

HW1 – Exercise-Bash

Exercise 1: What is your home directory? What files/folders exist in your home directory? Navigate to it and then navigate back to your notes.

(1) My home directory: /Users/michellelee

(2) List files/folders in my home directory:

Applications	Movies
Desktop	Music
Documents	Pictures
Downloads	Public
Exercise-Bash.html.save	iCloud雲碟 (封存檔)
Library	myfile.txt

(3) To navigate to it and back to notes:

```
michellelee@MichelledAir ~ % echo $HOME
/Users/michellelee
michellelee@MichelledAir ~ % ls ~
Applications      Movies
Desktop           Music
Documents         Pictures
Downloads         Public
Exercise-Bash.html.save  iCloud雲碟 (封存檔)
Library           myfile.txt
michellelee@MichelledAir ~ % cd ~
michellelee@MichelledAir ~ % pwd
/Users/michellelee
michellelee@MichelledAir ~ % cd -
~
michellelee@MichelledAir ~ % pwd
/Users/michellelee
michellelee@MichelledAir ~ %
```

Exercise 2: Where does the following command take you? How does it work?

The command `cd ../../../../` does the following:

`~` takes you to your home directory

`/../../` then goes up three directory levels from there

This could take you to the root directory (/) or close to it, depending on how deep your home directory is in the file system.

Exercise 3:

(1) To read the manual for `ls`.

(2) The `-a` flag shows all files, including hidden files (those starting with a dot).

The `-l` flag uses a long listing format, showing detailed information about each file. (owner, size, permissions, and modification time.)

The following is a screenshot of some results after typing `man ls`.

```
LS(1)                                General Commands Manual                                LS(1)

NAME
  ls - list directory contents

SYNOPSIS
  ls [-@BCFGHILOPRSTUWabodefhiklmnopqrstuvwxy1%,] [--color=when]
    [-D format] {file ...}

DESCRIPTION
  For each operand that names a file of a type other than directory, ls
  displays its name as well as any requested, associated information. For
  each operand that names a file of type directory, ls displays the names
  of files contained within that directory, as well as any requested,
  associated information.

  If no operands are given, the contents of the current directory are
  displayed. If more than one operand is given, non-directory operands are
  displayed first; directory and non-directory operands are sorted
  separately and in lexicographical order.

  The following options are available:

  -@      Display extended attribute keys and sizes in long (-l) output.

  -A      Include directory entries whose names begin with a dot ('.')
  except for . and .. . Automatically set for the super-user unless
  -I is specified.

  -B      Force printing of non-printable characters (as defined by
  ctype(3) and current locale settings) in file names as \xxx,
  where xxx is the numeric value of the character in octal. This
  option is not defined in IEEE Std 1003.1-2008 ("POSIX.1").

  -C      Force multi-column output; this is the default when output is to
  a terminal.

  -D format
  When printing in the long (-l) format, use format to format the
  date and time output. The argument format is a string used by
  strftime(3). Depending on the choice of format string, this may
  result in a different number of columns in the output. This
  option overrides the -Y option. This option is not defined in
  IEEE Std 1003.1-2008 ("POSIX.1").

  -F      Display a slash ('/') immediately after each pathname that is a
  directory, an asterisk (*) after each that is executable, an at
  sign (@) after each symbolic link, an equals sign (=) after
  each socket, a percent sign (%) after each whiteout, and a
  vertical bar (|) after each that is a FIFO.

  -G      Enable colorized output. This option is equivalent to defining
  CLICOLOR or COLORTERM in the environment and setting
  --color=auto. (See below.) This functionality can be compiled
  out by removing the definition of COLORLS. This option is not
  defined in IEEE Std 1003.1-2008 ("POSIX.1").

  -H      Symbolic links on the command line are followed. This option is
  assumed if none of the -F, -d, or -l options are specified.

  -I      Prevent -A from being automatically set for the super-user. This
  option is not defined in IEEE Std 1003.1-2008 ("POSIX.1").

  -L      Follow all symbolic links to final target and list the file or
  directory the link references rather than the link itself. This
  option cancels the -P option.
```

Exercise 4: Create a new file with touch command. for instance `touch myfile.txt`.

Run `stat myfile.txt` what information do you get?

Create a file: `touch myfile.txt`., and then run `stat myfile.txt`

Here is the information I got:

```
16777233 25237963 -rw-r--r-- 1 michellelee staff 0 27 "Jul  4 20:27:52
2024" "Jul  4 20:27:50 2024" "Jul  4 20:27:50 2024" "Jul  4 16:47:41
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.

```
-rw-r--r--      1 michellelee  staff      27 Jul  4 20:27 myfile.txt
```

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.

```
michellelee@MichellededeAir ~ % echo "This line is my first line" >
myfile.txt
michellelee@MichellededeAir ~ % cat myfile.txt
This line is my first line
```

Exercise 7: Run `touch myfile.txt` then run `ls -l myfile.txt` does the “timestamp” for the file `myfile.txt` is updated? Show the output. *Note: Another common use of the touch command is to update the timestamps of an existing file.*

This will update the timestamp of `myfile.txt` and show the new timestamp in the output.

