Welcome to GNU Emacs, one component of the GNU/Linux operating system.

- Emacs Tutorial
- Emacs Guided Tour
- View Emacs Manual
- Absence of Warranty
- Copying Conditions
- Ordering Manuals

Learn basic keystroke commands
Overview of Emacs features at gnu.org
View the Emacs manual using Info
GNU Emacs comes with ABSOLUTELY NO WARRANTY
Conditions for redistributing and changing Emacs
Purchasing printed copies of manuals

To start... Open a File  Open Home Directory  Customize Startup
To quit a partially entered command, type Control-g.

This is GNU Emacs 23.2.1 (i686-pc-linux-gnu, GTK+ Version 2.24.4)
of 2011-04-04 on rothera, modified by Debian
Copyright (C) 2010 Free Software Foundation, Inc.

For information about GNU Emacs and the GNU system, type C-h C-a.
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Tuesday, September 27, 2011

/home/researchtools:
total used in directory 228 available 11917372

```
drwxr-xr-x  4 root        root  4096 2011-09-22 19:33 ..
-rw-r--r--  1 researchtools researchtools 16343 2011-09-22 11:14 8-more-emacs-and-script-files.org
-rw-------  1 researchtools researchtools   7878 2011-09-22 10:43 .bash_history
-rw-r--r--  1 researchtools researchtools  220 2011-09-22 19:33 .bash_logout
-rw-r--r--  1 researchtools researchtools  3353 2011-09-01 19:33 .bashrc
drwxr-xr-x  8 researchtools researchtools  4096 2011-09-22 10:03 .cache
drwxr-xr-x 12 researchtools researchtools  4096 2011-09-22 10:20 .config
drwx------  3 researchtools researchtools  4096 2011-09-22 11:23 .dbus
drwxr-xr-x  2 researchtools researchtools  4096 2011-09-13 11:23 Desktop
-rw-r--r--  1 researchtools researchtools   63 2011-09-22 10:03 .dmrc
drwxr-xr-x  2 researchtools researchtools  4096 2011-09-13 11:23 Documents
drwxr-xr-x  5 researchtools researchtools  4096 2011-09-22 10:03 Dropbox
drwx------ 14 researchtools researchtools  4096 2011-09-22 10:03 Downloads
drwx------  3 researchtools researchtools  4096 2011-09-22 12:09 .dropbox-dist
drwx------  3 researchtools researchtools  4096 2011-09-13 12:29 .emacs.d
-rw-------  1 researchtools researchtools   16 2011-09-13 11:23 .esd_auth
-rw-------  1 researchtools researchtools  179 2011-09-01 19:33 examples.desktop
drwxr-xr-x  2 researchtools researchtools  4096 2011-09-22 10:40 .fontconfig
-rw-------  4 researchtools researchtools  4096 2011-09-22 10:03 .gconf
-rw-------  2 researchtools researchtools  4096 2011-09-22 11:16 .gconffd
-rw-------  1 researchtools researchtools   0 2011-09-22 10:39 .gksu.lock
drwx------  6 researchtools researchtools  4096 2011-09-22 11:48 .gnome2
-drwx------  2 researchtools researchtools  4096 2011-09-13 11:48 .gnome2_private
-rw-------  1 researchtools researchtools   73 2011-09-22 10:34 .gnuplot_history
-rw-r--r--  1 researchtools researchtools  49 2011-09-22 10:30 .gnuplot-wxt
-drwx------  4 researchtools researchtools  4096 2011-09-22 10:28 .googleearth
-drwx------  1 researchtools researchtools  177 2011-09-22 10:03 .gtk-bookmarks
-dr--------------  1 researchtools researchtools   0 2011-09-22 10:03 .gvfs
-drwxr-xr-x  3 researchtools researchtools  4096 2011-09-16 05:32 hw
-rw-------  1 researchtools researchtools 1272 2011-09-22 10:03 .ICEauthority

-U:%%- ~ Top L5 (Dired by name)-----------
total used in directory 228 available 11917372

/home/researchtools:
drwxr-xr-x 4 root root 4096 2011-09-01 19:33 ..
-rw-r--r-- 1 researchtools researchtools 16343 2011-09-22 11:14 8-more-emacs-and-script-files.org
-rw------- 1 researchtools researchtools 7878 2011-09-22 10:43 .bash_history
