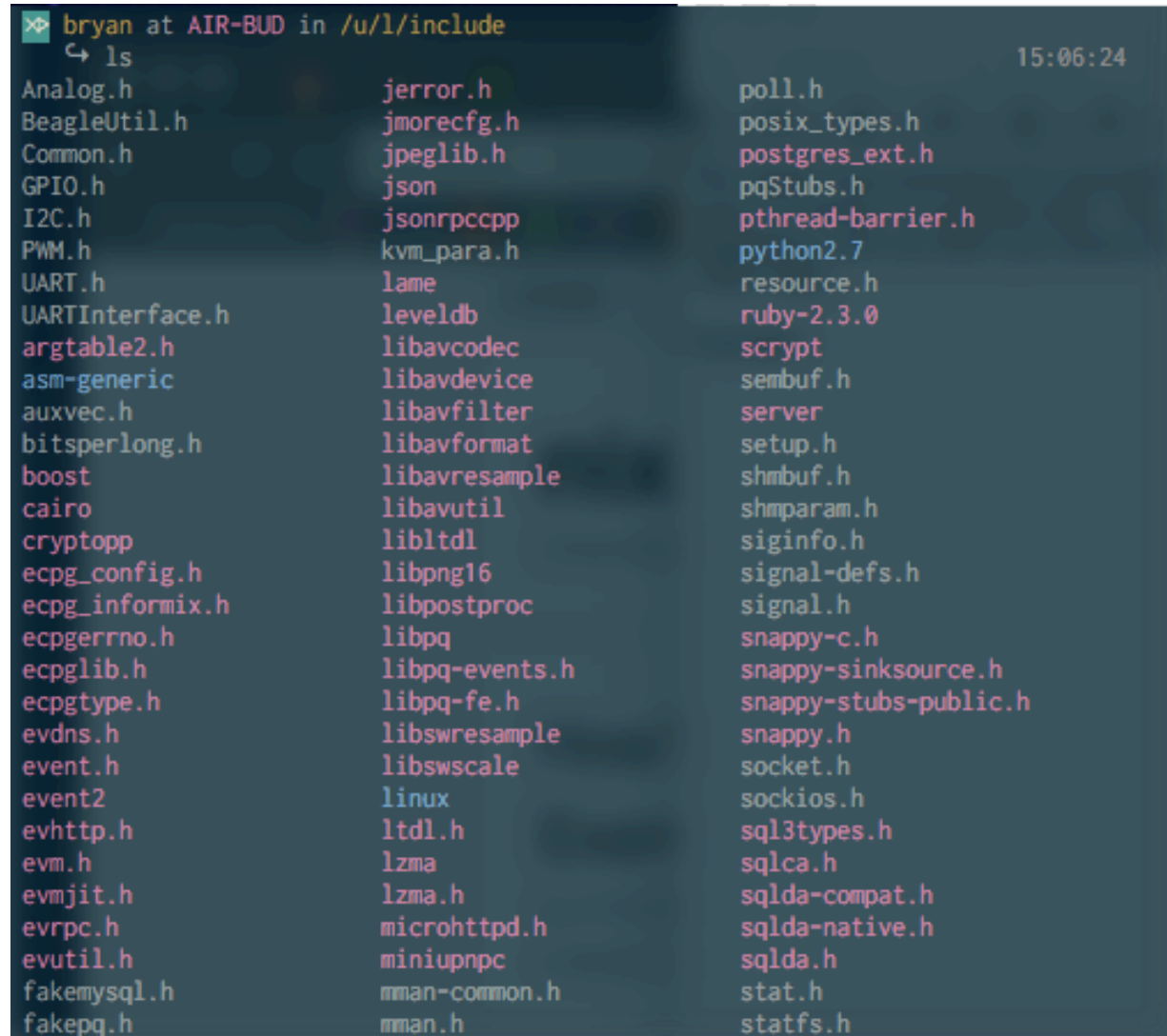The "grep" linux command is a tool that allows you to search through text for a pattern of letters (a word, or "string" in computer-talk). This allows for easy filtering of whatever text the terminal is displaying, such as when you instruct the terminal to display the contents of a folder which contains 1000+ files.

Example: 'ls' command to display contents of a folder

```
 bryan at AIR-BUD in /u/l/include
  ↳ ls                                                          15:06:24
Analog.h                    jerror.h                    poll.h
BeagleUtil.h                jmorecfg.h                  posix_types.h
Common.h                    jpeglib.h                   postgres_ext.h
GPIO.h                      json                        pqStubs.h
I2C.h                       jsonrpccpp                  pthread-barrier.h
PWM.h                       kvm_para.h                  python2.7
UART.h                      lame                        resource.h
UARTInterface.h             leveldb                     ruby-2.3.0
argtable2.h                 libavcodec                  scrypt
asm-generic                 libavdevice                 sembuf.h
auxvec.h                    libavfilter                 server
bitsperlong.h               libavformat                 setup.h
boost                       libavresample               shmbuf.h
cairo                       libavutil                   shmparam.h
cryptopp                    libltdl                     siginfo.h
ecpg_config.h               libpng16                    signal-defs.h
ecpg_informix.h             libpostproc                 signal.h
ecpgerrno.h                 libpq                       snappy-c.h
ecpglib.h                   libpq-events.h              snappy-sinksource.h
ecpgtype.h                  libpq-fe.h                  snappy-stubs-public.h
evdns.h                     libswresample               snappy.h
event.h                     libswscale                  socket.h
event2                      linux                       sockios.h
evhttp.h                    ltdl.h                      sql3types.h
evm.h                       lzma                        sqlca.h
evmjit.h                    lzma.h                      sqlda-compat.h
evrpc.h                     microhttpd.h                sqlda-native.h
evutil.h                    miniupnpc                   sqlda.h
fakemysql.h                 mman-common.h               stat.h
fakepq.h                    mman.h                      statfs.h
```

