Command codes wit h R+

Ls

Cd

cd Desktop/data-shell/

Last login: Fri Feb 5 09:33:56 on ttys000

Jamess-MacBook-Pro:~ jamespowell$ ls

Applications Movies dir

Desktop Music igv

Documents Pictures sratoolkit.2.5.4-mac64

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Library Sites

Jamess-MacBook-Pro:~ jamespowell$ ls(1)

-bash: syntax error near unexpected token `1'

Jamess-MacBook-Pro:~ jamespowell$ $ man ls

-bash: $: command not found

Jamess-MacBook-Pro:~ jamespowell$ $ man ls

-bash: $: command not found

Jamess-MacBook-Pro:~ jamespowell$ ls-f

-bash: ls-f: command not found

Jamess-MacBook-Pro:~ jamespowell$ $ man ls

-bash: $: command not found

Jamess-MacBook-Pro:~ jamespowell$ ~$ man ls

-bash: ~$: command not found

Jamess-MacBook-Pro:~ jamespowell$ :~ $ man ls

-bash: :~: command not found

Jamess-MacBook-Pro:~ jamespowell$ man ls

Jamess-MacBook-Pro:~ jamespowell$ cd data-shell

-bash: cd: data-shell: No such file or directory

Jamess-MacBook-Pro:~ jamespowell$ cd..

-bash: cd..: command not found

Jamess-MacBook-Pro:~ jamespowell$ pwd

/Users/jamespowell

Jamess-MacBook-Pro:~ jamespowell$ ls-f

-bash: ls-f: command not found

Jamess-MacBook-Pro:~ jamespowell$ ls-f-a

-bash: ls-f-a: command not found

Jamess-MacBook-Pro:~ jamespowell$ ls- f -a

-bash: ls-: command not found

Jamess-MacBook-Pro:~ jamespowell$ cd

Jamess-MacBook-Pro:~ jamespowell$ cd Desktop/data-shell/

Jamess-MacBook-Pro:data-shell jamespowell$ cd

Jamess-MacBook-Pro:~ jamespowell$ is-f

-bash: is-f: command not found

Jamess-MacBook-Pro:~ jamespowell$ cd

Jamess-MacBook-Pro:~ jamespowell$ ls

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Library Sites

Jamess-MacBook-Pro:~ jamespowell$ cd Documents/Data-shell

-bash: cd: Documents/Data-shell: No such file or directory

Jamess-MacBook-Pro:~ jamespowell$ ;ls

-bash: syntax error near unexpected token `;'

