

Unix and Linux

System Administration

Gaining Access to the root account

Three ways to gain access to root privileges

- Login as the root user
- Use the “su” command to “become” the root user
- Use the “sudo” command to execute commands as the root user
 - The first two are more dangerous and require knowing the root password. Usually not available to developers
 - “sudo” privileges need to be set up by the root user
 - The “cuadmin” account has sudo privileges

The sudo command

- Try this:

```
id
```

```
sudo id
```

Display disk usage

The `df` command shows the file system disk usage:

```
df
```

```
df -h
```

The `du` command estimates file space usage

```
du /home
```

```
du -h /home
```

Checking Hard Disk Usage

- Basic strategies used to maintain adequate free space:
 - Be vigilant against running dangerously low on free space
 - Use *df* command
 - Watch for conspicuous consumption
 - Use *du* command
 - Follow a routine schedule for “garbage” collection and removal
 - Use a combination of *find* and *rm* commands

Installing and managing software

Different tools for different distributions:

- Red Hat, Fedora, CentOS

`yum` and `rpm`

- Debian, Ubuntu and Mint

`apt-get` and `dpkg`

- Mac OS

`brew`

Often used with `sudo`

Searching for and listing software

Search repositories for editor software

```
yum search editor | more
```

Show software installed on your computer

```
yum list installed | more
```

Install software examples

Install sl

```
sudo yum install sl
```

Install vim

```
sudo yum install vim
```

Install neovim

```
sudo yum install neovim
```

Run sl

```
sl
```


Remove software

- **Red Hat, Fedora, CentOS**

```
sudo yum remove packageName
```

```
sudo yum remove sl
```

- **Debian, Ubuntu and Mint**

```
apt-get remove packageName
```

- **Mac OS**

```
brew remove packageName
```

Adding user accounts

Create an account for yourself by typing this command, but replace “username” with your actual Chapman username:

```
sudo useradd username
```

Set a password for this account by typing

```
sudo passwd username
```

Verify that the account has been added:

```
tail /etc/passwd
```

Logout of the `cuadmin` account and log back in using the new account you just created.

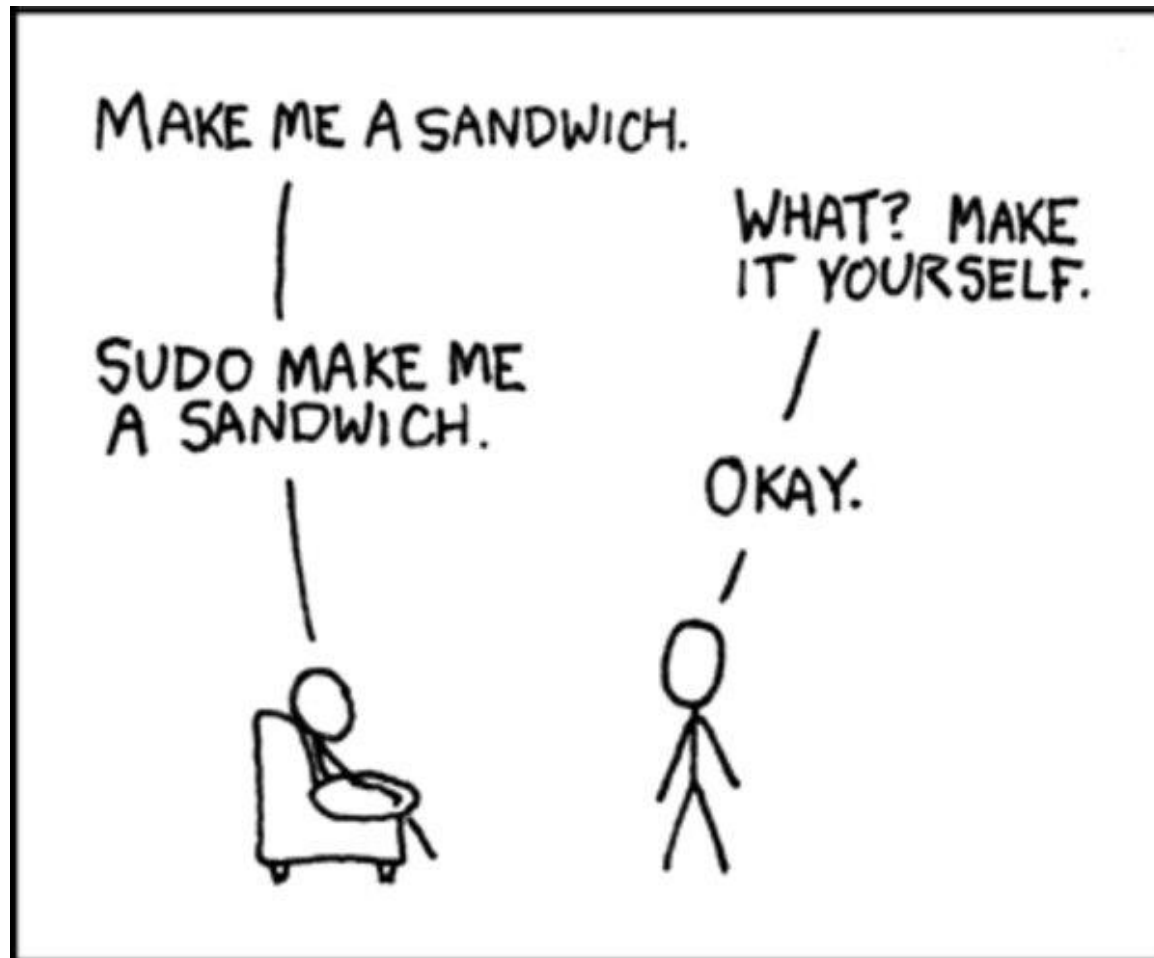
Changing accounts

- The account you created for yourself does not have sudo privileges, but the cuadmin account does.
- To continue with the examples, you will need sudo privileges
- To get them back, you can switch to the cuadmin account by typing:

```
su cuadmin
```

And typing the “Ch@pm@n” password when prompted

sudo



Remove a user account

Remove the account but not the user's home directory

```
sudo userdel username
```

Remove the account and the home directory

```
sudo userdel -r username
```