Exercise 1

已開始： 8月28日 17:00

測驗說明

問題 1

100 分數

The goal of this exercise is to get you familiar with the terminal (command line), which is a key part of Linux. This includes so-called Unix commands, which are common commands understood by many terminal programs across operating systems. Next lecture you will get to hear more about Unix, which is Linux evolved from. You will also run a git command and use a shell script, which are also common practice in the Linux world.

Let's start by getting a terminal program up and running:

- Get access to a terminal emulator
  - Windows - Use the terminal in WSL (Windows Subsystem for Linux), install mobaXterm (https://mobaxterm.mobatek.net), or use some other terminal emulator
  - Mac - Use the built-in terminal
  - Linux - Use the built-in terminal
- Enter the text **pwd** into the prompt of the terminal and hit enter
  - This is how you run a Unix command
  - pwd is our Unix command in this case and means print working directory, i.e., determining where you are in the file system
  - It will be at your home directory, which is where documents are typically stored
- Run the command **cd ~**
  - cd - change directory
  - ~ - a shortcut for your home directory
  - Running the command pwd again will show that we changed to the home directory, i.e., we didn't go anywhere actually
- Run **mkdir gitrepos**
  - mkdir - make a directory (folder)
  - gitrepos - the argument that the command uses as the folder name
- Run **ls**
  - ls - list, i.e., list the files and folders in the current working directory
  - You should see the new gitrepos folder
- Change the current working directory to the gitrepos folder using one of the previously mentioned commands

Now let's download a Wordle game that can be played in the terminal:

- GitHub is a site known to provide an amazing amount of open-source code
- There is a fun piece of code (**link (https://gist.github.com/6a1a6a7b34a0d0abcac00b47e3d01513.git)**) that implements Wordle for the command line
- Run **git clone https://gist.github.com/6a1a6a7b34a0d0abcac00b47e3d01513.git**
  - git - a command to run the git version control system, which manages code (including code changes)
  - clone - an argument telling git to download the code from the final argument (which is a link to code on GitHub)
- Run a previously mentioned Unix command to check that there is now a folder in the gitrepos folder
- Run another command to change into that new directory (which was downloaded by the git command previously)
- Run another command to show what files are in the downloaded directory
- You should see two - one ends in .md (Markdown; a format for text files) and one ends in .sh (shell; shell scripts can be run by the terminal)
  - In general (not just for shell scripts), the shell interprets and runs commands given in the terminal
- We want to run the shell script but it is not currently marked as executable, so we need to do something to make it runnable
- Run **man chmod**
  - man - manual, provides info about Unix commands
  - chmod - a Unix command that changes file properties (e.g., executability); However, in this context the chmod command is being passed as an argument for the man command, which means that we will be presented with manual information about the chmod command
  - Hit the q key to exit the manual once you've read a few lines of the text
- Run **ls -al**
  - -al is an argument that tells list to print things in more of a list fashion (l) and to show all (a) files/folders [some will be hidden if this argument is excluded]
  - Notice that there is something like -rw-r--r-- next to wordle.sh
    - This string indicates that some users can read (r) and write (w), but there is no x (execution)
- Run **chmod +x Wordle.sh**
  - The +x argument tells chmod to make Wordle.sh e**x**ecutable
  - Try **ls -al** again and notice that we now have something like -rwxr-xr-x next to wordle.sh
    - The x's are showing that users can now execute the program
- Since it is now executable, let's do it - run **./wordle.sh**
  - How to play: https://www.nytimes.com/games/wordle/index.html

- Try a round or two for fun!

We can now run Wordle, but we want to be able to easily do it wherever we want in the file system, just like how we can type pwd anytime and it will tell us where we are; Let's make this happen for Wordle:

- Run **echo $PATH**
  - echo - print something to the terminal
  - $PATH - an "environmental variable" in the shell, with the name PATH
  - The PATH variable contains the directories that the shell looks at when trying to execute a command like **matlab** - it needs to find the matlab executable in one of these directories
  - We need to add the directory we downloaded to this variable so that we can run Wordle from anywhere in the file system easily
- Let's go ahead and rename the folder containing wordle.sh to something simpler using the next steps
- Run **cd ..**
  - This moves you up one folder, so running **ls** should show the folder downloaded by git
- Run **mv complexFolderName wordleDir** [replacing complexFolderName with that annoying folder name]
  - mv - move command, which can be used to rename folders if done in the way above
  - Try ls now, the folder should have been renamed to wordleDir
  - cd to wordleDir
  - Run pwd
- Run **export PATH=$PATH:/Users/joe/git/wordleDir** [replacing /Users/joe/git/worldDir with whatever the last pwd command gave you]
  - export changes variables
  - In this case we are adding our new folder to the existing PATH variable
- Change back to the home directory: run **cd ~**
- Run **pwd** to verify that you are home
- Run **wordle.sh**
  - You should be able to play the game anywhere in the file system now just by running this command - cool!

You have completed the in-class exercise. Submit a screenshot of the last two major bullet points - specifically, the terminal output of pwd followed by wordle.sh output, both in one screenshot, with your username in your terminal visible.

上傳 選擇檔案

測驗保存於 16:01

提交測驗