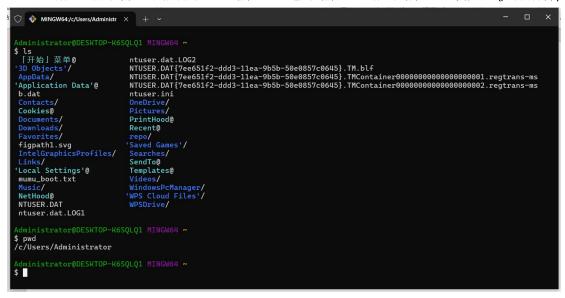
- 1.学习使用 Is 命令,检查自己计算机最常用的 "桌面"、"下载"、"文档" 等文件夹的真实的文件系统路径是什么
- (1) 理解 "目录树"、"根目录"、"路径"、"绝对路径"、"相对路径" 等概念 (/ 分隔符)



(2)理解 "当前工作目录" 的概念,掌握 pwd 命令

pwd: 当前工作目录

Is: 当前工作目录下的列表

tab 键自动补全

```
figpath1.svg 'Saved Games'/
IntelGraphicsProfiles/
Links/ 'Local Settings' Templates@
mumu_boot.txt Videos/
Music/ WindowsPcManager/
NutlBer.DAT WPS Cloud Files'/
WFSDrive/
ntuser.dat.LOG1

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~

$ pwd /c/Users/Administrator

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Music

$ pwd /c/Users/Administrator/Music

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Music

$ ls
abc.txt desktop.ini laser.rgb

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Music

$ cat abc.txt
hello
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Music
```

```
The content of the c
```

cd.. 回到上级文件夹

cd ../Documents/ 回到上级文件夹的另一个下级文件夹 Documents

(3) 理解 Unix 路径的标准写法,以及 Windows 路径与 Unix 路径的写法差异 cd/: 跟目录

cat abc.txt: 相对路径(注意当前目录)

cat /C/Users/Administrator/Documents/abc.txt: 绝对路径

```
$ ls
bin/ dev/ git-bash.exe* LICENSE.txt proc/
                                                                         unins000.ex
                                                           tmp/
                           mingw64/
                                        ReleaseNotes.html unins000.dat unins000.ms
q
$ pwd
bin/ dev/ git-bash.exe* LICENSE.txt proc/
                                                           tmp/
                                                                         unins000.ex
e* usr/
cmd/ etc/ git-cmd.exe*
                           mingw64/
                                       ReleaseNotes.html unins000.dat unins000.ms
g
$ cat abc.txt
cat: abc.txt: No such file or directory
Administrator@DESKTOP-K6SQLQ1 MINGW64 /
$ cat /C/Users/Administrator/Documents/abc.txt
hello world
Administrator@DESKTOP-K6SQLQ1 MINGW64 / $ pwd
$
```

Windows 路径的写法: \

Unix 路径的写法: /

- (4) 理解 Shell (Bash、Zsh) 的基本语法结构 (空格分隔、短选项、长选项、参数)
- (5) 阅读在线版 man ls 手册,尝试 ls 命令的一些常用选项

Is ..: 上级目录

Is -a: 显示以.开头的文件

蓝色文件夹, 白色普通文件

Is -a --color=never: 不显示颜色

```
$ ls -a --color=never
                     IntelGraphicsProfiles/
                    Links/
'Local Settings'@
mumu_boot.txt
 .conda/
 .condarc
 .continuum/
                     Music/
 .gitconfig
                     NetHood@
                     NTUSER. DAT
 .jupyter/
 .lesshst
                     ntuser.dat.LOG1
                     .local/
 .matplotlib/
 . MUMUVMM/
 .spss/
 .spyder-py3/
                     ntuser.ini
 .ssh/
.suwell/
                     OneDrive/
                     Pictures/
 .vscode/
「开始」菜单@
                     PrintHood@
                    Recent@
'3D Objects'/
AppData/
                     repo/
                    'Saved Games'/
'Application Data'@ Searches/
                     SendTo@
b.dat
                     Templates@
Contacts/
Cookies@
                    Videos/
Documents/
Downloads/
                    WindowsPcManager/
'WPS Cloud Files'/
Favorites/
                    WPSDrive/
figpath1.svg
```

