Objectives

Questions

* How can I combine existing commands to do new things?

Objectives

* Redirect a command’s output to a file.
* Process a file instead of keyboard input using redirection.
* Construct command pipelines with two or more stages.
* Explain what usually happens if a program or pipeline isn’t given any input to process.
* Explain Unix’s ‘small pieces, loosely joined’ philosophy.

Video notes

1. change directory to **data-shell** folder, type:

PS=”#”

pwd

cd Desktop/data-shell

ls

2. change directory to **molecules** folder, type:

cd molecules

ls

3. Do word count for **cubane.pdb** file, type:

wc cubane.pdb

(20 rows, 156 words, 1158 chars.)

4. Do word count for all **.pdb** files, type:

wc \*.pdb

5. Only count rows/lines for all **.pdb** files, type:

wc -l \*.pdb

6. if type wc -l, it doesn’t show anything, to get out, press ctrl & C

7. To create rows/lines for all **.pdb** files and produce a report in **lengths.txt** file, type.

wc -l \*.pdb > lengths.txt

(if thousands of files)

ls lengths.txt

cat lengths.txt

(print the file content to the screen)

8. To sort files by the file lengths, type:

sort -n lengths.txt

(-n means to sort by numerical)

9. store the sorted result in a temp file **sorted-lengths.txt**, type:

sort -n lengths.txt > sorted-lengths.txt

(it’s good to rename the sorted file)

head -n 1 sorted-lengths.txt

(only look at the first one)

10. use pipe | to do multiple steps: sort all **.pdb** files, then sort, type:

wc -l \*.pdb | sort -n

(all .pdb files will be ordered by numer of lines)

11. sort all **.pdb** files, sort, then show head of the first result, type:

wc -l \*.pdb | sort -n | head -n 1

(this gives 9 methane.pdb)

12. change directory, type:

cd ..

ls

cd north press tab

(it shows cd north-pacific-gyre/)

then type cd north-pacific-gyre/**2012** press tab, it shows cd north-pacific-gyre/2012-07-03/

13. count lines, type:

wc -l \*.txt

wc -l \*.txt | sort -n | head -n 5

(240 NENE02018B, there might be missing data)

wc -l \*.txt | sort -n | tail -n 5

(all have 300 lines)

14. find missing value files

ls \*Z.txt

(shows 2 files)

Quizzes

**Question 1**

**Graphical user interface, text, application, email

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**Question 2**

Table

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