```
michellelee@MichellededeAir ~ % touch myfile.txt
michellelee@MichellededeAir ~ % ls -l myfile.txt
```

```
-rw-r--r--  1 michellelee  staff   27 Jul   4 20:42 myfile.txt
```

*** The following is all the coding and screenshots of this homework:**

```
michellelee@MichellededeAir ~ % echo $HOME
/Users/michellelee
michellelee@MichellededeAir ~ % ls ~
Applications          Movies
Desktop              Music
Documents             Pictures
Downloads             Public
Exercise-Bash.html.save      iCloud 雲碟（封存檔）
Library               myfile.txt
michellelee@MichellededeAir ~ % cd ~
michellelee@MichellededeAir ~ % pwd
/Users/michellelee
michellelee@MichellededeAir ~ % cd -
~
michellelee@MichellededeAir ~ % pwd
/Users/michellelee
michellelee@MichellededeAir ~ % man ls
Unknown locale, assuming C
michellelee@MichellededeAir ~ % touch myfile.txt
michellelee@MichellededeAir ~ % stat myfile.txt
16777233 25237963 -rw-r--r--  1 michellelee staff 0 27 "Jul   4 20:27:52
2024" "Jul   4 20:27:50 2024" "Jul   4 20:27:50 2024" "Jul   4 16:47:41
2024" 4096 8 0 myfile.txt
michellelee@MichellededeAir ~ % ls
Applications          Movies
Desktop              Music
Documents             Pictures
Downloads             Public
Exercise-Bash.html.save      iCloud 雲碟（封存檔）
Library               myfile.txt
michellelee@MichellededeAir ~ % ls -l
total 16
drwx-----@   3 michellelee  staff    96 Sep  2  2023 Applications
drwx-----@  24 michellelee  staff   768 Jul  3 16:19 Desktop
drwx-----@   4 michellelee  staff   128 Jul  4 12:30 Documents
drwx-----@ 291 michellelee  staff  9312 Jul  4 14:48 Downloads
-rw-----   1 michellelee   staff  2959 Jul  4 12:30 Exercise-
Bash.html.save
drwx-----@  92 michellelee  staff  2944 Jul  4 11:44 Library
drwx-----   5 michellelee  staff   160 Sep  4  2023 Movies
drwx-----+   6 michellelee  staff   192 Aug 20  2023 Music
```

```

drwx-----+ 14 michellelee staff 448 Sep 8 2023 Pictures
drwxr-xr-x+ 4 michellelee staff 128 Jul 26 2023 Public
drwx----- 4 michellelee staff 128 Jul 26 2023 iCloud 雲碟 (封存檔)
-rw-r--r-- 1 michellelee staff 27 Jul 4 20:27 myfile.txt
michellelee@MichellededeAir ~ % echo "This line is my first line" >
myfile.txt
michellelee@MichellededeAir ~ % cat myfile.txt
This line is my first line
michellelee@MichellededeAir ~ % touch myfile.txt
michellelee@MichellededeAir ~ % ls -l myfile.txt
-rw-r--r-- 1 michellelee staff 27 Jul 4 20:42 myfile.txt
michellelee@MichellededeAir ~ %

```

```

michellelee@MichellededeAir ~ % echo $HOME
/Users/michellelee
michellelee@MichellededeAir ~ % ls ~
Applications      Movies
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Documents         Pictures
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Applications      Movies
Desktop           Music
Documents         Pictures
Downloads         Public

```

```

Documents      Pictures
Downloads      Public
Exercise-Bash.html.save  iCloud 雲碟 (封存檔)
Library        myfile.txt
michellelee@MichellededeAir ~ % ls -l
total 16
drwx-----@ 3 michellelee staff 96 Sep 2 2023 Applications
drwx-----@ 24 michellelee staff 768 Jul 3 16:19 Desktop
drwx-----@ 4 michellelee staff 128 Jul 4 12:30 Documents
drwx-----@ 291 michellelee staff 9312 Jul 4 14:48 Downloads
-rw----- 1 michellelee staff 2959 Jul 4 12:30 Exercise-Bash.html.save
drwx-----@ 92 michellelee staff 2944 Jul 4 11:44 Library
drwx----- 5 michellelee staff 160 Sep 4 2023 Movies
drwx-----+ 6 michellelee staff 192 Aug 20 2023 Music
drwx-----+ 14 michellelee staff 448 Sep 8 2023 Pictures
drwxr-xr-x+ 4 michellelee staff 128 Jul 26 2023 Public
drwx----- 4 michellelee staff 128 Jul 26 2023 iCloud 雲碟 (封存檔)
-rw-r--r-- 1 michellelee staff 27 Jul 4 20:27 myfile.txt
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michellelee@MichellededeAir ~ % cat myfile.txt
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michellelee@MichellededeAir ~ % ls -l myfile.txt
-rw-r--r-- 1 michellelee staff 27 Jul 4 20:42 myfile.txt

```