Bash Bingo!

Feedback? Tweet at @deniseyu21

You will need…

- A printed out bingo board that has been generated with the `make_board.rb` script in github.com/deniseyu/bash-bingo

- A pencil, preferably with an eraser!

- [Optional] A pair. This is more fun with a buddy, but bingo can certainly be played solo.

How to Play

- Each slide will show a terminal, with a command that has been **redacted!** ! Your job is to figure out what that command could be, based on the input, the arguments, and the output.

  - Sometimes the output will be a new screen. This will be clearly indicated on the slide.

  - There might be more than one correct answer sometimes. If you have two boxes that match, you may mark both off.

  - To prevent pattern-matching on word length, all redaction rectangles are the longer than they would need to be. Guess based on the context, not how long you think the word underneath is!

How to Play

- Every slide will be numbered

- When you figured out what a command is, if you have that command on your board, draw a circle with the number of the slide inside it, to connect that filled-in box to the slide

How to Play

- If you get "bingo", shout "BINGO!" As a group, review the slides together to check the results.

Win Conditions

- Traditional rules:

  - A full row of 5 squares is filled in. Vertical, horizontal, and diagonals all count.

- Extensions that will make this go faster:

  - Four corners

  - Any square-shaped block of four

Ready??

```
$ ls -la
total 0
drwxr-xr-x    2 deniseyu   staff    64 29 Jan 18:33 .
drwxr-xr-x   16 deniseyu   staff   512 29 Jan 18:23 ..
$ [???]    some-new-dir
$ ls -la
total 0
drwxr-xr-x    3 deniseyu   staff    96 29 Jan 18:42 .
drwxr-xr-x   16 deniseyu   staff   512 29 Jan 18:23 ..
drwxr-xr-x    2 deniseyu   staff    64 29 Jan 18:42 some-new-dir
```

1

```
$ echo "i love cats" > file1
$ echo "i love dogs" > file2
$ [???] "cats" . -r
./file1:i love cats
```

2

```
$  [ ??? ]  -X GET http://deniseyu.io
<html>
<head><title>301 Moved Permanently</title></head>
<body>
<center><h1>301 Moved Permanently</h1></center>
<hr><center>nginx</center>
</body>
</html>
```
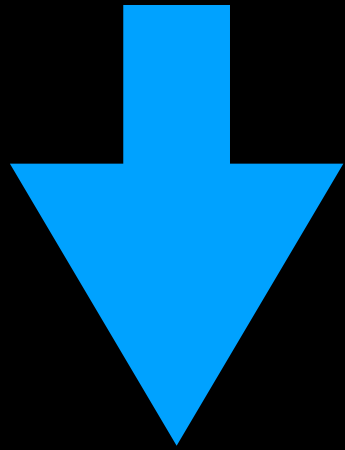
3

```
$ ll
total 16
drwxr-xr-x    4 deniseyu   staff   128 29 Jan 18:44 .
drwxr-xr-x   16 deniseyu   staff   512 29 Jan 18:23 ..
-rw-r--r--    1 deniseyu   staff    12 29 Jan 18:44
file1
-rw-r--r--    1 deniseyu   staff    12 29 Jan 18:44
file2
 $  ???        file*
 $ ll
total 0
drwxr-xr-x    2 deniseyu   staff    64 29 Jan 18:46 .
drwxr-xr-x   16 deniseyu   staff   512 29 Jan 18:23 ..
```

```
$ cd /usr/local/bin/
$            ???
/usr/local/bin
```

`$` ???

