Chase Odgers
2868660
EECS 678
Lab 2

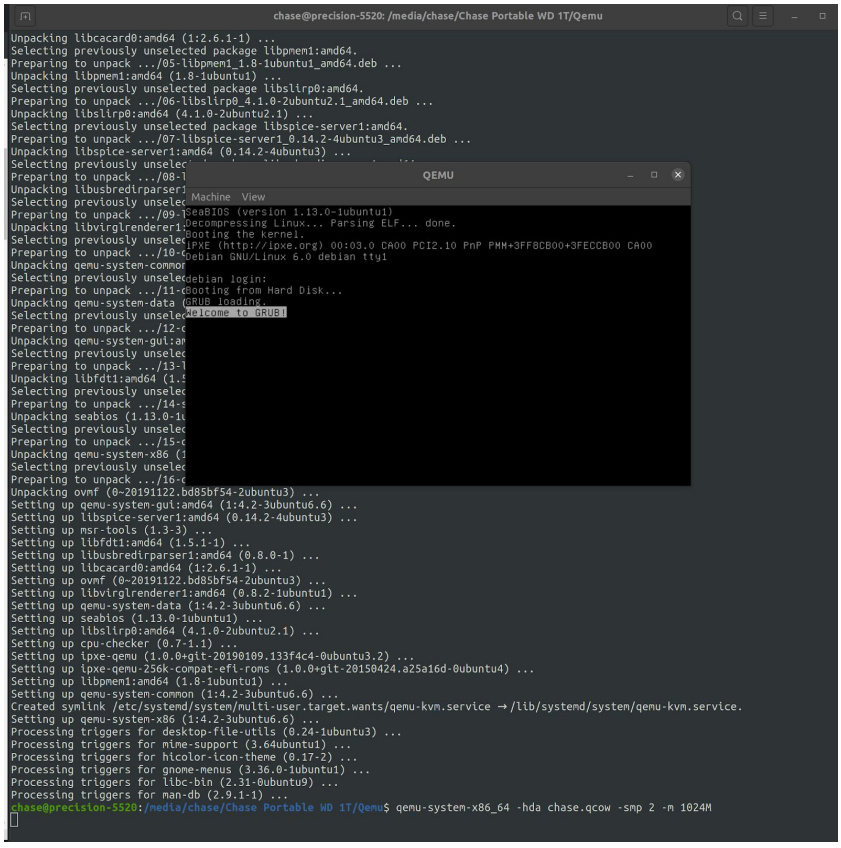
Lab 2

```
eecs678_base.qcow                                                                                    24%  535MB
 4.7MB/s   06:01 eecs678_base.qcow
 24%  540MB   4.7Meecs678_base.qcow                                                                        24%  5
41MB   4.8MB/s   0eecs678_base.qcow                                                                      25%  554M
B   4.9MB/s   05:40 eecs678_base.qcow                                                                      25%  554
MB   5.0MB/s   eecs678_base.qcow                                                                  25%  555MB   4.
9MB/s eecs678_base.qcow                                                                  25%  556MB   4.9MB/s   05:
eecs678_base.qcow                                                                  100% 2215MB   4.3MB/s   08:40
chase@precision-5520:/media/chase/Chase Portable WD 1T/Qemu$
```

1.) Copied the .qcow from the cycle server

```
Processing triggers for install-info (6.7.0.dfsg.2-5) ...
chase@precision-5520:/media/chase/Chase Portable WD 1T/Qemu$ qemu-img create -f qcow2 -b eecs678_base.qcow chase.qcow
Formatting 'chase.qcow', fmt=qcow2 size=21474836480 backing_file=eecs678_base.qcow cluster_size=65536 lazy_refcounts=off refcount_bits
=16
chase@precision-5520:/media/chase/Chase Portable WD 1T/Qemu$
```