中间空格打开多个

```
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~

$ ls Downloads/ WPSDrive/

Downloads/:

WPSDrive/:

840684299/
```

打开详细信息

Is -alhS: 按大小排序

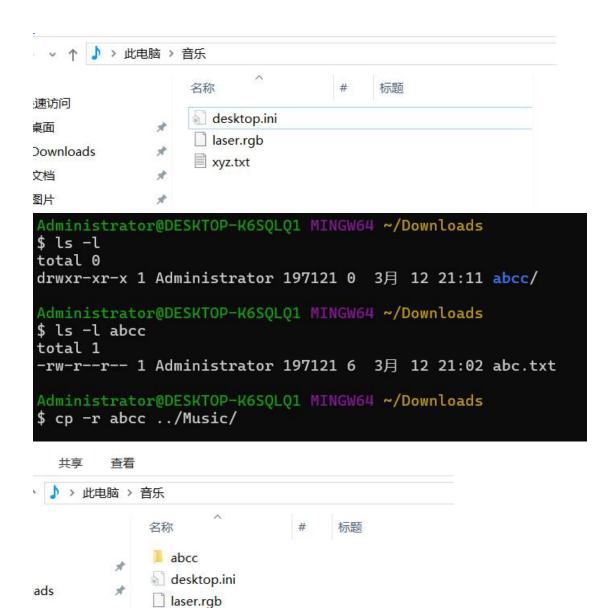
```
| State | Stat
```

Is -alht: 按时间排序

2.使用 cp 命令复制文件/文件夹,使用 mv 命令移动 (重命名) 文件/文件夹

```
×
MINGW64:/c/Users/Administr X
 Templates@
 Videos/
WindowsPcManager/
'WPS Cloud Files'/
WPSDrive/
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ cd Downloads/
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ ls -l
total 0
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ ls -l
total 1
-rw-r--r-- 1 Administrator 197121 6 3月 12 21:02 abc.txt
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ cat abc.txt
abcabc
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ cat abc.txt ../Music/
abcabccat: ../Music/: Is a directory
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ cp abc.txt ../Music/
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
```

```
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads $ cp abc.txt ../Music/xyz.txt
```



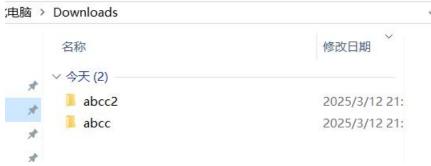
```
$ pwd
/c/Users/Administrator/Downloads

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ mv ../Music/abc.txt ./
mv: cannot stat '../Music/abc.txt': No such file or directory

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ mv ../Music/abcc2 ./

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ \_
```

xyz.txt



3.使用 mkdir 命令创建一个名为 myproject 的新文件夹,然后从图形界面 (比如 Windows 的 "文件资源管理器"、macOS 的"访达") 复制粘贴某些文件/文件夹进去,用 Is 命令查看复制进去的文件/文件夹的大小和修改时间,最后用 rm 命令删除这些文件/文件夹

```
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ mkdir myproject
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ ls -l
total 0

      drwxr-xr-x
      1
      Administrator
      197121
      0
      3月
      12
      21:11
      abcc/

      drwxr-xr-x
      1
      Administrator
      197121
      0
      3月
      12
      21:26
      abcc2/

      drwxr-xr-x
      1
      Administrator
      197121
      0
      3月
      12
      21:29
      myproject/

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ ls -alh myproject/
total 4.0K
drwxr-xr-x 1 Administrator 197121 0
                                                           3月 12 21:29 ./
drwxr-xr-x 1 Administrator 197121 0
                                                            3月 12 21:29 ../
drwxr-xr-x 1 Administrator 197121 0
                                                            3月 12 21:29 abcc/
drwxr-xr-x 1 Administrator 197121 0
                                                            3月 12 21:29 abcc2/
```

删除

```
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ rm abc.txt

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ rm -r myproject/
```