(next screen)

```
Processes: 508 total, 2 running, 506 sleeping, 2330 threads
18:49:50
Load Avg: 2.23, 2.00, 1.94  CPU usage: 4.62% user, 3.8% sys, 92.28% idle
SharedLibs: 192M resident, 41M data, 17M linkedit.
MemRegions: 215162 total, 5818M resident, 134M private, 1863M shared.
PhysMem: 15G used (3315M wired), 655M unused.
VM: 2297G vsize, 1880M framework vsize, 31044897(0) swapins, 32581913(0) swapouts.
Networks: packets: 15381970/11G in, 13645343/6408M out. Disks: 8730546/243G read, 10057620/225G written.

PID    COMMAND      %CPU TIME      #TH     #WQ  #PORT MEM    PURG CMPRS  PGRP  PPID  STATE    BOOSTS
376    iTerm2       20.6 39:21.84 9       6    642+  317M-  54M+ 46M-   376   1     sleeping *0[14417]
223    WindowServer 9.8  05:12:45 10      4    2660- 1389M  33M  114M   223   1     sleeping *0[1]
40137  Signal Helpe 8.3  41:54.66 25      1    775   380M+  0B   138M   40128 40128 sleeping *0[4]
77756  top          4.8  00:00.95 1/1     0    26    5008K  0B   0B     77756 76802 running  *0[1]
0      kernel_task  4.7  04:24:47 196/8   0    0     392M-  0B   0B     0     0     running   0[0]
147    hidd         4.0  44:05.32 6       3    327   6332K+ 0B   3156K  147   1     sleeping *0[1]
40133  Signal Helpe 1.8  05:54.33 9       1    163   228M   0B   58M    40128 40128 sleeping *0[1]
```

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```
$ pip3 --version
pip 19.3.1 from /Library/Frameworks/
Python.framework/Versions/3.8/lib/python3.8/site-
packages/pip (python 3.8)
$ [???]        pip3
/Library/Frameworks/Python.framework/Versions/3.8/
bin/pip3
```

```
$ [???]        +noall +answer deniseyu.io
deniseyu.io.    291  INA 185.199.111.153
deniseyu.io.    291  INA 185.199.108.153
deniseyu.io.    291  INA 185.199.109.153
deniseyu.io.    291  INA 185.199.110.153
```

```
$ echo "hi there" > original.txt
$ [    ???    ]original.txt duplicate.txt
$ cat duplicate.txt
hi there
```

```
$ echo "pwd" > script.sh
$ ./script.sh
-bash: ./script.sh: Permission denied
$ [???] 700 script.sh
$ ./script.sh
/Users/deniseyu/workspace/some-directory
```

```
 $ ls
hi.go
 $ go build hi.go
 $ ls
hi     hi.go
 $ [    ???    ] hi
hi: Mach-O 64-bit executable x86_64
```

Two terminal shells!

Commands are run in the sequence indicated.

```
$  ???  -l 4444
```
1

2

```
hello cats
```
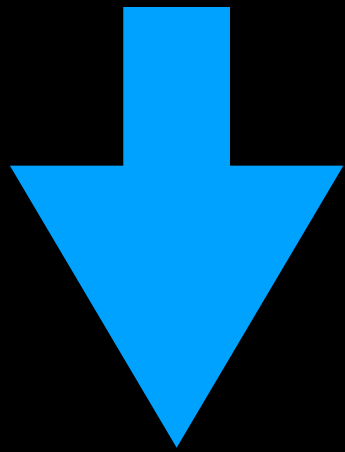**3**

```
$ echo "hello cats" > txt
$  ???  localhost 4444 < txt
```
2

```
$    ???    echo
```

(next screen)

```
ECHO(1)                    BSD General Commands Manual                    ECHO(1)

NAME
     echo -- write arguments to the standard output

SYNOPSIS
     echo [-n] [string ...]

DESCRIPTION
     The echo utility writes any specified operands, separated by single blank (` ') characters and
followed by a newline (`\n') character, to the standard out-
     put.