Jamess-MacBook-Pro:~ jamespowell$ ls

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Library Sites

Jamess-MacBook-Pro:~ jamespowell$ cd Desktop/data-shell/

Jamess-MacBook-Pro:data-shell jamespowell$ cd

Jamess-MacBook-Pro:~ jamespowell$ ~/Desktop/data-shell$ ls north-pacific-gyre

-bash: /Users/jamespowell/Desktop/data-shell$: No such file or directory

Jamess-MacBook-Pro:~ jamespowell$ ls

Applications Movies dir

Desktop Music igv

Documents Pictures sratoolkit.2.5.4-mac64

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Library Sites

Jamess-MacBook-Pro:~ jamespowell$ cd Desktop/data-shell/

Jamess-MacBook-Pro:data-shell jamespowell$ ls

Desktop molecules pizza.cfg

creatures north-pacific-gyre solar.pdf

data notes.txt writing

Jamess-MacBook-Pro:data-shell jamespowell$ ls north-pacific-gyre

2012-07-03

Jamess-MacBook-Pro:data-shell jamespowell$ ls north-pacific-gyre/2012-07-03/

NENE01729A.txt NENE01751B.txt NENE01971Z.txt NENE02040A.txt NENE02043B.txt

NENE01729B.txt NENE01812A.txt NENE01978A.txt NENE02040B.txt goodiff

NENE01736A.txt NENE01843A.txt NENE01978B.txt NENE02040Z.txt goostats

NENE01751A.txt NENE01843B.txt NENE02018B.txt NENE02043A.txt

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-bash: $: command not found

Jamess-MacBook-Pro:~ jamespowell$ ls-f

-bash: ls-f: command not found

Jamess-MacBook-Pro:~ jamespowell$ $ man ls

-bash: $: command not found

Jamess-MacBook-Pro:~ jamespowell$ ~$ man ls

-bash: ~$: command not found

Jamess-MacBook-Pro:~ jamespowell$ :~ $ man ls

-bash: :~: command not found

Jamess-MacBook-Pro:~ jamespowell$ man ls

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-bash: cd: data-shell: No such file or directory

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-bash: cd..: command not found

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Jamess-MacBook-Pro:~ jamespowell$ ls-f

-bash: ls-f: command not found

Jamess-MacBook-Pro:~ jamespowell$ ls-f-a

-bash: ls-f-a: command not found

Jamess-MacBook-Pro:~ jamespowell$ ls- f -a

-bash: ls-: command not found

Jamess-MacBook-Pro:~ jamespowell$ cd

Jamess-MacBook-Pro:~ jamespowell$ cd Desktop/data-shell/

Jamess-MacBook-Pro:data-shell jamespowell$ cd

Jamess-MacBook-Pro:~ jamespowell$ is-f

-bash: is-f: command not found

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Jamess-MacBook-Pro:~ jamespowell$ ls

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-bash: /Users/jamespowell/Desktop/data-shell$: No such file or directory

Jamess-MacBook-Pro:~ jamespowell$ ls

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Desktop molecules pizza.cfg

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NENE01751A.txt NENE01843B.txt NENE02018B.txt NENE02043A.txt

Jamess-MacBook-Pro:data-shell jamespowell$ mkdir thesis

Jamess-MacBook-Pro:data-shell jamespowell$ ~/Desktop/Data-shell$ ls

-bash: /Users/jamespowell/Desktop/Data-shell$: No such file or directory

Jamess-MacBook-Pro:data-shell jamespowell$ ls

Desktop north-pacific-gyre thesis

creatures notes.txt writing

data pizza.cfg

molecules solar.pdf

Jamess-MacBook-Pro:data-shell jamespowell$ cd creatures

Jamess-MacBook-Pro:creatures jamespowell$ cd .

Jamess-MacBook-Pro:creatures jamespowell$ cd ..

Jamess-MacBook-Pro:data-shell jamespowell$ cd thesis

Jamess-MacBook-Pro:thesis jamespowell$ nano draft.txt

Jamess-MacBook-Pro:thesis jamespowell$ data-shell/thesis$ ls

-bash: data-shell/thesis$: No such file or directory

Jamess-MacBook-Pro:thesis jamespowell$ nano draft.txt

Jamess-MacBook-Pro:thesis jamespowell$ ls

draft.txt

Jamess-MacBook-Pro:thesis jamespowell$ ls/ thesis

-bash: ls/: No such file or directory

Jamess-MacBook-Pro:thesis jamespowell$ cd ..

