cron, tar, SQL, and exam

Melvyn Ian Drag

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In this lecture you'll learn cron, how to backup your linux machine, a bit about SQL (not essential, but should help you get more out of next week's lecture) and then we'll discuss the exam a bit.

1 Introduction

Plan for the evening:

- **7:00 - 7:20** *get setup*
- **7:20 - 7:30** *morale boosting review*
- **7:30 - 8:00** *backups with cron + tar*
- **8:00 - 9:00** *sqlite3 murder mystery*
- **9:00 - 9:35** *prepare for exam*
- **9:35 - 9:45** *coming up this semester*

2 Setup

Create a new $5 Debian 10 server and add your ssh key so you can get in. Then:

```
root@machine$ apt install sqlite3 # well use this later.
```

3 Review

At this point, we're 7 weeks (nearly 2 months!) into your Linux career. You may be realizing that learning Linux is something of a lifestyle - this will take lots of practice! Soon we'll start doing some real projects on our Linux machines like configuring various types of servers, but let's make sure that we know basic things like create files, move and modify files, and navigate our linux machine with ease. I expect you to understand these concepts right now:

1. create a hidden file
2. create a directory
3. delete a file
4. delete a directory
5. add some text to a file with vim.
6. what are some text editors besides vim?

should use this right margin for lecturer notes - what to draw on the board, what leading questions to ask students, relevant anecdotes, etc.

7. why are we using vim in this class and not those (answer : I like vim and it's my class. If you like nano or pico or emacs, then use that on your own time! In this class we're learning vim.
8. ls
9. ls -a
10. ls -l
11. chmod
12. How to execute a file with "./"
13. cp
14. cp -r
15. mkdir -p
16. mv
17. rm
18. rm -r
19. what's the sudo group?
20. who is root?
21. how to install software on debian with apt?

There's more to know, I just spent a minute thinking about the semester - the definitive source of what you should know is in the lecture materials from the previous six weeks.

4 Cron

Cron is used for scheduling jobs on your computer. You can modify a thing called a crontable to tell your computer to do thing at certain time(s) in the future.

View your cron table with *crontab -l*, edit the crontab with *crontab -e*. Choose vim if prompted to select which text editor to use.

Add rows of the form

m h dom moy dow command

where the above represent:

- m - minute (0-59),
- h - hour (0-23),
- dom - day of the month (1-31),
- moy - month of the year (1-12),
- dow - day of the week (0-6, 0=Sunday)
- command - bash command

5 Backups with Cron

6 SQL

7 Exam

See the