-rw-r--r-- 1 researchtools researchtools 220 2011-09-01 19:33 .bash_logout
-rw-r--r-- 1 researchtools researchtools 3353 2011-09-01 19:33 .bashrc
drwxr-xr-x 8 researchtools researchtools 4096 2011-09-22 10:03 .cache
drwxr-xr-x 12 researchtools researchtools 4096 2011-09-22 10:20 .config
drw-x------ 3 researchtools researchtools 4096 2011-09-13 11:23 .dbus
drwxr-xr-x 2 researchtools researchtools 4096 2011-09-13 11:23 Desktop
-rw-r--r-- 1 researchtools researchtools 63 2011-09-22 10:03 .dmrc
drwxr-xr-x 2 researchtools researchtools 4096 2011-09-13 11:23 Documents
drwxr-xr-x 2 researchtools researchtools 4096 2011-09-13 11:23 Downloads
drw-x------ 3 researchtools researchtools 4096 2011-09-22 10:03 .dropbox
drw-x------ 14 researchtools researchtools 4096 2011-09-22 10:03 Dropbox
(rw------- 5 researchtools researchtools 4096 2011-09-15 12:09 .dropbox-dist
drwxr-xr-x 3 researchtools researchtools 4096 2011-09-13 12:29 .emacs.d
-rw-r--r-- 1 researchtools researchtools 16 2011-09-13 11:23 .esd_auth
-rw-r--r-- 1 researchtools researchtools 179 2011-09-01 19:33 examples.desktop
drwxr-xr-x 2 researchtools researchtools 4096 2011-09-22 10:40 .fontconfig
-rw------- 4 researchtools researchtools 4096 2011-09-22 10:03 .gconf
-rw------- 2 researchtools researchtools 4096 2011-09-22 11:16 .gconf fd
-rw-r--r-- 1 researchtools researchtools 0 2011-09-22 10:39 .gksu.lock
drwx------ 6 researchtools researchtools 4096 2011-09-13 11:48 .gnome2
-rw-r--r-- 2 researchtools researchtools 4096 2011-09-13 11:48 .gnome2_private
-rw------- 1 researchtools researchtools 73 2011-09-22 10:34 gnuplot_history
-rw-r--r-- 1 researchtools researchtools 49 2011-09-22 10:30 gnuplot-wxt
drwx------ 4 researchtools researchtools 4096 2011-09-22 10:28 .googleearth
-rw-r--r-- 1 researchtools researchtools 177 2011-09-22 10:03 gtk-bookmarks
dr-x------ 2 researchtools researchtools 0 2011-09-22 10:03 .gvfs
-dr-x------ 3 researchtools researchtools 4096 2011-09-16 05:32 hw
-rw-r--r-- 1 researchtools researchtools 1272 2011-09-22 10:03 .ICEauthority

I-search: drop
Class 8: More emacs and script files (DRAFT)

* todo
  * todo items

  - Why am I teaching these tools? http://slashgeo.org/2011/09/16/FOSS4G-2011-Brian-Timoney-GeoSpatial-One-Stop-Irene-USA
  - create homework
  - http://manpages.ubuntu.com and use the ones for 11.04
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  - finding out about software in Ubuntu
  - How to create a script
  - Getting images from the healy

* Introduction

* Getting help

:stackoverflow:

http://stackoverflow.com/questions/7431167/escaping-org-mode-example-block-inside-of-an-example-block

* Videos on Emacs
NOTE: The table has been re-ordered so that the newest items are at the top.

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Title/Notes</th>
<th>Audio/Podcast</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>2011-09-22</td>
<td>More emacs and script files [org]</td>
<td>[mp3] [m4a] [ogg]</td>
</tr>
<tr>
<td>HW</td>
<td>2011-09-20</td>
<td>Homework 2: shell and org-mode due Thurs 2011-09-22 5PM EDT [org]</td>
<td>[mp3] [m4a] [ogg]</td>
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<td>2011-09-20</td>
<td>Emacs and org-mode [org]</td>
<td>[mp3] [m4a] [ogg]</td>
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<td>2011-09-15</td>
<td>KeyPassX and Dropbox [org]</td>
<td>[mp3] [m4a] [ogg]</td>
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<tr>
<td>5.</td>
<td>2011-09-13</td>
<td>File types, Intro to Emacs, beginning scripts [org]</td>