2.) Created a differential image named chase.qcow



3.) Booted into new image

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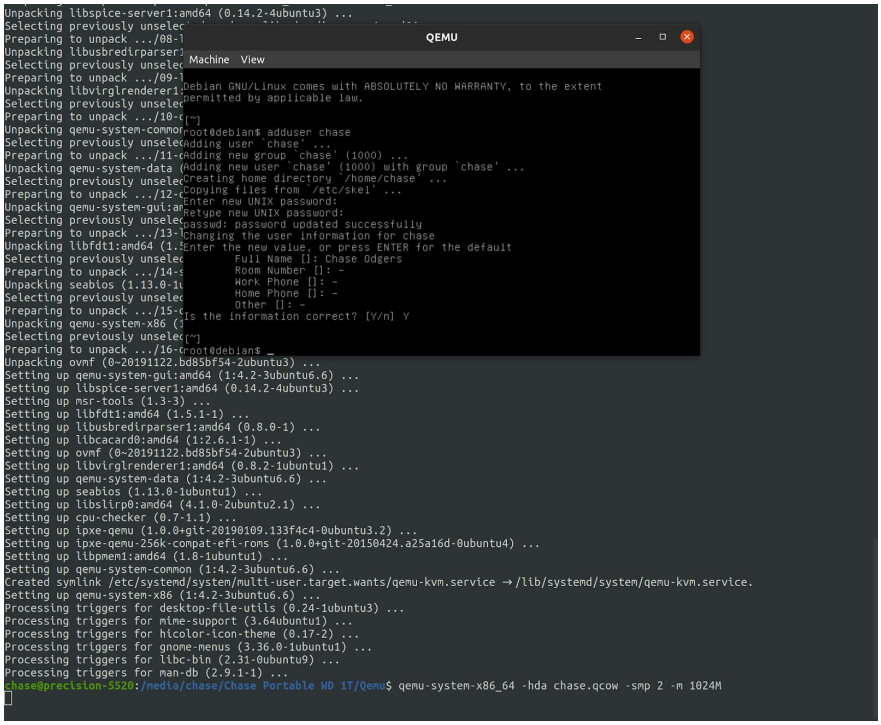


4.) Added a new user named Chase

5.) Added user to the sudoers file

```
[~]
root@debian$ usermod -a -G sudo chase

[~]
root@debian$ mkdir /home/chase/kernel

[~]
root@debian$ mv ~/linux-2.6.32.60/ /home/chase/kernel/

[~]
root@debian$ chown -R chase:chase /home/chase/kernel/

[~]
root@debian$ apt-get install sudo_
```

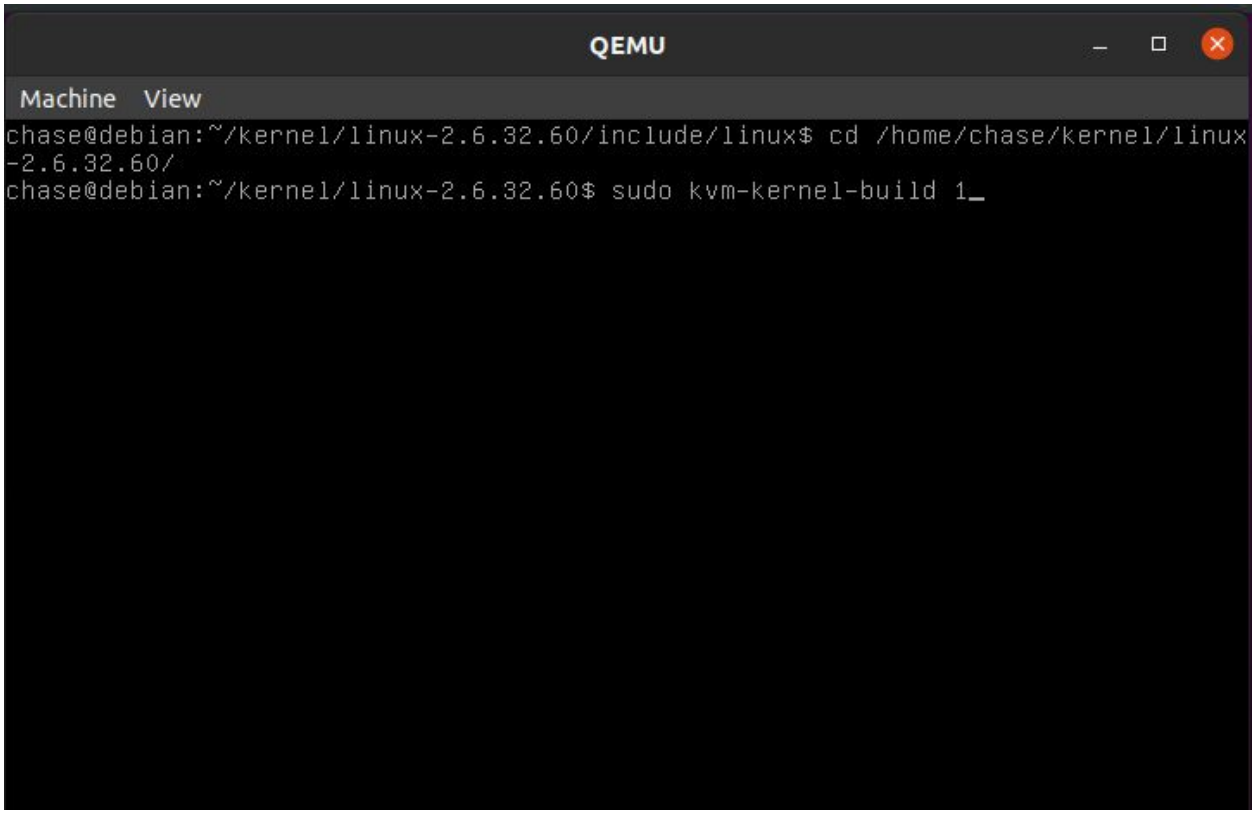
6.) Added myself to the sudo group, made a kernel folder, moved linux-2.6.32.60 to kernel folder, changed ownership of kernel folder to the user, installed sudo.

```
[~]
root@debian$ cp /root/.vimrc /home/chase

[~]
root@debian$ chown chase:chase /home/chase/.vimrc

[~]
root@debian$ su chase
chase@debian:/root$ sudo apt-get install libz-dev_
```