Trying to find all files with 'sql' in the filename - the 'ls' output is directed to grep using the pipe | utility
And through the grep utility using the following syntax

grep [search pattern]

```
server
▶ bryan at AIR-BUD in /u/l/include
  ↳ ls | grep sql                                          15:07:48
fakemysql.h
fakesql.h
mysqlStubs.h
sql3types.h
sqlca.h
sqlda-compat.h
sqlda-native.h
sqlda.h
```

The pipe utility can be used to filter any output of the terminal through grep to isolate specific lines of text.

Grep can be used to search through text files (txt, html, etc) using the following syntax:

grep [search pattern] [filename]

Example:

Tutorial1.txt (A long string of latin with the word "Commons" hidden somewhere) :

```
Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula ege
t dolor. Aenean massa. Cum sociis natoque penatibus et magnis dis parturient montes
, nascetur ridiculus mus. Donec quam felis, ultricies nec, pellentesque eu, pretium
 quis, sem. Nulla consequat massa quis enim. Donec pede justo, fringilla vel, aliqu
et nec, vulputate eget, arcu. In enim justo, rhoncus ut, imperdiet a, venenatis vit
ae, justo. Nullam dictum felis eu pede mollis pretium. Integer tincidunt. Cras dapi
bus. Vivamus elementum semper nisi. Aenean vulputate eleifend tellus. Aenean leo li
gula, porttitor eu, consequat vitae, eleifend ac, enim. Aliquam lorem ante, dapibus
 in, viverra quis, feugiat a, tellus. Phasellus viverra nulla ut metus varius laore
et. Quisque rutrum. Aenean imperdiet. Etiam ultricies nisi vel augue. Curabitur ull
amcorper ultricies nisi. Nam eget dui. Etiam rhoncus. Maecenas tempus, tellus eget
condimentum rhoncus, sem quam semper libero, sit amet adipiscing sem neque sed ipsu
m. Nam quam nunc, blandit vel, luctus pulvinar, hendrerit id, lorem. Maecenas nec o
dio et ante tincidunt tempus. Donec vitae sapien ut libero venenatis faucibus. Null
```

```
▶ bryan at AIR-BUD in ~/D/Tutorial
  ↳ grep Commons Tutorial1.txt                             15:12:31
Praesent egestas tristique nibh. Sed a libero. Cras varius. Donec vitae orci sed do
lor rutrum auctor. Fusce egestas elit eget lorem. Commons Vivamus elementum semper
nisi.
```

Using the grep command and the default syntax you can filter out all but the line you're concerned with.
If you're searching for more than one word, wrap the search pattern in quotation marks:

Ex: grep "The Commons" Tutorial1.txt

If you want to know which line contains the word "Commons", add "-n" after the word grep:
Adding letters with a dash like this is called a "flag" and is used in Linux command lines to add options to a command.

```
 bryan at AIR-BUD in ~/D/Tutorial
   grep -n Commons Tutorial1.txt                                    15:12:38
31:Praesent egestas tristique nibh. Sed a libero. Cras varius. Donec vitae orci sed
 dolor rutrum auctor. Fusce egestas elit eget lorem. Commons Vivamus elementum semp
er nisi.
```

(Line 31)

If you want to search through a series of files for given text, you can specify by filetype using the asterisk * wildcard.
This will search through all files in the given folder.

grep -n Commons *

Or search through all files with the filename _____.txt :

grep -n Commons *.txt

If looking through a series of directories with sub-directories, adding a -r flag will result in all folders being searched, as well as any folders within them.

Together with the -n flag, this will give you the path of all files containing the "Commons" text, as well as the line number:

```
 bryan at AIR-BUD in ~/D/Tutorial
   grep -rn Commons *                                               15:19:50
1/2/3/Tutorial4.txt:35:Commons Phasellus accumsan cursus velit. Vestibulum ante ips
um primis in
1/2/Tutorial3.txt:1:Commons Phasellus consectetuer vestibulum elit.
1/Tutorial2.txt:31: Commons sociis natoque penatibus et magnis dis parturient monte
s, nascetur ridiculus mus.
Tutorial1.txt:31:Praesent egestas tristique nibh. Sed a libero. Cras varius. Donec
vitae orci sed dolor rutrum auctor. Fusce egestas elit eget lorem. Commons Vivamus
elementum semper nisi.
```

Search through all text files in the given folders for your own name
[provide folder with text files, sub directories, as well other text format files (html, md, etc)