<td>[mp3] [m4a] [ogg]</td>
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<tr>
<td>4.</td>
<td>2011-09-08</td>
<td>VMWare Ubuntu Image (Coming soon)</td>
<td>[mp3] [m4a] [ogg]</td>
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<td>3.</td>
<td>2011-09-06</td>
<td>Wiki editing, Weather Demo, Basic Command Line [org]</td>
<td>[mp3] [m4a] [ogg]</td>
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<td>2011-09-01</td>
<td>IRC, Wiki, Basic Shell [org]</td>
<td>[mp3] [m4a] [ogg]</td>
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<td>2011-09-20</td>
<td>Homework 2: shell and org-mode</td>
<td>[mp3] [m4a] [ogg]</td>
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Class 8: More emacs and script files (DRAFT)

# * todo
# * todo items

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http://stackoverflow.com/questions/7431167/escaping-org-mode-example-block-inside-of-an-example-block

* Videos on Emacs
more emacs and script files (DRAFT)


t: nil @: t :: t ^: t -: t f: t *: t <: t

\#{
| skip: d:nil todo:t pri:nil tags:not-in-toc
| nil ltoc: mouse:underline buttons:0 path:http://orgmode.org/org-info.js
| com.unh.edu/~schwehr/Classes/2011/esci895-researchtools/

---

more emacs and script files (DRAFT)

\#{
| todo
| todo items

---
# * todo items

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http://stackoverflow.com/questions/7431167/escaping-org-mode-example-block-inside-of-an-example-block

---

8-more-emacs-and-script-files.org 4% L30 (Org)

+STARTUP: showall

---

**Class 8: More emacs and script files (DRAFT)**

+TITLE: Kurt Schwehr
+AUTHOR: schwehr@ccom.unh.edu
+DATE: <2011-09-22 Thu>
+DESCRIPTION: Marine Research Data Manipulation and Practices
+KEYWORDS: emacs, org-mode
+LANGUAGE: en
+OPTIONS: H:3 num:nil toc:t \n:nil @:t ::t ^:t -:t f:t -:t *:t -=:t
+LINK_HOME: http://vislab-ccom.unh.edu/~schwehr/Classes/2011/esci895-researchtools/

---

8-more-emacs-and-script-files.org Top L1 (Org)

Quit
Class 8: More emacs and script files (DRAFT)

#* todo
#* todo items

Shapes: 00000
Rows: 00000
Score: 00000
Class 8: More emacs and script files (DRAFT)

# TITLE: Class 8: More emacs and script files (DRAFT)
# AUTHOR: Kurt Schwehr
# EMAIL: schwehr@ccom.unh.edu
# DATE: <2011-09-22 Thu>
# DESCRIPTION: Marine Research Data Manipulation and Practices
# KEYWORDS: emacs, org-mode
# LANGUAGE: en
# OPTIONS: H:3 num:nil toc:t \n:nil @:t ::t |:t ^:t -:t f:t *:t <:t
# OPTIONS: TeX:t LaTeX:nil skip:t d:nil todo:t pri:nil tags:not-in-toc
# LINK_HOME: http://vislab-ccom.unh.edu/~schwehr/Classes/2011/esci895-researchtools/

---

* todo
* todo items
```bash
/home/researchtools:
total used in directory 228 available 11917372
drwxr-xr-x  4 root       root     4096 2011-09-01 19:33 ..
-rw-r--r--  1 researchtools researchtools 16343 2011-09-22 11:14 8-more-emacs-and-script-files.org
-rw-------  1 researchtools researchtools  7878 2011-09-22 10:43 .bash_history
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drwxr-xr-x  8 researchtools researchtools  4096 2011-09-22 10:03 .cache
drwxr-xr-x 12 researchtools researchtools  4096 2011-09-22 10:20 .config
drwxs------  3 researchtools researchtools  4096 2011-09-13 11:23 .dbus
drwxr-xr-x  2 researchtools researchtools  4096 2011-09-13 11:23 Desktop
drwxr-xr-x  2 researchtools researchtools   63 2011-09-22 10:03 .dmrc
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drwxr-xr-x  2 researchtools researchtools  4096 2011-09-13 11:23 Downloads
drwxs------  3 researchtools researchtools  4096 2011-09-22 10:03 .dropbox
```