Jamess-MacBook-Pro:data-shell jamespowell$ rm thesis/draft.txt

Jamess-MacBook-Pro:data-shell jamespowell$ ls thesis

Jamess-MacBook-Pro:data-shell jamespowell$ rmdir thesis

Jamess-MacBook-Pro:data-shell jamespowell$ ls

Desktop molecules pizza.cfg

creatures north-pacific-gyre solar.pdf

data notes.txt writing

Jamess-MacBook-Pro:data-shell jamespowell$ mkdir thesis

Jamess-MacBook-Pro:data-shell jamespowell$ ls

Desktop north-pacific-gyre thesis

creatures notes.txt writing

data pizza.cfg

molecules solar.pdf

Jamess-MacBook-Pro:data-shell jamespowell$ mkdir thesis

mkdir: thesis: File exists

Jamess-MacBook-Pro:data-shell jamespowell$ nano thesis/draft.txt

Jamess-MacBook-Pro:data-shell jamespowell$ ls thesis

draft.txt

Jamess-MacBook-Pro:data-shell jamespowell$ pwd

/Users/jamespowell/Desktop/data-shell

Jamess-MacBook-Pro:data-shell jamespowell$ ls thesis

draft.txt

Jamess-MacBook-Pro:data-shell jamespowell$ mkdir thesis

mkdir: thesis: File exists

Jamess-MacBook-Pro:data-shell jamespowell$ nano draft.txt

Jamess-MacBook-Pro:data-shell jamespowell$ ls thesis

draft.txt

Jamess-MacBook-Pro:data-shell jamespowell$ mv/nano draft.txt/quotes.txt

-bash: mv/nano: No such file or directory

Jamess-MacBook-Pro:data-shell jamespowell$ mv/nano draft.txt/quotes.txt

-bash: mv/nano: No such file or directory

Jamess-MacBook-Pro:data-shell jamespowell$ ls thesis

draft.txt

Jamess-MacBook-Pro:data-shell jamespowell$ ls thesis/draf.txt thesis/quotes.txt

ls: thesis/draf.txt: No such file or directory

ls: thesis/quotes.txt: No such file or directory

Jamess-MacBook-Pro:data-shell jamespowell$ ls thesis

draft.txt

Jamess-MacBook-Pro:data-shell jamespowell$ mv draft.txt quotes.txt

Jamess-MacBook-Pro:data-shell jamespowell$

Jamess-MacBook-Pro:data-shell jamespowell$ ls

Desktop north-pacific-gyre solar.pdf

creatures notes.txt thesis

data pizza.cfg writing

molecules quotes.txt

Jamess-MacBook-Pro:data-shell jamespowell$ mv quotes.txt thesis/quotes.txt

Jamess-MacBook-Pro:data-shell jamespowell$ ls thesis

draft.txt quotes.txt

Jamess-MacBook-Pro:data-shell jamespowell$ ls

Desktop north-pacific-gyre thesis

creatures notes.txt writing

data pizza.cfg

molecules solar.pdf

Jamess-MacBook-Pro:data-shell jamespowell$ cp thesis/quotes.txt thesis/quotations.txt

