

## 一、学习 ls 命令

### 1. ls 命令：显示当前目录下的文件

```
apple — zsh — 80x24
Last login: Mon Mar 10 16:26:16 on ttys000
(base) apple@appledeMacBook-Pro ~ % ls
Applications      Music              corr1.rtf
Desktop           Pictures           corr1.txt
Documents         Public            corr1.xml
Downloads         Untitled.ipynb    corr2.docx
E-Study          Zotero            java.log.58948
Library          anaconda3         mydata.dta
Movies           anaconda_projects week01
(base) apple@appledeMacBook-Pro ~ % pwd
/Users/apple
(base) apple@appledeMacBook-Pro ~ %

-----
(base) apple@appledeMacBook-Pro / % cd
(base) apple@appledeMacBook-Pro ~ % ls
Applications      Music              corr1.rtf
Desktop           Pictures           corr1.txt
Documents         Public            corr1.xml
Downloads         Untitled.ipynb    corr2.docx
E-Study          Zotero            java.log.58948
Library          anaconda3         mydata.dta
Movies           anaconda_projects week01
(base) apple@appledeMacBook-Pro ~ % ls anaconda3
anaconda3
(base) apple@appledeMacBook-Pro ~ % ls ..
Shared  apple
(base) apple@appledeMacBook-Pro ~ % man ls
(base) apple@appledeMacBook-Pro ~ %
```

## 2. 理解概念

目录树：文件系统的层级结构

根目录：是整个文件系统的最顶层目录

路径：从一个特定的起始点到目标文件所经过的一系列目录

绝对路径：从根目录开始的完整路径

相对路径：相对于当前工作目录的路径，它不包含根目录 /

## 3. 学习 pwd 命令

pwd 命令：输出当前工作目录的路径

```
(base) apple@appledeMacBook-Pro ~ % pwd
/Users/apple
(base) apple@appledeMacBook-Pro ~ %
```

## 4. 理解 Shell

在 Shell 中，命令和其选项、参数之间通常使用空格进行分隔

ls -l /user 中 ls 是命令，l 是选项，/user 是参数

## 5. 阅读 man ls 手册，并尝试 ls 命令常用的选项

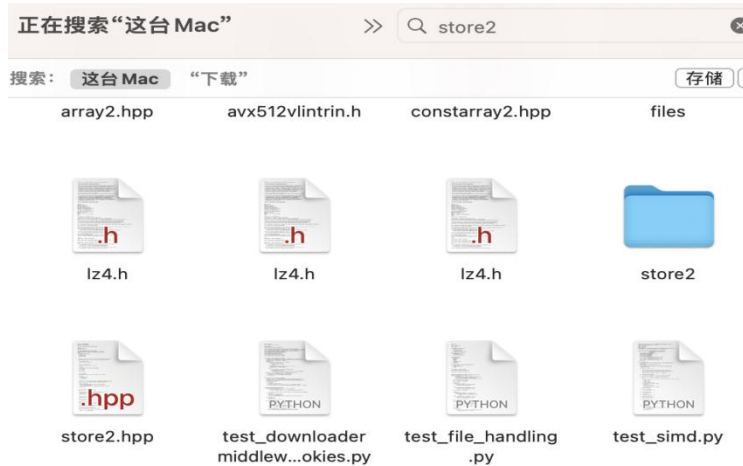
```
ls(1) — Linux manual page
NAME | SYNOPSIS | DESCRIPTION | AUTHOR | REPORTING BUGS | COPYRIGHT | SEE ALSO | COLOPHON
-----
Search online pages
LS(1) User Commands LS(1)
NAME
ls - list directory contents
SYNOPSIS
ls [OPTION]... [FILE]...
DESCRIPTION
List information about the FILES (the current directory by default). Sort entries alphabetically if none of -ctuvSUX nor --sort is specified.
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
```



```

(base) apple@appledeMacBook-Pro Desktop % cp -r store ../Downloads
(base) apple@appledeMacBook-Pro Desktop % cp -r store ../Downloads/store2
(base) apple@appledeMacBook-Pro Desktop %

```



### 3. 移动（重命名）文件/文件夹

```

(base) apple@appledeMacBook-Pro Desktop % mv ../Downloads/store2 ./
(base) apple@appledeMacBook-Pro Desktop %

```

## 三、使用 mkdir 命令创建一个名为 myproject 的新文件夹

### 1. 创建新文件

```

(base) apple@appledeMacBook-Pro Desktop % mkdir myproject
(base) apple@appledeMacBook-Pro Desktop % ls -l
total 117416

```

### 2. 用 ls 命令查看复制进去的文件/文件夹的大小和修改时间

```

(base) apple@appledeMacBook-Pro Desktop % ls -alh myproject/
total 0
drwxr-xr-x  3 apple  staff   96B  3  13  20:51 .
drwx-----@ 108 apple  staff  3.4K  3  13  20:51 ..
drwxr-xr-x  4 apple  staff  128B  3  13  12:13 store
(base) apple@appledeMacBook-Pro Desktop %

```

### 3. 用 rm 命令删除这些文件/文件夹

```

(base) apple@appledeMacBook-Pro Desktop % rm xyz.rtf
(base) apple@appledeMacBook-Pro Desktop % rm -r myproject/
(base) apple@appledeMacBook-Pro Desktop % rm store
rm: store: No such file or directory
(base) apple@appledeMacBook-Pro Desktop % rm -r store
rm: store: No such file or directory
(base) apple@appledeMacBook-Pro Desktop % rm -r store2
(base) apple@appledeMacBook-Pro Desktop %