```
Possible completions are:

*Completions*
*Messages*
*GNU Emacs*
*scratch*
```

```bash
8-more-emacs-and-script-files.org
```
Class 8: More emacs and script files (DRAFT)

# * todo
# * todo items
Class 8: More emacs and script files (DRAFT)

# ++TITLE:  Class 8: More emacs and script files (DRAFT)
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# ++EMAIL: schwehr@ccom.unh.edu
# ++DATE: <2011-09-22 Thu>
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# ++LANGUAGE: en
# ++OPTIONS: H:3 num:nil toc:t \n:nil @:t |:t ^:t -:t f:t *:t <:t
# ++OPTIONS: TeX:t LaTeX:nil skip:t d:nil todo:t pri:nil tags:not-in-toc
# ++LINK_HOME: http://vislab-ccom.unh.edu/~schwehr/Classes/2011/esci895-researchtools/

* todo
* todo items
For the rest of the semester, you need to keep a log file for this class.

```bash
mkdir ~/Dropbox/logs
```

* Working with the ocean drilling projects site database

```bash
#BEGIN_SRC sh
mkdir -p class/8
cd class/8
#END_SRC
```

Today, we will use a program very similar to wget called `curl`
([curl.1 man page](http://curl.hivemind.com/)) to fetch data.
For the rest of the semester, you need to keep a log file for this class.

mkdir ~/Dropbox/logs

* Working with the ocean drilling projects site database

```sh
# BEGIN_SRC sh
mkdir -p class/8
cd class/8
# END_SRC
```

Today, we will use a program very similar to wget called `curl`
(`curl.1 man page`) to fetch data.
Today, we will use a program very similar to `wget` called `curl` (curl.1 man page) to fetch data.

```
# BEGIN_SRC sh
sudo apt-get install curl
# /esci895-researchtools/examples/holes.csv.bz2
# % Total  % Received % Xferd  Average Speed   Time    Time  Time     Time  Current
#          %       @    @     @  @     @       @       @       @     @
# 100 38953 100 38953 0 0 224k 0 --:--:--- --:--:--- --:--:--- 358k
# END_SRC
```
Today, we will use a program very similar to wget called `curl` (curl.1 man page) to fetch data.

```sh
sudo apt-get install curl
```

```
--- 8-more-emacs-and-script-files.org 11% L59 (Org)
Mark set
```
Today, we will use a program very similar to wget called **curl** to fetch data.

```sh
sudo apt-get install curl
```

---

8-more-emacs-and-script-files.org 11% L59 (Org)
Today, we will use a program very similar to wget called **curl** (curl.1 man page) to fetch data.

```bash
sudo apt-get install curl

```

<table>
<thead>
<tr>
<th>Total</th>
<th>Received</th>
<th>Xferd</th>
<th>Average Speed</th>
<th>Time Spent</th>
<th>Time Left</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>38953</td>
<td>0</td>
<td>224k</td>
<td>0</td>
<td>0</td>
<td>358k</td>
</tr>
</tbody>
</table>
mkdir -p class/8
cd class/8
ls -la


$ s.csv.bz2
% Total  % Received % Xferd  Average Speed   Time   Time    Time     Time  Current
100 38953   0 0 1042k   0     0      0      0          0 1729k

$ file *
holes.csv.bz2: bzip2 compressed data, block size = 900k

$ bunzip2 holes.csv.bz2

Uncompress and take a first look at this file:

#BEGIN_SRC sh
bunzip2 holes.csv.bz2

wc -l holes.csv
# 3047 holes.csv

head holes.csv
#END_SRC

The beginning of the holes.csv file looks like this:

#BEGIN_EXAMPLE
Expedition,Site,Hole,Program,Longitude,Latitude,Water Depth (m),Core Recovered (m)
#END_EXAMPLE
Uncompress and take a first look at this file:

```
#+BEGIN_SRC sh
bunzip2 holes.csv.bz2
wc -l holes.csv
# 3047 holes.csv
head holes.csv

The beginning of the holes.csv file looks like this:

#+BEGIN_EXAMPLE
Expedition,Site,Hole,Program,Longitude,Latitude,Water Depth (m),Core Recovered (m)
```

---

Tuesday, September 27, 2011
Uncompress and take a first look at this file:

```
#BEGIN_SRC sh
bunzip2 holes.csv.bz2

wc -l holes.csv
# 3047 holes.csv

head holes.csv
#END_SRC

The beginning of the holes.csv file looks like this:

```
-- 8-more-emacs-and-script-files.org 15% L64 (Org)---
```
researchtools@ubuntu:/class/8$ cut -d , -f4 holes.csv | uniq

When you run the above command, you will only see the first 10 lines on the screen. That is not very helpful. We would like to see how many unique entry types there are. The `uniq` command removes duplicates in the lines of text that it receives.

```sh
# BEGIN_SRC sh
cut -d , -f4 holes.csv | uniq
# Program
# DSDP
# ODP
# IODP
# END_SRC
```

Next, let's see how many lines there are for each program. We can pass the output of the `grep` to the word count program we used before. `wc` has an option to only print the number of lines, so we will...
researchtools@ubuntu:~/class/8$ cut -d, -f4 holes.csv | uniq
Program
DSDP
ODP
IODP

researchtools@ubuntu:~/class/8$ egrep DSDP holes.csv | wc -l
1116

researchtools@ubuntu:~/class/8$

```
*shell* Bot L45 (Shell:run)
Pass the output of the grep to the word count program we used before.
`wc` has an option to only print the number of lines, so we will
add "-l" to the command line.

The data gets passed from one program to another by a *pipe*.
What goes in one side, comes out the other. A pipe is created by the
vertical bar character: "|".
```

#+BEGIN_SRC sh
egrep DSDP holes.csv | wc -l  # the letter "l" as in Lima, not the number 1
  # 1116

egrep ODP holes.csv | wc -l
  # 1930

egrep IODP holes.csv | wc -l
  # 153

---
8-more-emacs-and-script-files.org 27% L131 (Org)
Pass the output of the grep to the word count program we used before.