     The following option is available:

     -n     Do not print the trailing newline character.  This may also be achieved by appending `\c' to
the end of the string, as is done by iBCS2 compatible
```

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```
 $ cat cats.txt
siamese
maine coon
ragdoll
domestic shorthair
 $ cat cats.txt | [ ??? ]
domestic shorthair
maine coon
ragdoll
siamese
```

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```
 $ pwd
/Users/deniseyu
 $ [???] /usr/local/bin/
 $ pwd
/usr/local/bin
 $ [???] -
/Users/deniseyu
 $ pwd
/Users/deniseyu
```

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```
$  ???    -al
total 8
drwxr-xr-x    5 deniseyu   staff   160 29 Jan 21:46 .
drwxr-xr-x   16 deniseyu   staff   512 29 Jan 18:23 ..
-rw-r--r--    1 deniseyu   staff    46 29 Jan 21:40 cats.txt
-rw-r--r--    1 deniseyu   staff     0 29 Jan 21:46 dogs.txt
-rw-r--r--    1 deniseyu   staff     0 29 Jan 21:46 squirrels.yml
```

```
 $ ls
cat.ascii.txt
 $ [ ??? ] cat.ascii.txt
    /\_____/\
   /  o   o  \
  ( ==  ^  == )
   )         (
  (           )
 ( (  )   (  ) )
(__(__)___(__)__)
```

```
 $ cat red-things.txt fruits.txt
apple
cherry
tomato
apple
cherry
kiwi
 $ [    ???    ]    red-things.txt fruits.txt
3c3
< tomato
---
> kiwi
```

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```
$ [???]          -b
Filesystem      512-blocks         Used Available Capacity  Mounted on
/dev/disk1s5     976695384    21107032 871698560        3%  /
devfs                  374         374         0      100%  /dev
/dev/disk1s1     976695384    71894408 871698560        8%  /System/Volumes/Data
/dev/disk1s4     976695384    10487848 871698560        2%  /private/var/vm
map auto_home            0           0         0      100%  /System/Volumes/Data/home
/dev/disk1s3     976695384     1032216 871698560        1%  /Volumes/Recovery
```

```
 $ [   ???   ] -cvf picnic.tar bread.txt cheese.txt fruits.txt
a bread.txt
a cheese.txt
a fruits.txt
$ ls
bread.txt   cheese.txt fruits.txt picnic.tar
```

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```
$  ???      bandit24@bandit.labs.overthewire.org -p 2220

This is a OverTheWire game server. More information on http://
www.overthewire.org/wargames
```

```
 $ cat cheese.txt
stilton
cheddar
swiss
 $ cat cheese.txt | [ ??? ] -l
        3
```

```
$  ???        hello.txt
$ file hello.txt
hello.txt: empty
```

```
$ [???] google.com

64 bytes from 172.217.1.14: icmp_seq=0 ttl=50 time=24.039 ms
64 bytes from 172.217.1.14: icmp_seq=1 ttl=50 time=21.084 ms
64 bytes from 172.217.1.14: icmp_seq=2 ttl=50 time=31.683 ms
64 bytes from 172.217.1.14: icmp_seq=3 ttl=50 time=16.399 ms
```

```
root@690ed6f97b10:/#         ???
HOSTNAME=690ed6f97b10
PWD=/
HOME=/root
TERM=xterm
SHLVL=1
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin
_=/usr/bin/env
```

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```
$ [    ???    ]
lo0: flags=8049<UP,LOOPBACK,RUNNING,MULTICAST> mtu 16384
    options=1203<RXCSUM,TXCSUM,TXSTATUS,SW_TIMESTAMP>
    inet 127.0.0.1 netmask 0xff000000
    inet6 ::1 prefixlen 128
    inet6 fe80::1%lo0 prefixlen 64 scopeid 0x1
    nd6 options=201<PERFORMNUD,DAD>
gif0: flags=8010<POINTOPOINT,MULTICAST> mtu 1280
stf0: flags=0<> mtu 1280
en0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST>
mtu 1500
    options=400<CHANNEL_IO>
    ether 98:5a:eb:8f:0d:02
    inet6 fe80::1472:fb8c:76a7:3945%en0 prefixlen 64 secured
scopeid 0x4
    inet 192.168.0.20 netmask 0xffffff00 broadcast 192.168.0.255
    nd6 options=201<PERFORMNUD,DAD>
    media: autoselect
    status: active
```

```
 $ cat cheese.txt
stilton
cheddar
swiss
 $ cat cheese.txt |          ???          's/stilton/brie/g'
brie
cheddar
swiss
```

