

Command Line Murder Mystery -- Solution

Overview

The clues and the interview are what created the suspect list. The interview confirmed that the suspect was male.

Command 1: Build the Suspect List

Full command

```
grep -w 'M' people \
| cut -f1 \
| grep -Fxf memberships/AAA - \
| grep -Fxf memberships/Delta_SkyMiles - \
| grep -Fxf memberships/Terminal_City_Library - \
| grep -Fxf memberships/Museum_of_Bash_History - \
> suspect_list.txt
```

Breakdown

Step	Command	Purpose
1	grep -w 'M' people	Grabs the M single letter from the people file to filter males
2	cut -f1	Grabs the name column from the people file
3-6	grep -Fxf memberships/<file> -	-F = string literal, -x = exact match (e.g. "Joe" not "Joel")

Command 2: Filter by Height (6ft+)

Next, we know from the clues to find someone who is 6ft or taller. This information is available in the vehicles file.

Full command

```
grep -B 1 "Height: [6-8]'" vehicles \
| grep "Owner:" \
| cut -d: -f2 \
| sed 's/^ //' \
| grep -Fxf suspect_list.txt -
```

Breakdown

Step	Command	Purpose
1	grep -B 1 "Height: [6-8]'" vehicles	Finds anyone between 6-8ft tall
2	grep "Owner:"	Keeps only the owner line
3	cut -d: -f2	Extracts the owner name
4	sed 's/^ //'	Trims leading whitespace
5	grep -Fxf suspect_list.txt -	Cross-references tall car owners against the suspect list

Command 3: Check Each Suspect

At this point, the suspect list is short, so we can check the names one at a time. I opted to use an environment variable to store the suspect's name.

Remaining suspects

Mike Bostock
Nikolaus Milatz
Matt Waite
Brian Boyer
Augustin Lozano
Jeremy Bowers

Verification attempts

```
export SUSPECT='Mike Bostock'      -- SORRY, TRY AGAIN.
export SUSPECT='Nikolaus Milatz'    -- SORRY, TRY AGAIN.
export SUSPECT='Matt Waite'        -- SORRY, TRY AGAIN.
export SUSPECT='Brian Boyer'       -- SORRY, TRY AGAIN.
```

```
export SUSPECT='Augustin Lozano' -- SORRY, TRY AGAIN.  
export SUSPECT='Jeremy Bowers' -- CORRECT! GREAT WORK, GUMSHOE.
```

Verification command

```
echo $SUSPECT \  
| $(command -v md5 || command -v md5sum) \  
| grep -qif /dev/stdin encoded \  
&& echo "CORRECT! GREAT WORK, GUMSHOE." \  
|| echo "SORRY, TRY AGAIN."
```

Answer: Jeremy Bowers

Proof:

```
dave@Davids-MacBook-Pro-3 command-line-mystery % echo $SUSPECT | $(command -v md5 || command -v md5sum)  
CORRECT! GREAT WORK, GUMSHOE.
```