`wc` has an option to only print the number of lines, so we will add `-l` to the command line.

The data gets passed from one program to another by a *pipe*.
What goes in one side, comes out the other. A pipe is created by the vertical bar character: `|`.

```sh
# BEGIN_SRC sh
egrep DSDP holes.csv | wc -l  # the letter "l" as in Lima, not the number 1
   # 1116

egrep ODP holes.csv | wc -l
   # 1930

egrep IODP holes.csv | wc -l
   # 153
```
Tuesday, September 27, 2011

```
researchtools@ubuntu:/class/8$ cut -d, -f4 holes.csv | uniq

Program
DSDP
ODP
IODP

researchtools@ubuntu:/class/8$ egrep DSDP holes.csv | head
1116
researchtools@ubuntu:/class/8$ egrep DSDP holes.csv | head
1,1,,DSDP,-92.1833,25.8583,2827,50
1,2,,DSDP,-92.0587,23.0455,3572,13
1,3,,DSDP,-92.0433,23.03,3747,47

ass the output of the grep to the word count program we used before.

has an option to only print the number of lines, so we will
add "-l" to the command line.

The data gets passed from one program to another by a *pipe*.
What goes in one side, comes out the other. A pipe is created by the
vertical bar character: "|".

#BEGIN_SRC sh

egrep DSDP holes.csv | wc -l # the letter "l" as in Lima, not the number 1
# 1116

egrep ODP holes.csv | wc -l
# 1930

egrep IODP holes.csv | wc -l
# 153

```

Tuesday, September 27, 2011
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: write error
researchtools@ubuntu:~./class/8$ egrep ODP holes.csv | wc -l
1930
researchtools@ubuntu:~./class/8$

Pass the output of the grep to the word count program we used before. 

`-wc` has an option to only print the number of lines, so we will 
add "-l" to the command line.

The data gets passed from one program to another by a *pipe*. 
What goes in one side, comes out the other. A pipe is created by the 
vertical bar character: "|".

#+BEGIN_SRC sh
egrep DSDP holes.csv | wc -l # the letter "l" as in Lima, not the number 1
  # 1116

egrep ODP holes.csv | wc -l
  # 1930

egrep IODP holes.csv | wc -l
  # 153

#+END_SRC

---

8-more-emacs-and-script-files.org 27% L131 (Org)

---

Tuesday, September 27, 2011
We have a slight problem here in that the counts are not adding up. The string ODP is found in both the ODP and IODP entries. Here I am using the "binary calculator" (bc.1 man page) to do a little math. I suspect you can just do this by hand, but the example shows another pipe.

```bash
# BEGIN_SRC sh
# The 3 results from the word counts above
echo "1116 + 1930 + 153" | bc
# 3199

# That adds up to more than the number of lines in the file
wc -l holes.csv
# 3047 holes.csv
# END_SRC
```
We have a slight problem here in that the counts are not adding up. The string ODP is found in both the ODP and IODP entries. Here I am using the "binary calculator" (bc.1 man page) to do a little math. I suspect you can just do this by hand, but the example shows another pipe.

```
# The 3 results from the word counts above
echo "1116 + 1930 + 153" | bc
# 3199

# That adds up to more than the number of lines in the file
wc -l holes.csv
# 3047 holes.csv
```

# BEGIN_SRC sh
# That adds up to more than the number of lines in the file
wc -l holes.csv
# 3047 holes.csv
# END_SRC
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: write error

researchtools@ubuntu:~/class/8$ egrep ODP holes.csv | wc -l
1930
researchtools@ubuntu:~/class/8$ egrep IODP holes.csv | wc -l
153
researchtools@ubuntu:~/class/8$ echo "1116 + 1930 + 153" | bc
3199
researchtools@ubuntu:~/class/8$ echo "1116 + 1930 + 153"
1116 + 1930 + 153
researchtools@ubuntu:~/class/8$ egrep ODP holes.csv

We can use the ",," that precedes the ODP to help avoid the IODP.

```sh
egrep 'ODP' holes.csv | wc -l
# 1930
egrep ',ODP' holes.csv | wc -l
# 1777
```

---

**8-more-emacs-and-script-files.org**
313,1,C,IODP, -73.616619, 39.639419, 32,  
313,2,D,IODP, -73.497266, 39.565720, 35,  
313,2,E,IODP, -73.496050, 39.567083, 35,  
313,2,F,IODP, -73.492317, 39.571200, 34,  
313,3,A,IODP, -73.413238, 39.519533, 34,  
313,3,B,IODP, -73.418144, 39.514094, 34,  
313,3,C,IODP, -73.408025, 39.525037, 34,  
researchtools@ubuntu:~/class/8$

```bash
-***  *shell*  Bot L2878  (Shell:run)---

