-link.txt
-rw-rw-r-- 1 second second   0 Sep 27 08:59 soft-link.txt
second@AE9947-Ubuntu:~$
```

## Tehtävä4

```
second@AE9947-Ubuntu:~$ chmod 700 first.txt
second@AE9947-Ubuntu:~$ ls -la
total 24
drwxr-xr-x 2 second second 4096 Sep 27 09:17 .
drwxr-xr-x 9 root root 4096 Sep 27 08:50 ..
-rw----- 1 second second 404 Sep 27 09:19 .bash_history
-rw-r--r-- 1 second second 220 Feb 25 2020 .bash_logout
-rw-r--r-- 1 second second 3771 Feb 25 2020 .bashrc
-rw-r--r-- 1 second second 807 Feb 25 2020 .profile
-rw-r--r-- 1 second second 0 Sep 27 09:17 .sudo_as_admin_successful
-rwx----- 1 second second 0 Sep 27 08:50 first.txt
-rw-rw-r-- 1 second second 0 Sep 27 08:59 hard-link.txt
-rw-rw-r-- 1 second second 0 Sep 27 08:59 soft-link.txt
second@AE9947-Ubuntu:~$
```

## Tehtävä5

```
second@AE9947-Ubuntu:~$ touch hard.txt
second@AE9947-Ubuntu:~$ touch soft.txt
second@AE9947-Ubuntu:~$ ln hard.txt hard-link.txt
second@AE9947-Ubuntu:~$ ln soft.txt soft-link.txt
second@AE9947-Ubuntu:~$ ls -l
total 0
-rwxrwxrwx 1 second second 0 Sep 27 08:50 first.txt
-rw-rw-r-- 2 second second 0 Sep 27 08:59 hard-link.txt
-rw-rw-r-- 2 second second 0 Sep 27 08:59 hard.txt
-rw-rw-r-- 2 second second 0 Sep 27 08:59 soft-link.txt
-rw-rw-r-- 2 second second 0 Sep 27 08:59 soft.txt
second@AE9947-Ubuntu:~$
```

Linkkien luomisen jälkeen -p optioiden jälkeinen numero muuttuu ykkösestä kakkoseksi

```
second@AE9947-Ubuntu:~$ rm hard.txt
second@AE9947-Ubuntu:~$ rm soft.txt
second@AE9947-Ubuntu:~$ ls -l
total 0
-rwxrwxrwx 1 second second 0 Sep 27 08:50 first.txt
-rw-rw-r-- 1 second second 0 Sep 27 08:59 hard-link.txt
-rw-rw-r-- 1 second second 0 Sep 27 08:59 soft-link.txt
second@AE9947-Ubuntu:~$
```

Numero muuttuu takaisin ykköseksi koska filen linkki katoaa poistaessa alkuperäisen filen

## Tehtävä6

```
second@AE9947-Ubuntu:/etc$ ls -d 1* *.conf
adduser.conf          host.conf             libaudit.conf        login.defs           mke2fs.conf         sos.conf
ca-certificates.conf landscape            libaudit.conf        logrotate.conf      multipath.conf      sysctl.conf
debconf.conf         ld.so.cache          libblockdev          logrotate.conf      nsswitch.conf       ucf.conf
deluser.conf         ld.so.conf           libnl-3              logrotate.d         overlayroot.conf    usb_modeswitch.conf
e2scrub.conf         ld.so.conf           locale.alias         lsb-release         pam.conf            xattr.conf
fuse.conf            ld.so.conf.d         locale.gen           ltrace.conf         popularity-contest.conf
gai.conf             ldap                 localtime           ltrace.conf         resolv.conf
hdparm.conf          legal                logcheck            lvm                 rsyslog.conf
second@AE9947-Ubuntu:/etc$
```

## Tehtävä7

```
root@AE9947-Ubuntu:/# tree tmp/sensors/  
tmp/sensors/  
├── s1  
│   └── temp.log  
├── s2  
│   └── temp.log  
└── s3  
    └── temp.log  
  
3 directories, 3 files  
root@AE9947-Ubuntu:/# █
```

## Tehtävä8

```
drwxrwxr-x  5 user user 4096 Sep 27 09:43 .  
drwxrwxrwt 18 root root 4096 Sep 27 09:34 ..  
drwxrwx---  2 root user 4096 Sep 27 09:35 s1  
drwxrwx---  2 root root 4096 Sep 27 09:44 s2  
drwxrwx---  2 root root 4096 Sep 27 09:44 s3  
user@AE9947-Ubuntu:/tmp/sensors$ cd s2  
bash: cd: s2: Permission denied  
user@AE9947-Ubuntu:/tmp/sensors$ █
```

## Tehtävä9

```
user@AE9947-Ubuntu:~$ sudo tree -pug /var/shares/  
/var/shares/  
├── [drwxrwx--- Mike managers] management  
│   ├── [-rw-rw---- Mike managers] list_of_employees.txt  
├── [drwxrwxr-x Nicky marketing] marketing  
│   ├── [-rw-r--r-- Mike managers] marketing_policy.txt  
│   └── [-rw-rw-r-- Nicky marketing] seminars.txt  
└── [drwxrwxr-x Jonathan projects] projects  
    ├── [-rw-rw-r-- Jonathan projects] period_1_report.txt  
    ├── [-rw-rw-r-- Jonathan projects] period_2_report.txt  
    └── [-rw-rw-r-- Jonathan projects] project_schedule.txt
```