

Name _____

Computer login _____

Computer System Internals – week 8 Linux test

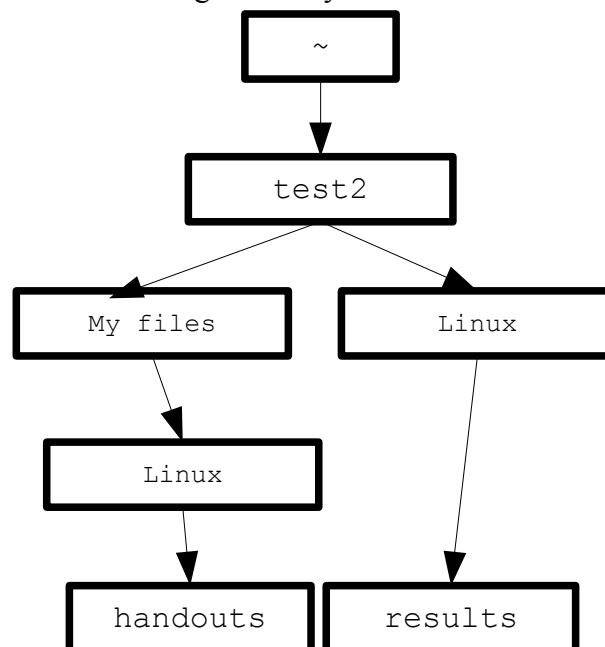
Tuesday 18th November 2014. You have 50 minutes.

This week we are having a test to see how people have managed with the material so far. Some of this repeats what you did in test 1, but this time you get marks for it.

You will be allowed to bring into the test two sides of A4 paper (one sheet double-sided or two sheets single-sided) or one screen-full of electronic material, containing whatever notes you think are useful (selecting, presenting and refining the material on that sheet is an important part of the learning in the Linux part of the module). You will be allowed to refer to `man` pages or `info` pages during the test.

Everything in the test must be done with a command line. You are not allowed to use the graphical user interface (e.g. nautilus) for anything other than observing. You are not allowed to use the network to access information on other computers.

Task 1 (25 marks): Create the following hierarchy of directories/subdirectories



Use `vi` to make a file called `binary.txt` inside the `handouts` directory. The content of the file should include the 8-bit binary for the number 42.

Use `nano` to make a file called `exams.txt` inside the `My files` directory. The content of the file should include a list of the exams you have to do in January.

Using absolute filenames (ones that start with a `/`), copy the `binary.txt` file into the `results` directory.

Using relative filenames (ones that *don't* start with a `/`), move the `exams.txt` file into the `handouts` directory.

Tidy up what you have made, by moving something to make the `results` and `handouts` directories be subdirectories of the *same* `Linux` directory (I don't mind which one) and by deleting the `Linux` directory you are no longer using.

Task 2 (25 marks):

Download a list of “University world rankings”, containing a rank, a score and a name and a country

```
wget http://www.firstyearmatters.info/uni.txt
```

You can now apply your regular expressions to the `uni.txt` file. Look carefully at this file to make sure you understand it's format (and that you downloaded it correctly)

For each of the problems below, you can use the box to write an English description of what your regular expression is looking for, and then use Ubuntu to develop the actual regular expression. Having both versions of the answer will help me to debug problems, and will allow me to give you some credit if you are in the right direction but are not able to get a working regular expression.

Marking scheme for Task 2 (questions out of 5) Make sure you have a go at all the questions.

- 0 means “No attempt”
- 1 means “I can tell what question you are trying to answer”
- 2 means “I can see what you are trying to do”
- 3 means “A reasonable approach that shows you're on the right lines”.
- 4 means “Does (or could) match a couple of lines too many or too few, but nearly there”
- 5 means “Perfect (or close enough)”

2.1: Find all university names starting with “University of” something.

(for a bonus mark, is it more common to be listed as “University of something” or “something University”)

2.2: Find all university names ending with two vowels (you can ignore accented vowels)

2.3: Find the universities whose score is 70 or more

2.4: Find entries where the University name is less than 10 characters long

(for a bonus mark, find only universities from the USA whose name is less than 10 characters long)

2.5: Find the six countries appearing most often in the list

Submission

All you will need to do at the end is to type “`exit`” into your terminal and log off. Exiting your terminal properly will cause your command history to be written into your home directory, so I can use my “superuser access” to access the file that contains the details of what you typed. I will be also able to see inside your home directories, to see your files and directories, and I will be able to check timestamps to ensure the work was done at the correct time.

To test if everything has worked, start a new terminal and type “`history`”. If you can see the commands you typed in then so can I. If you can't then I won't be able to either.

The next test will be on Monday 15th December