7.) Copied .vimrc from /root to home directory, changed ownership to myself, switched user to myself then installed libz-dev.

```
  2 rev=$1
  3 if [ -z "$rev" ]; then
  4         echo "Usage: build64 <revision>"
  5         exit 1
  6 fi
  7 make-kpkg -j 2 --rootcmd fakeroot --initrd --revision=$rev kernel_image 2>&1
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
"/usr/bin/kvm-kernel-build" 7L, 178C written
chase@debian:/root$ _
```

8.) Added “-j” and “2” to the kvm-kernel-build script for concurrency



9.) I ran the kernel build script to begin building the new kernel

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```
chase@debian:~/kernel$ ls
linux-2.6.32.60  linux-image-2.6.32.60_1_i386.deb
chase@debian:~/kernel$ su
Password:

[/home/chase/kernel]
root@debian$ ls
linux-2.6.32.60/  linux-image-2.6.32.60_1_i386.deb

[/home/chase/kernel]
root@debian$ dpkg -i linux-image-2.6.32.60_1_i386.deb
```

10.) Once the kernel was built I had a .deb file with the correct linux flavor, I was then able to install the kernel i just built.

```
linux-2.6.32.60/  linux-image-2.6.32.60_1_i386.deb

[/home/chase/kernel]
root@debian$ dpkg -i linux-image-2.6.32.60_1_i386.deb
Selecting previously deselected package linux-image-2.6.32.60.
(Reading database ... 23905 files and directories currently installed.)
Unpacking linux-image-2.6.32.60 (from linux-image-2.6.32.60_1_i386.deb) ...
Done.
Setting up linux-image-2.6.32.60 (1) ...
Running depmod.
Examining /etc/kernel/postinst.d.
run-parts: executing /etc/kernel/postinst.d/initramfs-tools 2.6.32.60 /boot/vmli
nuz-2.6.32.60
update-initramfs: Generating /boot/initrd.img-2.6.32.60
run-parts: executing /etc/kernel/postinst.d/zz-update-grub 2.6.32.60 /boot/vmlin
uz-2.6.32.60
Generating grub.cfg ...
Found linux image: /boot/vmlinuz-2.6.32.60
Found initrd image: /boot/initrd.img-2.6.32.60
Found linux image: /boot/vmlinuz-2.6.32-5-686
Found initrd image: /boot/initrd.img-2.6.32-5-686
done

[/home/chase/kernel]
root@debian$
```

11.) After the kernel was built I was left with this output letting me know everything was built correctly and I was good to initiate the reboot

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```
SeaBIOS (version 1.13.0-1ubuntu1)
Decompressing Linux... Parsing ELF... done.
Booting the kernel.
iPXE (http://ipxe.org) 00:03.0 CA00 PCI2.10 PnP PMM+BFF8CAF0+BFECCAF0 CA00
Debian GNU/Linux 6.0 debian tty1

debian login: chase
Password: om Hard Disk...
Linux debian 2.6.32.60 #2 SMP Fri Sep 25 10:11:07 CDT 2020 i686
Welcome to GRUB!
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
chase@debian:~$ uname -a
Linux debian 2.6.32.60 #2 SMP Fri Sep 25 10:11:07 CDT 2020 i686 GNU/Linux
chase@debian:~$ _
```

12.) After the reboot I ran a uname -a to give me the information about the system, confirming I successfully had installed the kernel!