

Exercise-Bash

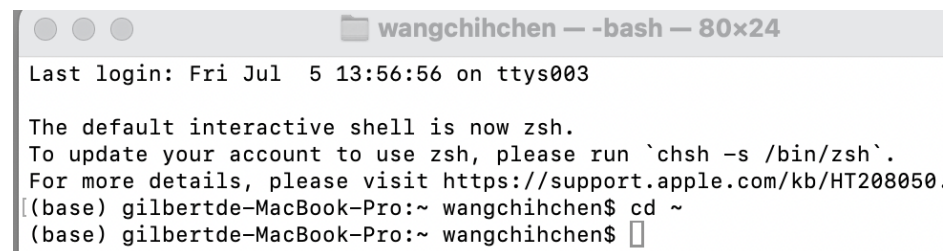
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What is the difference between shell and bash?

- “Shell” is a broad term that refers to any program that provides a command-line interface, “Bash” is a specific type of shell that is widely used in Unix/Linux systems.

Exercise 1:

What is your home directory?



```
wangchihchen — -bash — 80x24
Last login: Fri Jul 5 13:56:56 on ttys003

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
(base) gilbertde-MacBook-Pro:~ wangchihchen$ cd ~
(base) gilbertde-MacBook-Pro:~ wangchihchen$
```

What files/folders exist in your home directory?

```
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ ls
VPPProjects      myfile.txt      未命名.rtf
```

Navigate to it and then navigate back to your notes.

```
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ pwd
/Users/wangchihchen/Documents
```

Exercise 2:

Where does the following command take you? How does it work?

The “cd” command stands for "change directory." It is used to navigate between directories in the file system.

The tilde (~) represents the current user's home directory.

../../: This command part specifies the directory traversal.

```
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ cd ~/Users/wangchihchen/Documents
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ ls
VPPProjects      example.txt      myfile.txt      未命名.rtf
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ pwd
/Users/wangchihchen/Documents
```

Exercise 3:

Read the manual page of ls. What does a flag do? What does the l flag do?

Ans: Ls means listing the current files and folders in a directory.

The “-a” flag stands for "all". When you use the “-a” flag with the ls command, it lists all files and directories.

```
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ ls -a
.          .DS_Store    VPPProjects  myfile.txt
..         .localized   example.txt  未命名.rtf
```

Exercise 4:

Create a new file with touch command. for instance touch myfile.txt. Run stat myfile.txt

what information do you get?

Ans: Create a new file (example.txt):

```
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ cd ~/Documents ]
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ touch example.txt ]
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ ls ]
VPPProjects      example.txt      myfile.txt      未命名.rtf
```

Information of the file:

```
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ stat myfile.txt
16777221 32701637 -rw-r--r-- 1 wangchihchen staff 0 13 "Jul  5 14:27:02 2024" "Jul  5 14:11:49 2024" "Jul  5 14:11:05 2024" 4096 8 0 myfile.txt
```

Exercise 5:

Run ls and from there list select a file. Now run 'ls -l' to display the details of the files, showing that it has been created or updated. what information does it give you regarding the myfile.txt and your selected file.

```
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ ls -l myfile.txt example.txt
-rw-r--r-- 1 wangchihchen staff 0 7 5 14:56 example.txt
-rw-r--r-- 1 wangchihchen staff 13 7 5 14:11 myfile.txt
```

This information helps us understand file permissions, ownership, and size.

Exercise 6:

Add the following line. This line is my first line to myfile.txt. Then run cat myfile.txt to show the line is added.

Ans: I will use echo to print the string of text or the value of a variable on the terminal.

```
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ cd ~/Documents
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ echo "This line is my first
line" >> myfile.txt
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ cat myfile.txt
Data Science
This line is my first line
```

Exercise 7:

Run `touch myfile.txt`, then run `ls -l myfile.txt`. Has the “timestamp” for the file `myfile.txt` been updated? Show the output. Note: Another common use of the `touch` command is to update the timestamps of an existing file.

Ans: The difference in the modification time (12:15vs.12:18) confirms that the timestamp for `myfile.txt` has been updated by the `touch` command.

```
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ cd ~/Documents
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ touch myfile.txt
(base) gilbertde-MacBook-Pro:Documents wangchihchen$ ls -l myfile.txt
-rw-r--r--  1 wangchihchen  staff  40  7  6 12:15 myfile.txt
```

```
[(base) gilbertde-MacBook-Pro:Documents wangchihchen$ touch myfile.txt ]
[(base) gilbertde-MacBook-Pro:Documents wangchihchen$ ls -l myfile.txt ]
-rw-r--r--  1 wangchihchen  staff  40  7  6 12:18 myfile.txt
```