```

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```

```
We can use the "," that precedes the ODP to help avoid the IODP.
311, U1329, E, IODP, -126.6786, 48.7898, 945.5, 37.74
312, 1256, D, IODP, -91.9343, 6.7365, 3634.7, 47.32
313, 1, A, IODP, -73.621646, 39.634091, 32,
313, 1, B, IODP, -73.620800, 39.635066, 32,
313, 1, C, IODP, -73.616619, 39.639419, 32,
313, 2, D, IODP, -73.497266, 39.565720, 35,
313, 2, E, IODP, -73.496650, 39.567083, 35,
313, 2, F, IODP, -73.492317, 39.571200, 34,
313, 3, A, IODP, -73.413238, 39.519533, 34,
313, 3, B, IODP, -73.418144, 39.514094, 34,
313, 3, C, IODP, -73.408025, 39.525037, 34,

```
researchtools@ubuntu:~/class/8$ egrep ',ODP,' holes.csv | wc -l
1930
researchtools@ubuntu:~/class/8$ egrep ',ODP,' holes.csv | wc -l
1777
```

```
U:: **shell** Bot L2889 (Shell:run)
```

```
echo "1116 + 1930 + 153" | bc
  # 3199

# That adds up to more than the number of lines in the file
wc -l holes.csv
  # 3047 holes.csv

#+END_SRC

We can use the ",," that precedes the ODP to help avoid the IODP.

```
BEGIN_SRC sh
egrep 'ODP' holes.csv | wc -l[]
  # 1930

egrep ',ODP' holes.csv | wc -l
  # 1777

END_SRC
```

---

**8-more-emacs-and-script-files.org** 33% L169 (Org)
We can use the "," that precedes the ODP to help avoid the IODP.

```bash
egrep 'ODP' holes.csv | wc -l
```

```bash
egrep ',ODP,' holes.csv | wc -l
```

```bash
history
```

```bash
echo "1116 + 1930 + 153" | bc
```

```bash
egrep 'ODP' holes.csv
```

```bash
echo "1116 + 1930 + 153" | bc
```

```
# That adds up to more than the number of lines in the file
wc -l holes.csv
# 3047 holes.csv
```

```
# BEGIN_SRC
egrep 'ODP' holes.csv | wc -l
# 1930
```

```
egrep ',ODP,' holes.csv | wc -l
# 1777
```

```
# END_SRC
```

Absolute reference cannot be expanded
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: writing output: Broken pipe
egrep: write error

researchtools@ubuntu:~/class/8$ egrep ODP holes.csv | wc -l
1930
researchtools@ubuntu:~/class/8$ egrep IODP holes.csv | wc -l
153
researchtools@ubuntu:~/class/8$ echo "1116 + 1930 + 153" | bc
3199
researchtools@ubuntu:~/class/8$ echo "1116 + 1930 + 153"
1116 + 1930 + 153
researchtools@ubuntu:~/class/8$ egrep ODP holes.csv
100,625, A, ODP, -87.16, 28.8317, 889, 18.8
100,625, B, ODP, -87.16, 28.8317, 889, 222.22
100,625, C, ODP,  -87.16, 28.8317, 889, 39.36

 We can use the "," that precedes the ODP to help avoid the IODP.

## BEGIN_SRC sh
egrep 'ODP' holes.csv  | wc -l
# 1930
egrep ',ODP' holes.csv  | wc -l
# 1777
## END_SRC
We can use the "," that precedes the ODP to help avoid the IODP.

```bash
egrep 'ODP' holes.csv | wc -l
```

```bash
egrep ',ODP,' holes.csv | wc -l
```

# That adds up to more than the number of lines in the file
```
wc -l holes.csv
```

# 3047 holes.csv

```bash
egrep 'ODP' holes.csv | wc -l
```

# 1930

```bash
egrep ',ODP,' holes.csv | wc -l
```

# 1777

```bash
egrep 'ODP' holes.csv | wc -l
```

# 1930
We can use the "," that precedes the ODP to help avoid the IODP.

```sh
egrep 'ODP' holes.csv | wc -l
# 1930
```

```sh
egrep ',ODP' holes.csv | wc -l
# 1777
```

```sh
egrep DSDP holes.csv | wc -l
egrep ODP holes.csv | wc -l
egrep IODP holes.csv | wc -l
```

```sh
echo "1116 + 1930 + 153" | bc
```

```sh
wc -l holes.csv
# 3047 holes.csv
```

