

Week 03

ssh, grep, regexes, if, and bash scripts

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Abstract

Tonight we'll look at grep a bit more, we'll learn what a regex is, you'll see how if statements work in bash, we'll see a tidy way to write bash commands, and you'll use a cool tool called ssh.

1 ssh

Let's start with the coolest thing. We'll make a remote connection to a remote pc. At my house I have a raspberry pi running.

Now connect to the pc using ssh from the command line. And poke around a bit. Class should think it's cool

Now I want you to do the same thing. To do this you need an ssh key. To get a key you open git bash, a linux terminal or a mac terminal. Type 'ssh-keygen' and then just hit yes to everything. **Show the class how to do this using git bash** . Then:

```
mel@laptop$ cd
mel@laptop$ pwd
/home/mel/
mel@laptop$ ls -a
.. lots of stuff including a .ssh directory
mel@laptop$ cd .ssh
mel@laptop$ ls
id_rsa id_rsa.pub
mel@laptop$ cat id_rsa.pub
A LOT OF STUFF
```

Now I want you to be able to connect to my raspberry pi

I need everyone to get me his or her id_rsa.pub.

Actually have everyone email me the id_rsa.pub file.

Then I'm going to do some magic on my end and you'll be able to connect to my computer. We have a lot to cover today so go fast, get this done, I don't want this to take the whole class!

(Add the keys to the homeserver and then the students can connect to my raspberry pi)

```
Activities Terminal Sat 02:42
File Edit View Search Terminal Help
melvyn$ # on my laptop now
melvyn$ ssh -p7543 students@homeserver
Linux homeserver 4.19.57-v7+ #1244 SMP Thu Jul 4 18:45:25 BST 2019 armv7l

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the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

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permitted by applicable law.
Last login: Sat Feb 1 07:41:43 2020 from 192.168.1.228
students@homeserver:~$ cat .ssh/authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDk5Nxo6Ux1TvFKYPJT9QM1yckyprG18rX0PePePwS/jGf
PnqHZFa0wvCrUYRaZLH1k477N7558HxgBrA/qv8knf30Yb7wYXdVlpQbFWthG2gsdyRh13ztAFkSCyoiZPwyd
ESQMPWma2JzpgPqldbytVioNVmpOCdyCU9HXEjJNkGtbYgUYK9A74nW+rcsoD5GQWb13TslYOsY8sVKFFg2kA
aw76v8bcyvwSjMBWtobH0hLpj7D0kLWmXqeliReA9EFuNi9SP5aLHCzQ8KH2vrxVhlyg8ZMnnwFDQJXC5wFY
j8FOc+N9/yAQWV6ZiVCO0eS37KswIbunn/AlInPz melvyn@melvyn-ThinkPad-T410
students@homeserver:~$
```

Figure 1: I need to add your ssh key to my authorized_keys file so you can connect to my raspberry pi