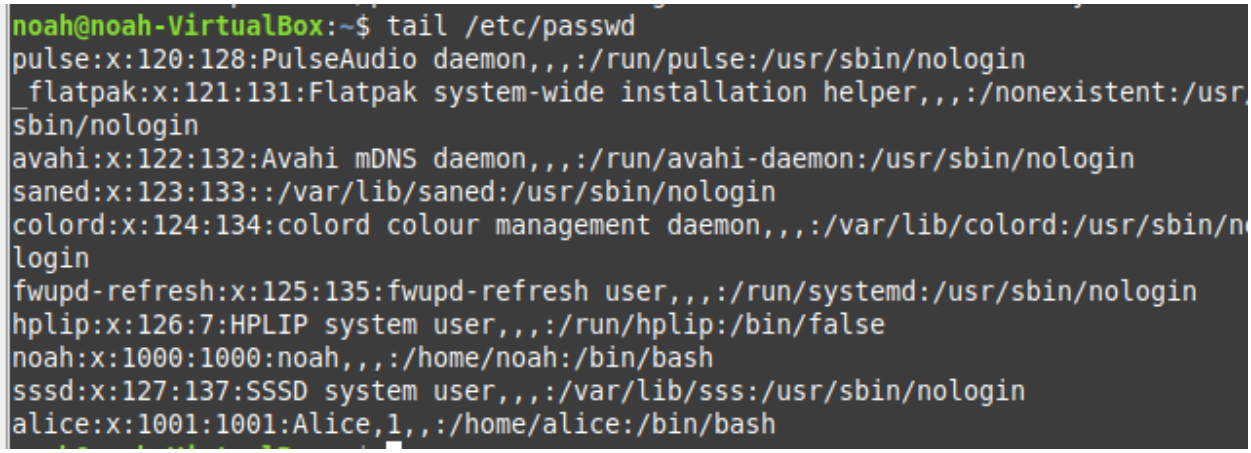
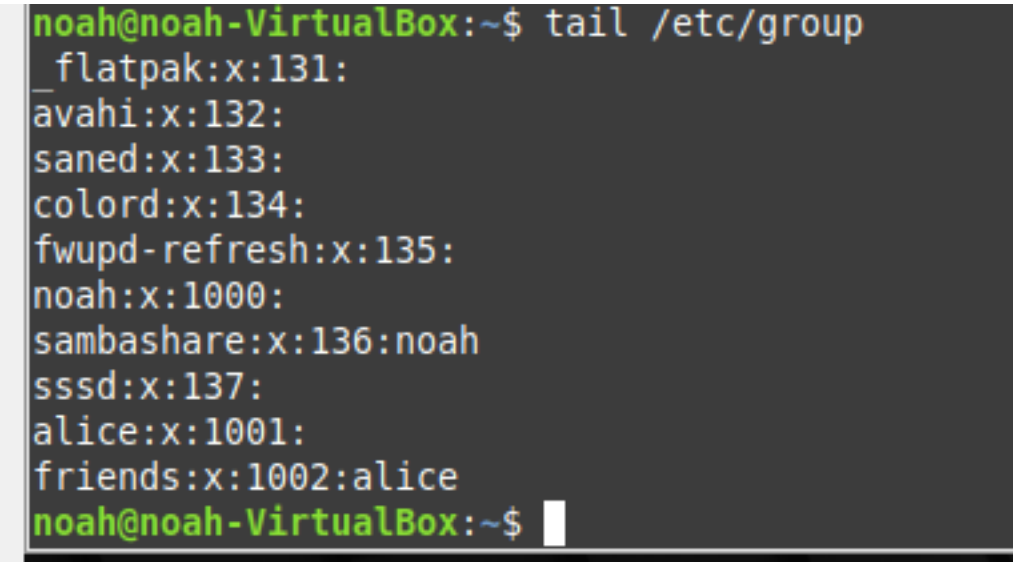
Homework 2

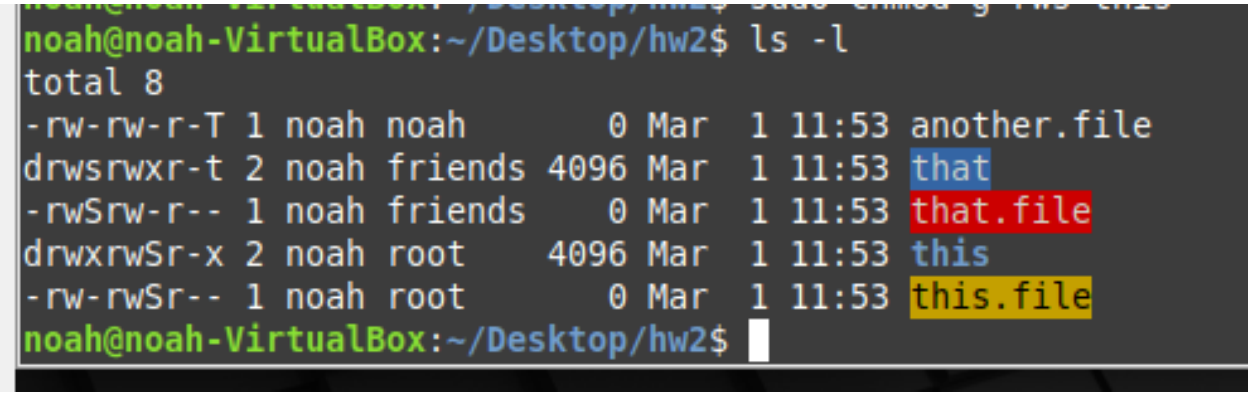
- Q1 **Virtual Box (does NOT work on mac with apple silicon)**
    - A) Picture of passwd file Tail