That adds up to more than the number of lines in the file.
We can use the "," that precedes the ODP to help avoid the IODP.

```bash
egrep 'ODP' holes.csv  | wc -l
# 1930

egrep ',ODP,' holes.csv  | wc -l
# 1777
```

---

**8-more-emacs-and-script-files.org** 33% L169  (Org)
Gnuplot works most easily with files that have space delimited rather than comma delimited text data values. We need to pull out the longitude and latitude values from the holes.csv file. We can start back with the cut command that we used before. This time we will give it two different fields in the csv to print with "-f5-6". This means we are asking for fields 5 through 6. We could also have said "-f5,6", which would be fields 5 and 6.

```sh
#BEGIN_SRC sh
cut -d, -f5-6 holes.csv | head
#END_SRC

#BEGIN_EXAMPLE
Longitude, Latitude
-92.1833, 25.8583
-92.0587, 23.0455
#END_EXAMPLE

---

8-more-emacs-and-script-files.org
Gnuplot works most easily with files that have space delimited rather than comma delimited text data values. We need to pull out the longitude and latitude values from the holes.csv file. We can start back with the cut command that we used before. This time we will give it two different fields in the csv to print with "-f5-6". This means we are asking for fields 5 through 6. We could also have said "-f5,6", which would be fields 5 and 6.

```sh
# +BEGIN_SRC sh
cut -d, -f5-6 holes.csv | head
# +END_SRC

# +BEGIN_EXAMPLE
Longitude, Latitude
-92.1833, 25.8583
-92.0587, 23.0455
# +END_EXAMPLE
```
The output above is pretty close to being usable, but we have a "," characters between each longitude and latitude. We can use the tr (translate) command to exchange the ",," for a " " (space). Make sure to place the =tr= after the =cut= command or cut will not be able to tell the comma separated fields apart.

```
# BEGIN_SRC sh
egrep -v Longitude holes.csv | cut -d, -f5-6 | tr "," " " | head
# END_SRC
```

```sh
# BEGIN_EXAMPLE
-92.1833 25.8583
-92.0587 23.0455
-92.0433 23.03
-73.792 24.478
-73.792 24.478
-73.641 24.7265
# END_EXAMPLE
```
The output above is pretty close to being usable, but we have a "," characters between each longitude and latitude. We can use the `tr` (translate) command to exchange the "," for a " " (space). Make sure to place the `=tr=` after the `=cut=` command or cut will not be able to tell the comma separated fields apart.

```
#+BEGIN_SRC sh
egrep -v Longitude holes.csv | cut -d, -f5-6 | tr "," " " | head
#+END_SRC

#+BEGIN_EXAMPLE
-92.1833 25.8583
-92.0587 23.0455
-92.0433 23.03
-73.792 24.478
-73.792 24.478
-73.641 24.7265
```
The output above is pretty close to being usable, but we have a "," characters between each longitude and latitude. We can use the `tr` (translate) command to exchange the "," for a " " (space). Make sure to place the `=tr=` after the `=cut=` command or cut will not be able to tell the comma separated fields apart.

```
sh
egrep -v Longitude holes.csv | cut -d, -f5-6 | tr "," " " | head
```

```
#BEGIN_SRC sh
egrep -v Longitude holes.csv | cut -d, -f5-6 | tr "," " " | head
#END_SRC

#BEGIN_EXAMPLE
-92.1833 25.8583
-92.0587 23.0455
-92.0433 23.03
-73.792 24.478
-73.792 24.478
-73.641 24.7265
-73.641 24.7265
-67.6477 30.8398
-67.6477 30.8398
-68.2967 30.134
```

```
```
tr: write error: Broken pipe
cut: write error: Broken pipe

researchtools@ubuntu:/~class/8$ `egrep -v Longitude holes.csv | cut -d, -f5-6 | tr "," " " > xy.dat`
researchtools@ubuntu:/~class/8$ `head xy.dat`

-92.1833 25.8583
-92.0587 23.0455
-92.0433 23.03
-73.792 24.478
-73.792 24.478
-73.641 24.7265
-73.641 24.7265
-67.6477 30.8398
-67.6477 30.8398
-68.2967 30.134

researchtools@ubuntu:/~class/8$

