

Unix Commands



Jeremiah Lant, Hydrologist
USGS Kentucky Water Science Center
jlant@usgs.gov

Last meeting

- Learned some more Unix commands
 - Wildcard command; *
 - Re-direct output from a command to a file; >
 - Append the output from a command to a file; >>
 - Take output from one command and “pipe” it as input to another command; |

FYI

- Software Carpentry has updated some of there material. Continuing to use Version 4 for now.
 - <http://software-carpentry.org/lessons.html>

Today's Objective

1. **Learn** some more Unix commands

- Creating aliases and variables; **.bashrc**
- Find matching text in files; **grep**
 - **grep** (global/regular expression/print) can also match patterns using regular expressions
- Find files themselves whose names match a given pattern; **find**

• **Why?**

- Good basis for learning how to program.
- Becoming more comfortable on command line
- Becoming more efficient

Quick Demo of Some Commands

```
$ alias ls="ls -lh"
```

```
$ alias npp="/c/Program\ File\ \ (x86)/Notepad++/notepad++.exe"
```

```
$ cd jeremiah/projects/python-projects/nwispy
```

```
$ export NWISPY=/c/Users/jlant/jeremiah/projects/python-projects/nwispy
```

```
$ echo $NWISPY
```

```
$ env # NWISPY is now a variable in your environment
```

```
$ echo $PATH
```

```
$ cat .bashrc
```

```
$ grep KENTUCKY test.txt # match KENTUCKY in test.txt
```

```
$ grep KENTUCKY -n test.txt # line number
```

```
$ grep kentucky -i test.txt # case insensitive
```

```
$ grep USGS test.txt | head
```

```
$ grep 2012-07-05 test.txt
```

```
$ grep 2012-07-* test.txt
```

```
$ grep "#" test.txt # finds header
```

```
# invert match, meaning find everything but the header
```

```
$ grep "#" -v test.txt # prints too much
```

```
$ grep "#" -v test.txt | head # check that it worked
```

Quick Demo of Some Commands

\$ find meeting-5-0 # finds everything with meeting-5-0 text

find file named test.txt in meeting-5-0

\$ find meeting-5-0 -name test.txt

\$ find meeting-5-0 -name README.txt # finds README.txt

\$ find meeting-5-0 -name *.txt # finds all text files in directory

\$ find meeting-5-0 -name *dv.txt # finds all daily value files

\$ find meeting-5-0 -name 4* # finds all files that start with 4

Video – The Unix Shell



- Software Carpentry, Greg Wilson
 - The Unix Shell: Find
 - <http://software-carpentry.org/v4/shell/find.html>

Try Out Commands – page 1

make a alias for the list command that lists in long human-readable and time ordered format

\$ *answer*

create an environment variable called MYDATA for data directory in meeting-5-0

\$ *answer*

\$ echo \$MYDATA

open another shell instance.

Does \$MYDATA exist in the other shell instance? Why or why not?

What was the discharge value 1 year ago to this day in test.txt

\$ *answer*

Remove header from test.txt file and create a new file called “test_without_header.txt”

\$ *answer*

Try Out Commands – page 2

Is there a file called test2_uv.txt in the meeting-5-0 directory?

What is the path to the file from your home directory

\$ answer

From your home directory, find how many unit value files there are in the meeting-5-0 directory.

\$ answer

From your home directory, find how many total text files are there in meeting-5-0.

\$ answer

Next meeting

- Cut out columns from a data file; **cut**
- Start a mini project – build a bash script