    - B) Picture of tail/ etc/group



    - C) Picture of file system as seen in example



- Q2 **Unix/Linux Permissions**
    - A) explain why alice can change Marks script

Since alice (and the friends group has permissions in the directory, marksdir, though not for the .sh file itself, she can change the permissions on the file so that she can change it and then put it back like nothing happened.

- B) provide commands alice would use (provide screen shots)

Alice would need to add the friends group to the .sh file (chgrp friends). Now with access to the file she can change what is needed. Then to be sneaky chgrp mark to the file when done and even if he checks it, it is only him again (though she might not be able to assign his personal group to the file).

Note: she can change permissions since the friends group has permissions in the directory, without she would not be able to.

- Q3 **5.5 from book (SQL statement**)
    - A) What is intent of statement?

It looks through a database for an ID that has the matching the forename and surname of John Smith.

- B) With assumed, What is effect?

The new forename and stuff

- C) New assumed, Effect this time?

The semicolon indicates end of the command and then it is overloading and adding the extra drop authors command to run on top.

The drop table authors— command would delete a table named authors.

- Q4 **Dynamic Queries**
    - A) given supposed, show SQL query

SELECT accounts FROM users WHERE login = ‘karen’ AND pass = ‘1q2w3e4r5t’ AND pin = ‘1234’

    - B) new supposed, what is new effect?

If the user adds OR 1 = 1 – then that would make it auto login as the SQL would try to login OR set it so that 1=1 which is always true.

- Q5 **Fire Suppression (Pros and Cons of each)**
    - A) Water Sprinkler

Pros: Widely available and used throughout many facilities. Water is also accessible with water lines being ran to almost every building in the modern world. Since most water companies flat charge you or charge per usage, this option would also be pretty in expensive.

Cons: For one thing, water is the natural enemy of most electronics.This could lead to damage of components, data loss or downtime of your systems.

    - B) Dry Chemical (ie bicarbonate)

Pros: Can extinguish fires in a time efficient manor. Unlike water, this option (and those that follow) are less detrimental to electronics.

Cons: Depending on the chemicals their could be different cons. Some may leave residues on your devices, some could be corrosive or reactive to some of the different pieces and components. If the chemical is released

as a powder it could also get in and clog up cooling solutions and fans of running pieces as well.

- C) Halon

Pros: Great fire suppressant while keeping devices safe and unlike the chemicals it doesn't leave residues or cause corrosion.

Cons: This gas is bad for the environment as well as difficult to produce due to bans in some countries because of the environmental effects. This leads to Halon being a more expensive option and with the costs to maintain and recharge keeps those costs monthly or so.

- D) Argon

Pros: Like Halon but environmentally friendlier. Still avoids residues and corrosion. Displaces oxygen so fire cannot breathe.

Cons: This is also very expensive for starting and maintenance. Also not widely available so difficult to get and maintain as well.

Fun fact: the school used to use a freon system in their server room/data center.

Pros: Effective at suppressing fires and non-conductive so safe to use with technology.

Cons: In the same way as Halon, freon is bad for the ozone and therefore the environment. Again, like Halon, it is banned in some countries and therefore difficult to get. It is also bad for people and so if it goes off, need to get it cleaned up (bad for skin and lungs).

- Q6 **6.5 from book (Consider following, what type of Malware is this)**
  - This first code segment that crashs a computer any Friday the 13th (fun fact: Friday the 13th only happens once every 200 ish

days) would be a time or logic bomb. Time or Logic bombs wait for a specific time or circumstance to occur and then execute themselves.

- Q7 **6.6 from book (Consider following, what type of Malware is this)**
    - This code that allows the let hacker login for just using that username looks like a backdoor into a login system. This could be added by a malicious person on a system no matter what.

- Q8 **6.7 from the book (Given scenario, answer questions)**
    - Threats

If the device were to have a virus or script on it, then it could run and cause any number of problems depending on what the virus was designed for. Also, if the USB had a document on it that you foolishly opened then on opening or executing, many viruses could spread that way.

- Malware propagation

If your computer is set up for auto play, then a malicious script could execute and infect. Also, as discussed above, if there was a document you were to open then opening it would activate such a virus helping it to spread.

- Avoidance

DON'T PLUG IN RANDOM USBs. Best practice.

If you were curious, you could get a spare computer and disconnect it from the network and plug it into a test computer to look at the device or scan it for viruses or the like.

Another way it to make sure that auto play is not turned on so if you do goof and plug the USB into your computer then nothing would run and you could scan the device in a less secure manor.