```
# You output may be different depending on the files you have in your
# current directory

cat listing

#BEGIN_EXAMPLE
ls -l

```

```
total 124
```

```
-rw-r--r-- 1 researchtools researchtools 125861 2011-09-22 04:46 holes.csv
```
GNUPlot
Version 4.4 patchlevel 2
last modified Wed Sep 22 12:10:34 PDT 2010
System: Linux 2.6.38-11-generic

Thomas Williams, Colin Kelley and many others

gnuplot home: http://www.gnuplot.info
faq, bugs, etc: type "help seeking- assistance"
immediate help: type "help"
plot window: hit 'h'

Terminal type set to 'wxt'
gnuplot> plot 'xy.dat'

---
You output may be different depending on the files you have in your
# current directory
cat listing
#+END_SRC

#+BEGIN_EXAMPLE
ls -l
total 124
-rw-r--r-- 1 researchtools researchtools 125861 2011-09-22 04:46 holes.csv
#+END_EXAMPLE

Now that you know how to redirect the output to a file, send the
results of the chain of pipes consisting of =egrep=, =cut=,
and =tr= to the file "xy.dat".

#+BEGIN_SRC sh
egrep -v Longitude holes.csv | cut -d, -f5-6 | tr "," " " > xy.dat

---
8-more-emacs-and-script-files.org 56% L278 (Org)
Now that you know how to redirect the output to a file, send the results of the chain of pipes consisting of `egrep`, `cut`, and `tr` to the file "xy.dat".

```
BEGIN_SRC sh
egrep \-v Longitude holes.csv | cut \-d, \-f5-6 \| tr "," " " > xy.dat
```

---

8-more-emacs-and-script-files.org 56% L278 (Org)
Terminal type set to 'wxt'
gnuplot> plot 'xy.dat'
plot 'xy.dat'
gnuplot> set yrange [-90:90]
set yrange [-90:90]
^Unrecognized option. See 'hel

gnuplot> set yrange [-90:90]
set yrange [-90:90]
gnuplot> plot 'xy.dat'
plot 'xy.dat'
gnuplot> 

#BEGIN_EXAMPLE
ls -l
total 124
-rw-r--r-- 1 researchtools researchtools 0 Mar 25 13:07 holes.csv
#END_EXAMPLE

Now that you know how to redirect the output to a file, send the
results of the chain of pipes consisting of =egrep=, =cut=,
and =tr= to the file "xy.dat".

#BEGIN_SRC sh
grep -v Longitude holes.csv | cut -d, -f5-6 | tr "," " " > xy.dat
#END_SRC

---

8-more-emacs-and-script-files.org 56% L278 (Org)
```bash
plot 'xy.dat'

set yrange [ -90:90 ]
set yrange [ -90:90 ]

Unrecognized option. See 'help set'.

set yrange [ -90:90 ]
set yrange [ -90:90 ]
gnuplot> plot 'xy.dat'
plot 'xy.dat'
gnuplot> quit
quit
```

```
researchtools@ubuntu:/class/8$ GMT minmax xy.dat
GMT minmax xy.dat
xy.dat: N = 3046    <-179.5558/179.738>    <-77.4413/5736.4>
researchtools@ubuntu:/class/8$
```

```bash
You output may be different depending on the files you have in your
# current directory
cat listing
#ifm

#BEGIN_EXAMPLE
ls -l
```
```
total 124
-rw-r--r-- 1 researchtools researchtools 125861 2011-09-22 04:46 holes.csv
```bash
#END_EXAMPLE
```
```
Now that you know how to redirect the output to a file, send the
results of the chain of pipes consisting of `egrep=, `cut=,
and `tr= to the file "xy.dat".
```
```
#BEGIN_SRC sh
egrep -v Longitude holes.csv | cut -d, -f5-6 | tr "," " " > xy.dat
```bash
```
**NOTE:** The table has been re-ordered so that the newest items are at the top.

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<th>Date</th>
<th>Title/Notes</th>
<th>Audio/Podcast</th>
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<td>1</td>
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<td>[ mp3 ][ m4a ][ ogg ]</td>
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<td>IRC, Wiki, Basic Shell [ org ]</td>
<td>[ mp3 ][ m4a ][ ogg ]</td>
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<td>More emacs and script files [ org ]</td>
<td>[ mp3 ][ m4a ][ ogg ]</td>
</tr>
</tbody>
</table>

HW 2 2011-09-20  Homework 2: shell and org-mode due Thurs 2011-09-22 5PM EDT [ org ] | [ mp3 ][ m4a ][ ogg ] |
URL  irc://researchtools.ccom.nh  Mode  no mode
/unhresearchtools

Topic  <none>

6.0.1/20110830202826"

<nhassan> byee

|-- prasadh has left researchtools.ccom.nh (Client closed connection)

|-- nhassan has left researchtools.ccom.nh ("ChatZilla 0.9.87 [Firefox
6.0.1/20110830202826"]")

|-- sthein has left researchtools.ccom.nh ("ChatZilla 0.9.87 [Firefox
6.0.1/20110830202826"]")

<schwehrvm> ttfn

|-- tnguyen has left researchtools.ccom.nh (Ping timeout: 20 seconds)