

# Teach Yourself to Fish

# What You Will Learn

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- 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

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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

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

# PATH

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- 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?

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

# Starting to Fish

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

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

**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`

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- 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

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```
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

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- 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

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- 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.