Jamess-MacBook-Pro:data-shell jamespowell$ pwd

/Users/jamespowell/Desktop/data-shell

Jamess-MacBook-Pro:data-shell jamespowell$ ls-f

-bash: ls-f: command not found

Jamess-MacBook-Pro:data-shell jamespowell$ ls -F

Desktop/ north-pacific-gyre/ thesis/

creatures/ notes.txt writing/

data/ pizza.cfg

molecules/ solar.pdf

Jamess-MacBook-Pro:data-shell jamespowell$ mkdir thesis

mkdir: thesis: File exists

Jamess-MacBook-Pro:data-shell jamespowell$ ls -F

Desktop/ north-pacific-gyre/ thesis/

creatures/ notes.txt writing/

data/ pizza.cfg

molecules/ solar.pdf

Jamess-MacBook-Pro:data-shell jamespowell$ ls -F thesis

draft.txt quotations.txt quotes.txt

Jamess-MacBook-Pro:data-shell jamespowell$ cd thesis

Jamess-MacBook-Pro:thesis jamespowell$ nano draft.txt

Jamess-MacBook-Pro:thesis jamespowell$ ls

draft.txt quotations.txt quotes.txt

Jamess-MacBook-Pro:thesis jamespowell$ draft.txt

-bash: draft.txt: command not found

Jamess-MacBook-Pro:thesis jamespowell$ ls

draft.txt quotations.txt quotes.txt

Jamess-MacBook-Pro:thesis jamespowell$ rm draft.txt

Jamess-MacBook-Pro:thesis jamespowell$ ls

quotations.txt quotes.txt

Jamess-MacBook-Pro:thesis jamespowell$ pwd

/Users/jamespowell/Desktop/data-shell/thesis

Jamess-MacBook-Pro:thesis jamespowell$ /users/nelle/thesis

-bash: /users/nelle/thesis: No such file or directory

Jamess-MacBook-Pro:thesis jamespowell$ pwd

/Users/jamespowell/Desktop/data-shell/thesis

Jamess-MacBook-Pro:thesis jamespowell$ nano draft.txt

Jamess-MacBook-Pro:thesis jamespowell$ pwd

/Users/jamespowell/Desktop/data-shell/thesis

Jamess-MacBook-Pro:thesis jamespowell$ /Users/nelle/thesis

-bash: /Users/nelle/thesis: No such file or directory

Jamess-MacBook-Pro:thesis jamespowell$ pwd

/Users/jamespowell/Desktop/data-shell/thesis

Jamess-MacBook-Pro:thesis jamespowell$ ls

quotations.txt quotes.txt

Jamess-MacBook-Pro:thesis jamespowell$ mv quotes.txt ../quotes.txt

Jamess-MacBook-Pro:thesis jamespowell$ cd ..

Jamess-MacBook-Pro:data-shell jamespowell$ ls

Desktop north-pacific-gyre solar.pdf

creatures notes.txt thesis

data pizza.cfg writing

molecules quotes.txt

Jamess-MacBook-Pro:data-shell jamespowell$ man mv

Jamess-MacBook-Pro:data-shell jamespowell$ ls

Desktop north-pacific-gyre solar.pdf

creatures notes.txt thesis

data pizza.cfg writing

molecules quotes.txt

Jamess-MacBook-Pro:data-shell jamespowell$ ls molecules

cubane.pdb methane.pdb pentane.pdb

ethane.pdb octane.pdb propane.pdb

Jamess-MacBook-Pro:data-shell jamespowell$ cd molecules

Jamess-MacBook-Pro:molecules jamespowell$ wc \*.pdb

20 156 1158 cubane.pdb

12 84 622 ethane.pdb

9 57 422 methane.pdb

30 246 1828 octane.pdb

21 165 1226 pentane.pdb

15 111 825 propane.pdb

107 819 6081 total

Jamess-MacBook-Pro:molecules jamespowell$

Jamess-MacBook-Pro:molecules jamespowell$ wc -l \*.pdb >lengths.txt

Jamess-MacBook-Pro:molecules jamespowell$ ls

cubane.pdb lengths.txt octane.pdb propane.pdb

ethane.pdb methane.pdb pentane.pdb

Jamess-MacBook-Pro:molecules jamespowell$ cat lengths.txt

20 cubane.pdb

12 ethane.pdb

9 methane.pdb

30 octane.pdb

21 pentane.pdb

15 propane.pdb

107 total

Jamess-MacBook-Pro:molecules jamespowell$ sort -n lengths.txt

9 methane.pdb

12 ethane.pdb

15 propane.pdb

20 cubane.pdb

21 pentane.pdb

30 octane.pdb

107 total

Jamess-MacBook-Pro:molecules jamespowell$

Jamess-MacBook-Pro:creatures jamespowell$ for filename in basilisk.dat unicorn.dat

> do

> head -3 $filename

> done

COMMON NAME: basilisk

CLASSIFICATION: basiliscus vulgaris

UPDATED: 1745-05-02

COMMON NAME: unicorn

CLASSIFICATION: equus monoceros

UPDATED: 1738-11-24

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Lauren Schiff - PhD Student at Mount Sinai, lauren.schiff@icahn.mssm.edu  Our lab focuses on studying stem cells of the eye to better develop treatments and understand eye disease pathologies

Sergio Amaro-Filho - PhD student visitor of Albert Einstein College of Medicine, sergioafilho@gmail.com.

