Teach Yourself to Fish

What You Will Learn

- How to navigate man pages.
- How the `$PATH` environment variable is used.
- What the `which` command does.
- How to ask commands for help.
- How to search man pages.

Navigating Man Pages

Enter	Move down one line.
Space	Move down one page.
g	Move to the top of the page.
G	Move to the bottom of the page.
q	Quit.

Environmental Variables

- Storage location that has a name and a value
- Typically uppercase
- Access the contents by executing:
  - `echo $VAR_NAME`

PATH

- An environment variable
- Controls the command search path
- Contains a list of directories

```
[jason@linuxsvr ~]$ echo $PATH
/usr/local/bin:/bin:/usr/bin:/usr/local/sbin:/usr/sbin:/sbin:/home/jason/bin
[jason@linuxsvr ~]$
```

```
[jason@linuxsvr ~]$ echo $PATH
/usr/local/bin:/bin:/usr/bin:/usr/local/sbin:/usr/sbin:/sbin:/home/jason/bin
[jason@linuxsvr ~]$ whatsupdoc
-bash: whatsupdoc: command not found
[jason@linuxsvr ~]$
```

Which Command Exactly?

`which` Locate a command

```
[jason@linuxsvr ~]$ echo $PATH
/usr/local/bin:/bin:/usr/bin:/usr/local/sbin:/usr/sbin:/sbin:/home/jason/bin
[jason@linuxsvr ~]$ whatsupdoc
-bash: whatsupdoc: command not found
[jason@linuxsvr ~]$ which cat
/bin/cat
[jason@linuxsvr ~]$
```

```
[jason@linuxsvr ~]$ echo $PATH
/usr/local/bin:/bin:/usr/bin:/usr/local/sbin:/usr/sbin:/sbin:/home/jason/bin
[jason@linuxsvr ~]$ whatsupdoc
-bash: whatsupdoc: command not found
[jason@linuxsvr ~]$ which cat
/bin/cat
[jason@linuxsvr ~]$ which tac
/usr/bin/tac
[jason@linuxsvr ~]$
```

Starting to Fish

- Look at the directories in `$PATH`.
- Look at the files in each directory.
- Use man to learn what the command does.


jason@linuxsvr:~
[jason@linuxsvr ~]$ ls /bin
alsaunmute
arch
awk
basename
bash
cat
chgrp
chmod
chown
cp
cpio
csh
cut
dash
date
dbus-cleanup-sockets
dbus-daemon
dbus-monitor
dbus-send
dbus-uuidgen
dd
df
dmesg
dnsdomainname
domainname
dumpkeys
echo
ed
egrep
env
ex
false
fgrep
find
findmnt
fusermount
gawk
grep
gtar
gunzip
gzip
hostname
ipcalc
iptables-xml
iptables-xml-1.4.7
kbd_mode
kill
link
ln
loadkeys
logger
login
ls
lsblk
mail
mailx
mkdir
mknod
mktemp
more
mount
mountpoint
mv
netstat
nice
nisdomainname
ping
ping6
plymouth
ps
pwd
raw
readlink
red
rm
rmdir
rpm
rvi
rview
sed
setfont
setserial
sh
sleep
sort
stty
su
sync
tar
taskset
tcsh
touch
tracepath
tracepath6
traceroute
traceroute6
true
ulockmgr_server
umount
uname
unicode_start
unicode_stop
unlink
usleep
vi
view
ypdomainname
zcat
[jason@linuxsvr ~]$

CAT(1) User Commands CAT(1)

NAME

cat - concatenate files and print on the standard output

SYNOPSIS

cat [OPTION]... [FILE]...

DESCRIPTION

Concatenate FILE(s), or standard input, to standard output.

-A, --show-all
equivalent to **-vET**

-b, --number-nonblank
number nonempty output lines

-e equivalent to **-vE**

-E, --show-ends
display $ at end of each line

-n, --number

:

Get Help with `--help` or `-h`

- Add `--help` to a command to get help.
- Try `-h` if `--help` doesn't work.

```
[jason@linuxsvr ~]$ ls --help
Usage: ls [OPTION]... [FILE]...
List information about the FILEs (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort.

Mandatory arguments to long options are mandatory for short options too.
  -a, --all                  do not ignore entries starting with .
  -A, --almost-all           do not list implied . and ..
      --author               with -l, print the author of each file
  -b, --escape               print octal escapes for nongraphic characters
      --block-size=SIZE      use SIZE-byte blocks.  See SIZE format below
  -B, --ignore-backups       do not list implied entries ending with ~
  -c                         with -lt: sort by, and show, ctime (time of last
                               modification of file status information)
                               with -l: show ctime and sort by name
                               otherwise: sort by ctime
  -C                         list entries by columns
      --color[=WHEN]         colorize the output.  WHEN defaults to `always'
                               or can be `never' or `auto'.  More info below
  -d, --directory            list directory entries instead of contents,
                               and do not dereference symbolic links
  -D, --dired                generate output designed for Emacs' dired mode
  -f                         do not sort, enable -aU, disable -ls --color
...
```

```
[jason@linuxsvr ~]$ gzip -h
Usage: gzip [OPTION]... [FILE]...
Compress or uncompress FILEs (by default, compress FILES in-place).

Mandatory arguments to long options are mandatory for short options too.

  -c, --stdout      write on standard output, keep original files unchanged
  -d, --decompress  decompress
  -f, --force       force overwrite of output file and compress links
  -h, --help        give this help
  -l, --list        list compressed file contents
  -L, --license     display software license
  -n, --no-name     do not save or restore the original name and time stamp
  -N, --name        save or restore the original name and time stamp
  -q, --quiet       suppress all warnings
  -r, --recursive   operate recursively on directories
  -S, --suffix=SUF  use suffix SUF on compressed files
  -t, --test        test compressed file integrity
  -v, --verbose     verbose mode
  -V, --version     display version number
  -1, --fast        compress faster
  -9, --best        compress better

[jason@linuxsvr ~]$
```

Searching Man Pages

```
man -k SEARCH_TERM
```

```
[jason@linuxsvr ~]$ man -k calendar
cal                   (1)  - displays a calendar
difftime              (3p)  - compute the difference between two calendar time values
[jason@linuxsvr ~]$
```

Summary

- Man is used to display documentation.
- `$PATH` controls your search path.
- Learn the full path to commands with `which`.
- Ask commands for help with `--help` or `-h`.
- Search man pages by using `man -k`.

Next Steps

- Examine your `$PATH` environment variable
- Perform an ls on each directory in your `$PATH`.
- Pick a few commands that look interesting.
- Use man to learn what the command does.
- Try using `--help` and `-h` on a few commands.