

## Recurse directories with find

```
$ cd /usr
$ find . | head # List all entries under the current directory
.
./games
./lib
./lib/dpkg
./lib/dpkg/methods
./lib/dpkg/methods/apt
./lib/dpkg/methods/apt/desc.apt
./lib/dpkg/methods/apt/install
./lib/dpkg/methods/apt/names
./lib/dpkg/methods/apt/update
$
```

## Limit listing to files

```
$ find . -type f | head # List only files
./lib/dpkg/methods/apt/desc.apt
./lib/dpkg/methods/apt/install
./lib/dpkg/methods/apt/names
./lib/dpkg/methods/apt/update
./lib/dpkg/methods/apt/setup
./lib/dpkg/parsechangelog/debian
./lib/libid3tag.a
./lib/libruby-1.9.1-static.a
./lib/libtagcoll2.a
./lib/ssl/misc/CA.sh
$
```

## Limit listing to directories

```
$ find . -type d | head # List only directories
.
./games
./lib
./lib/dpkg
./lib/dpkg/methods
./lib/dpkg/methods/apt
./lib/dpkg/parsechangelog
./lib/ssl
./lib/ssl/misc
./lib/tc
$
```

## Find files by name

```
$ find . -name '*.a' | head # List entries ending in .a
./lib/libid3tag.a
./lib/libruby-1.9.1-static.a
./lib/libtagcoll2.a
./lib/libsupp.a
./lib/arm-linux-gnueabi/libresolv.a
./lib/arm-linux-gnueabi/librpcsvc.a
./lib/arm-linux-gnueabi/libdl.a
./lib/arm-linux-gnueabi/libanl.a
./lib/arm-linux-gnueabi/libpng.a
./lib/arm-linux-gnueabi/libnsl.a
$
```

## Combine options

```
$ find . -name test # List entries named test
./bin/test
./lib/python3.4/test
./lib/python2.7/test
./lib/ruby/1.8/rdoc/markup/test
./lib/ruby/1.8/test
./lib/ruby/2.1.0/test
./lib/ruby/vendor_ruby/puppet/test
./lib/ruby/1.9.1/test
```

```

./share/texlive/texmf-dist/tex/generic/pgfplots/test
./share/doc/texlive-doc/fonts/fontinst/test
./share/doc/texlive-doc/latex/oberdiek/test
./share/doc/texlive-doc/latex/psnfss/test
./share/doc/texlive-doc/latex/graphviz/test
./share/doc/texlive-doc/latex/combinedgraphics/test
$ find . -name test -type f # List files named test
./bin/test
$

```

### Act on the results

```

$ find . -type f -ls | head # List details of each entry
265652  4 -rw-r--r--  1 root    root      567 Oct 29  2014 ./lib/dpkg/methods/apt/desc.apt
265648  4 -rwxr-xr-x  1 root    root     2759 Oct 29  2014 ./lib/dpkg/methods/apt/install
265651  4 -rw-r--r--  1 root    root      39 Oct 29  2014 ./lib/dpkg/methods/apt/names
265650  4 -rwxr-xr-x  1 root    root     1242 Oct 29  2014 ./lib/dpkg/methods/apt/update
265649  8 -rwxr-xr-x  1 root    root     7728 Oct 29  2014 ./lib/dpkg/methods/apt/setup
265654  8 -rwxr-xr-x  1 root    root     4500 Apr 19  2015 ./lib/dpkg/parsechangelog/debian
299521 104 -rw-r--r--  1 root    root    103654 Apr 27  2012 ./lib/libid3tag.a
295185 2460 -rw-r--r--  1 root    root   2515412 May  2  2015 ./lib/libruby-1.9.1-static.a
264615  376 -rw-r--r--  1 root    root   384270 May  3  2012 ./lib/libtagcoll2.a
274689  8 -rwxr-xr-x  1 root    root     5175 Mar 25  2015 ./lib/ssl/misc/CA.sh
$

```

### Execute a command for each file

```

$ find /usr/share/doc -type f -name changelog.gz -exec gzip -dc '{}' \; |
> wc -l
3002309
$

```

### Putting it all together

```

$ find /usr/include -type f | head -5
/usr/include/ustat.h
/usr/include/c++/4.7/cstdalign
/usr/include/c++/4.7/cwctype
/usr/include/c++/4.7/decimal/decimal
/usr/include/c++/4.7/decimal/decimal.h
$ find /usr/include -name '*c++*' -prune -o -type f -print | head # Skip c++ entries
/usr/include/ustat.h
/usr/include/mcheck.h
/usr/include/stdint.h
/usr/include/librtmp/http.h
/usr/include/librtmp/log.h
/usr/include/librtmp/amf.h
/usr/include/librtmp/rtmp.h
/usr/include/gettext-po.h
/usr/include/utmp.h
/usr/include/stab.h
$

```