```
$ [???] -s $(pwd)/books ~/Documents/books
$ ls -la ~/Documents/books
lrwxr-xr-x  1 deniseyu  staff  46 29 Jan 22:37 /Users/
deniseyu/Documents/books -> /Users/deniseyu/workspace/
some-directory/books
$ file ~/Documents/books
/Users/deniseyu/Documents/books: directory
```

```
$ ls -la /tmp/
total 12
drwxrwxrwt 1 root root 4096 Jan 30 03:44 .
drwxr-xr-x 1 root root 4096 Jan 30 03:43 ..
-rw-r--r-- 1 root root    3 Jan 30 03:44 file
$ ???          clara /tmp/file
$ ls -la /tmp/
total 12
drwxrwxrwt 1 root   root 4096 Jan 30 03:44 .
drwxr-xr-x 1 root   root 4096 Jan 30 03:43 ..
-rw-r--r-- 1 clara root    3 Jan 30 03:44 file
```

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```
$ ???   aux
USER       PID %CPU %MEM    VSZ    RSS TTY       STAT START   TIME COMMAND
root         1  0.0  0.1  18508   3456 pts/0     Ss   03:43   0:00 /bin/
bash
root       523  0.0  0.4  52072   8400 pts/0     T    03:47   0:00 vim
root       524  0.0  0.1  34400   2916 pts/0     R+   03:47   0:00 ps aux
```

```
$ ps aux
USER          PID %CPU %MEM    VSZ    RSS TTY      STAT START    TIME COMMAND
root            1  0.0  0.1  18508   3456 pts/0    Ss   03:43    0:00 /bin/bash
root          523  0.0  0.4  52072   8400 pts/0    T    03:47    0:00 vim
root          524  0.0  0.1  34400   2916 pts/0    R+   03:47    0:00 ps aux
$ ???            -9 523
$ ps aux
USER          PID %CPU %MEM    VSZ    RSS TTY      STAT START    TIME COMMAND
root            1  0.0  0.1  18508   3456 pts/0    Ss   03:43    0:00 /bin/bash
root          525  0.0  0.1  34400   2940 pts/0    R+   03:49    0:00 ps aux
```

```
$ ???
COMMAND PID USER    FD     TYPE DEVICE SIZE/OFF     NODE NAME
bash      1 root    cwd     DIR  0,112     4096  2359919 /tmp
bash      1 root    rtd     DIR  0,112     4096  2491404 /
bash      1 root    txt     REG  0,112  1113504  2359360 /bin/bash
```

```
$  ???       -a
procs -----------memory---------- ---swap-- -----io---- -system-- ———cpu-----
 r  b   swpd    free   inact active   si   so    bi     bo    in    cs us sy id wa st
 2  0      0 1288224 267128 396832    0    0    19      9    90   164  0  0 100  0
0
$  ???       -s
     2037260 K total memory
      288072 K used memory
      396996 K active memory
      267128 K inactive memory
     1287972 K free memory
       22636 K buffer memory
      438580 K swap cache
     1048572 K total swap
```

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```
$ cat cheese.txt
stilton
stilton
cheddar
swiss
swiss
swiss
 $ cat cheese.txt |        ???
stilton
cheddar
swiss
```

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```
$ [???]          df
execve("/bin/df", ["df"], 0x7ffd4c694ac0 /* 9 vars */) = 0
brk(NULL)                              = 0x55ec96cec000
access("/etc/ld.so.nohwcap", F_OK)     = -1 ENOENT (No such file or directory)
access("/etc/ld.so.preload", R_OK)     = -1 ENOENT (No such file or directory)
openat(AT_FDCWD, "/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=8686, ...}) = 0
mmap(NULL, 8686, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7f324b839000
close(3)                               = 0
access("/etc/ld.so.nohwcap", F_OK)     = -1 ENOENT (No such file or directory)
openat(AT_FDCWD, "/lib/x86_64-linux-gnu/libc.so.6", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\260\34\2\0\0\0\0\0"...,
832) = 832
fstat(3, {st_mode=S_IFREG|0755, st_size=2030544, ...}) = 0
```

