## This is meant to be super simple and can just be “done” in spare time.

## You will make typos. This will lead to debugging. Which is how we learn,

This will teach how some basic bash commands work. These exercises that are super simple. You can ignore anything after #### marks which are meant to be comments.

## Step 1: Get into a Unix shell. Director nav

If you have a Mac I believe this is automagic. Or you can use a raspberry Pi, or load a virtual machine and install ubuntu. At some point, you need to access the shell.

pwd # this shows you your current directory. It stands for print working directory.

ls ## this shows you what is in your directory

ls -la ### this will show you what is in your directory, and attributes (d = directory, r = read permissions, w = write permissions x = execute permissions… for different roles)

mkdir bashtest

ls

cd bashtest

pwd #your in your directory

cd .. # shortcut to move UP a directory

pwd

cd bashtest

## Step 1: files and output

ls # nothing there, no files

touch myfile # this created a file, very useful.

ls

echo hi # this just echos, to your console (standard out)

echo hi > myfile # this redirects it to your file. The single carrot will overwrite

cat myfile # now your file has a word in it

echo hi again >> myfile ## the double carrot will append

cat myfile

echo hi overwrite > myfile ## the single carrot overwrote.

ls -la # view permissions on your file. It has read and write, no execute.

echo echo this is a command in my file > myfile ### this will put this echo command in your file

cat myfile

./myfile #try to run your file. It will error out it isn’t executable, yet

chmod 755 myfile ### this will change permissions. Chmod does that.

ls -la ### that little x makes it executable

./myfile # it should now run the file

rm myfile # remove your file

ls # validate it is gone

cd .. # go up one directory

rmdir bashtest # remove your directory

## Step 3: add a user

useradd deleteme # try to add a user

### It probably fails due to permissisions. Back in the old days people ran around with admin privileges (root), and we broke stuff regularly. So you need to run w/ admin priv, and not everyone has it. You should, if you own your machine. Sudo = super user do

sudo useradd deleteme # creates user

passwd deleteme # this should fail w/ permissions issue

sudo passwd deleteme # now put it in

groups ## this lists groups. Pick one that seems boring, I am picking games

sudo usermod deleteme -G games ### we added games group to user deleteme. Usermod modifies the user

userdel deleteme #

sudo userdel deleteme

## Step 4: add a package

We’re using ubuntu. I think a lot of examples use this in the “wild” or possibly exams, because its free. It uses apt. for package mgmt. I am going to add a random package that isn’t big.

apt-get install xpuzzles

### this should fail. You should get used to seeing these failures, they are permissions based. they kind of look the same in different constructs (above earlier failures, and python, whatever)

sudo apt-get install xpuzzles ## install package

sudo apt remove xpuzzles ## remove package