Martin Picard, Columbia University Medical Center, mp3484@columbia.edu

**Cheat Sheet (UNIX/Bash)**

man = show documentation for the command (use 'q' to get out of the output) (for windows users using bash use git-"command look into)

ls = list files

* -F = list files and directories differently
* -A = show all files including hidden ones (hidden ones begin with a '.')

pwd = current directory

mkdir = make directory

cd = change directory

nano = text editor

cp = copy file to new directory

mv = move file to new directory

rm = remove file (permanent delete)

rm -r = remove directory and ALL of its contents

rmdir = remove directory (permanently delete directory)

wc = word count

* -l = counts lines

Wild cards

* \* = any
* $ = one character

> = redirect (prints the output to a file)

cat = prints out the text or can also be used to put multiple files into one when combined with a >

sort = sorts content in the text

* -b, --ignore-leading-blanks
* ignore leading blanks
* -d, --dictionary-order
* consider only blanks and alphanumeric characters
* -f, --ignore-case
* fold lower case to upper case characters
* -g, --general-numeric-sort
* compare according to general numerical value
* -i, --ignore-nonprinting
* consider only printable characters
* -M, --month-sort
* compare (unknown) < `JAN' < ... < `DEC'
* -n, --numeric-sort
* compare according to string numerical value
* -r, --reverse
* reverse the result of comparisons
* Other options:
* -c, --check
* check whether input is sorted; do not sort
* -k, --key=POS1[,POS2]
* start a key at POS1, end it at POS2 (origin 1)
* -m, --merge
* merge already sorted files; do not sort
* -o, --output=FILE
* write result to FILE instead of standard output
* -s, --stable
* stabilize sort by disabling last-resort comparison

| (pipe) = joins comands (makes a workflow with the line)

head = look a the top lines (lines are numbered as negative numbers)

tail = same as head but starts from the bottom line of the file

uniq= looks for duplicated lines and produces an output with the unique lines

echo = displays/prints what the variable is

First challenge. Renaming files.

Answer: mv statstics.txt statistics.txt

Correct

mv statstics.txt statistics.txt this will rename the file. If you write cp statsics.txt statistics.txt you will make a copy of the file, renamed with the correct spelling. The original will still exist.

wc -l \* | sort -n | head -3

1. wc -l \* | sort -n | head -3

Loop challenge answer

All of the text from fructose.dat, glucose.dat and sucrose.dat would be concatenated and saved to a file called sugar.dat.

Answer: 2. Why?

Challenge is:

    for sugar in \*.dat

do

    echo $sugar

    cat $sugar > xylose.dat

done

I'll explain each line:

    for sugar in \*.dat = "considering sugar a variable to categorize all files with extension .dat"

    echo $sugar = "display in terminal window the files that are included in that variable"

    cat $sugar > xylose.dat = "concatenate whatever is written in those files named as the variable $sugar and put that text into a new file named xilose.dat

    done = is to close the for loop

install.packages("ggplot2")

install.packages("dplR")

install.packages(tidyr)

setwd("Desktop/2016-02-05-nyas-swc-r/")

gapminder <-read.csv("data/gapminder-data.csv")

getwd()

gapminder

str(gapminder)

unique(gapminder$continent)

?read.csv

library(ggplot2)

ggplot(data = gapminder,aes(x=lifeExp, y=gdpPercap,

color=continent))+

geom\_point()

tr(gapminder)

unique(gapminder$continent)

?read.csv

library(ggplot2)

ggplot(data = gapminder,aes(x=lifeExp, y=gdpPercap,

color=continent))+

geom\_point()+

theme\_classic()+

scale\_y\_log10()

ggplot(data = gapminder,aes(x=lifeExp, y=gdpPercap,

color=continent))+

geom\_point(size=0.5)+

theme\_classic(base\_size = 20)+

scale\_y\_log10()+

geom\_smooth(method = "lm", size=1,se=FALSE)

my bad, I was answering the second challenge