FIRST LOGIN AS THE ROOT USER

We need to change the root password that your VPS host emailed to you.

```
passwd
```

We are going to add a new user that will be given elevated privileges for when we need them. After the adduser command leave a space and type your desired username.

```
adduser
```

Type a password for the new user and the press enter at each question, then finally adding a y(yes) at the end.

The new user needs elevated privileges.

```
visudo
```

We need to prevent anyone from logging in as the root user, edit the file sshd_config, using nano and change the line **PermitRootLogin** to no

```
cd /etc/ssh

cp sshd_config sshd_config.bak

nano sshd_config
```

Let's restart ssh and logout to apply the changes we have made.

```
systemctl restart ssh
logout
```

First Login as a NON ROOT User

Login again as the user you just created and update the VPS. You will not be able to login as the root user.

```
sudo apt-get update
sudo apt-get upgrade
```

To remove unneeded packages

```
sudo apt-get autoremove
```

If certain packages are being kept back, you need to perform a dist-upgrade. You may need to reboot after the dist-upgrade command

```
sudo apt-get dist-upgrade
sudo reboot
```

After the reboot, login again.

Ensure you are in your home directory and create a directory called .ssh

```
cd
mkdir .ssh
```

Logout of your VPS

```
logout
```

MAC / LINUX STEPS TO BE COMPLETED LOCALLY

Generate the key pair - **LOCALLY** - not on your server:

```
ssh-keygen -t rsa -b 4096
```

Once keys have been generated, copy the public key to you VPS. I'm referring to the public key as rsa_id.pub. Replace that name with the name you saved your public key as.

```
scp rsa_id.pub user@ip.address:/home/username/.ssh
```

Login to your vps

Change to the .ssh directory and rename the rsa_id.pub file to authorized_keys

```
cd .ssh
ls -l
mv rsa_id.pub authorized_keys
```

To complete the following steps, please refer to the video lectures:

1. Lockdown the authorized_keys file
2. Set an immutable bit on the authorized_keys file
3. Lockdown the .ssh directory