```

## 四、df 命令和 du 命令

### 1. 使用 df 命令查看磁盘剩余空间

```

(base) apple@appledeMacBook-Pro Desktop % df
Filesystem            512-blocks    Used Available Capacity iused   ifree
%iused Mounted on
/dev/disk1s4s1         195312496  18255992  21008416    47%  356846 105042080
0% /
devfs                  382        382         0  100%    662         0
100% /dev
/dev/disk1s2           195312496  3645344   21008416    15%    956 105042080
0% /System/Volumes/Preboot
/dev/disk1s6           195312496  2099264   21008416    10%     2 105042080
0% /System/Volumes/VM
/dev/disk1s5           195312496    5056     21008416     1%    20 105042080
0% /System/Volumes/Update
/dev/disk1s1           195312496 147799624  21008416    88% 1512474 105042080
1% /System/Volumes/Data
ntfs://disk0s3/BOOTCAMP 293094168 225408960  67685208    77%     1     0
100% /Volumes/BOOTCAMP
map auto_home          0          0         0  100%     0     0
100% /System/Volumes/Data/home
(base) apple@appledeMacBook-Pro Desktop %

```

```
(base) apple@appleMacBook-Pro Desktop % df -h
Filesystem      Size  Used Avail Capacity iused   ifree %iused  Mo
unt on
/dev/disk1s4s1  93Gi  8.7Gi  10Gi    47%   356846 105032720    0%   /
devfs           191Ki  191Ki    0Bi   100%     662      0  100%  /d
ev
/dev/disk1s2    93Gi  1.7Gi  10Gi    15%    956 105032720    0%   /S
ystem/Volumes/Preboot
/dev/disk1s6    93Gi  1.0Gi  10Gi    10%      2 105032720    0%   /S
ystem/Volumes/VM
/dev/disk1s5    93Gi  2.5Mi  10Gi     1%     20 105032720    0%   /S
ystem/Volumes/Update
/dev/disk1s1    93Gi  70Gi  10Gi    88% 1512482 105032720    1%   /S
ystem/Volumes/Data
ntfs://disk0s3/BOOTCAMP 140Gi 107Gi  32Gi    77%      1      0  100%  /V
olumes/BOOTCAMP
map auto_home    0Bi   0Bi   0Bi   100%      0      0  100%  /S
ystem/Volumes/Data/home
(base) apple@appleMacBook-Pro Desktop %
```

## 2.使用 du 命令查看文件/文件夹占用的磁盘空间

```
(base) apple@appleMacBook-Pro ~ % cd week01
(base) apple@appleMacBook-Pro week01 % pwd
/Users/apple/week01
(base) apple@appleMacBook-Pro week01 % du -d 0 .
4024 .
(base) apple@appleMacBook-Pro week01 % du -h -d 0 .
2.0M .
(base) apple@appleMacBook-Pro week01 %
```

## 五、Bash 命令

### 1. du -s \*

- **du** (disk usage): 统计文件/目录磁盘使用空间的命令
- **-s** (summarize): 只显示每个参数 (文件/目录) 的总用量, 不显示子目录详情
- **\***: 通配符表示当前目录下的所有可见文件和子目录
- **作用**: 会输出当前目录下每个文件/目录的磁盘占用大小 (默认单位是 KB)

### 2. | sort -nr

- **|** (管道符): 将前一个命令的输出传递给下一个命令
- **sort**: 排序命令
  - **-n** (numeric-sort): 按数值大小排序 (默认是按字符串排序, 可能导致  $10 < 2$ )
  - **-r** (reverse): 逆序排列 (从大到小)
- **作用**: 将 **du** 的输出按磁盘占用从大到小排序

### 3. > ~/report.txt

- **>**: 重定向符号, 将命令的输出写入文件 (覆盖原有内容)
- **~/report.txt**: 用户主目录下的 **report.txt** 文件 (如 **/home/username/report.txt**)
- **作用**: 将排序后的结果保存到指定文件中

## 修改后应用

```
(base) apple@appleMacBook-Pro ~ % ls -l ~/report.rtf
-rw-r--r--  1 apple  staff  319   3 14 23:14 /Users/apple/report.rtf
(base) apple@appleMacBook-Pro ~ % cat ~/report.rtf
38005832      Library
10825040      anaconda3
6113144      Desktop
3847192      Downloads
2594504      Pictures
737536       Documents
237704       Zotero
4024         week01
912          E-Study
648          Music
408          Movies
64           anaconda_projects
24           corr1.xml
16           corr2.docx
8            report.txt
8            mydata.dta
8            java.log.58948
```

## 六、创建私人代码仓库

## 1.创建私人代码仓库



## 2. 将一些自己的工作文件添加到仓库里

```
[(base) apple@appledeMacBook-Pro mywork % git log
commit 73573b859dd04505f2114a8fc533c2e6225a4c78 (HEAD -> master)
Author: zrb1016 <zrb1016@noreply.gitcode.com>
Date: Fri Mar 14 23:27:31 2025 +0800
```

```
added some files for test
(base) apple@appledeMacBook-Pro mywork %

[(base) apple@appledeMacBook-Pro mywork % git push
[Enter passphrase for key '/Users/apple/.ssh/id_ed25519':
枚举对象中：3，完成。
对象计数中：100% (3/3)，完成。
使用 4 个线程进行压缩
压缩对象中：100% (2/2)，完成。
写入对象中：100% (3/3)，458 字节 | 458.00 KiB/s，完成。
总共 3 (差异 0)，复用 0 (差异 0)，包复用 0 (来自 0 个包)
remote: Start Git Hooks Checking
To gitcode.com:zrb1016/mywork.git
* [new branch] master -> master
```

zrb1016	added some files for test	73573b85	创建于 4 分钟前	历史提交
文件	最后提交记录	最后更新时间		
report.rtf	added some files for test	4 分钟前		