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```
$    ???    books.txt
```
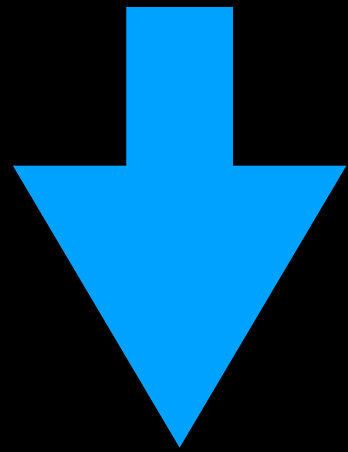
(next screen)

```
Harry Potter & The Half-Blood Prince
Little Women
The Three Body Problem
Kafka on the Shore
Americanah
books.txt (END)
```

```
$ ls
cat-books.txt      fairy-tales.txt    horse-books.txt
scary-stories.txt storybooks.txt
$ [???]        .  -name "*books*"
./storybooks.txt
./horse-books.txt
./cat-books.txt
```

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```
$ [???]  "such great content" > article.txt
$ cat article.txt
such great content
```

```
$  [   ???   ]           | head
   1  git clone --depth=1 https://github.com/Bash-it/
bash-it.git ~/.bash_it
   2  xcode-select --install
   3  git clone --depth=1 https://github.com/Bash-it/
bash-it.git ~/.bash_it
   4  ~/.bash_it/install.sh
   5  exit
   6  exit
   7  ruby -e "$(curl -fsSL https://
raw.githubusercontent.com/Homebrew/install/master/
install)"
   8  brew install gnupg
```

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```
$ [      ???      ] -c the-road-not-taken.txt > the-road-not-
taken.txt.gz
$ ls -la
total 28
drwxrwxrwt 1 root   root 4096 Jan 30 04:27 .
drwxr-xr-x 1 root   root 4096 Jan 30 03:43 ..
-rw-r--r-- 1 root   root  730 Jan 30 04:27 the-road-not-
taken.txt
-rw-r--r-- 1 root   root  450 Jan 30 04:28 the-road-not-
taken.txt.gz
```

```
$ [   ???   ] df
df is /bin/df
$ [   ???   ] which
which is /usr/bin/which
$ [   ???   ] apt-get
apt-get is hashed (/usr/bin/apt-get)
```

```
$         ???         moo=echo
$ moo "this is fun"
this is fun
```

```
$ cat books.csv
2005,Harry Potter & The Half-Blood Prince,J. K. Rowling
1868,Little Women,Louise May Alcott
2008,The Three Body Problem,Liu Cixin
2002,Kafka on the Shore,Haruki Murakami
2013,Americanah,Chimamanda Ngozi Adichie

$       ???        -d ',' -f 2 books.csv
Harry Potter & The Half-Blood Prince
Little Women
The Three Body Problem
Kafka on the Shore
Americanah
```

```
$ [    ???    ] +%Y-%m-%d > current_date.txt
$ cat current_date.txt
2020-03-07
```

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```
$ sudo su
$              ???
root
```

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```
$ [???]       -h access.log
 96M   access.log
$ cat /dev/null > access.log
$ [???]       -h access.log
  0B   access.log
```

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```
$ echo "There are seven colours in the rainbow" |
      ???          en-UK.txt en-CA.txt |
  sed 's/colours/colors/g' > en-US.txt

$ head en*.txt
==> en-CA.txt <==
There are seven colours in the rainbow

==> en-UK.txt <==
There are seven colours in the rainbow

==> en-US.txt <==
There are seven colors in the rainbow
```

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```
$ [    ???    ] ',' '\t' books.csv books.tsv

$ cat books.tsv
2005    Harry Potter & The Half-Blood Prince    J. K. Rowling
1868    Little Women    Louise May Alcott
2008    The Three Body Problem  Liu Cixin
2002    Kafka on the Shore      Haruki Murakami
2013    Americanah      Chimamanda Ngozi Adichie
```

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