4.使用 df 命令查看磁盘剩余空间,使用 du 命令查看文件/文件夹占用的磁盘空间

```
П
                                                                          ×
MINGW64:/c/Users/Administr × + v
Administrator@DESKTOP-K6SOL01 MINGW64 ~/Downloads
Filesystem
                  1K-blocks
                                 Used Available Use% Mounted on
D:/haozhiting/Git 394200060 238717856 155482204 61% /
                                      24865388
                  104864764 79999376
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
$ ls -al /
total 5600
drwxr-xr-x 1 Administrator 197121
                                                7 18:27 ./
                                          3月
                                        0 3月
                                                7 18:27
drwxr-xr-x 1 Administrator 197121
drwxr-xr-x 1 Administrator 197121
                                        0 3月
                                                7 18:27 bin/
                                                7 18:27 cmd/
drwxr-xr-x 1 Administrator 197121
                                        0 3月
drwxr-xr-x 1 Administrator 197121
                                        0
                                           3月
                                                7 18:27 dev/
                                                7
drwxr-xr-x
           1
             Administrator 197121
                                        0
                                           3月
                                                  18:27 etc/
                                           2月 13 11:00 git-bash.exe*
-rwxr-xr-x 1 Administrator 197121
                                   138640
-rwxr-xr-x 1 Administrator 197121
                                   138112
                                          2月
                                               13 11:00 git-cmd.exe*
     --r-- 1 Administrator 197121
                                    18765
                                           2月
                                              13 11:12 LICENSE.txt
                                                7 18:27 mingw64/
drwxr-xr-x 1 Administrator 197121
                                        0
                                           3月
dr-xr-xr-x 8 Administrator 197121
                                               12 21:34 proc/
                                        0
                                           3月
      -r-- 1 Administrator 197121
                                   276810
                                           2月
                                               13 11:12 ReleaseNotes.html
drwxr-xr-x 1 Administrator 197121
                                        0
                                           3月
                                               12 21:34 tmp/
      -r-- 1 Administrator 197121 1292964
                                                7 18:27 unins000.dat
                                           3月
-rwxr-xr-x 1 Administrator 197121 3384048
                                           3月
                                                7 18:05 unins000.exe*
-rw-r--r-- 1 Administrator 197121
                                                7 18:27 unins000.msg
                                    24183
                                           3月
drwxr-xr-x 1 Administrator 197121
                                        0
                                           3月
                                                7 18:27 usr/
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads
```

```
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/Downloads

$ df -h
Filesystem Size Used Avail Use% Mounted on
D:/haozhiting/Git 376G 228G 149G 61% /
C: 101G 77G 24G 77% /c
```

5.使用某个 AI 大模型 (比如豆包,或 DeepSeek) 解释下面的 Bash 命令,du-s*|sort-nr>~/report.txt

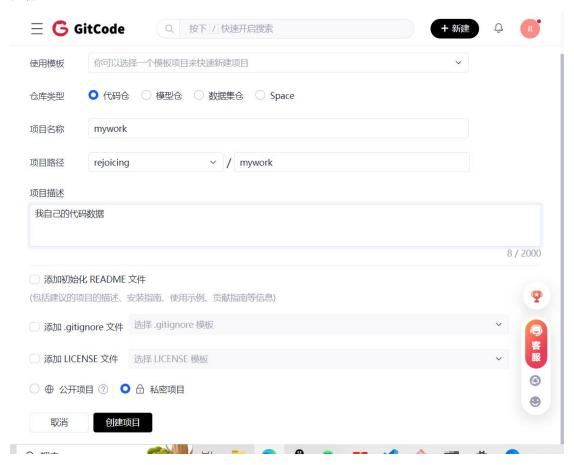
豆包回答:

- (1) `du` 是 "disk usage" 的缩写,用于查看文件或目录所占用的磁盘空间。
- (2) `-s` 选项表示 "summarize",即只显示每个参数所占用的总磁盘空间的摘要信息,而不是递归显示每个子目录和文件的详细信息。
- (3) ** 是通配符,表示匹配当前目录下的所有文件和目录(不包括隐藏文件和目录)。所以 `du -s *` 会计算当前目录下每个文件和目录占用的磁盘空间总量,并输出相应的摘要信息。
- (4) '|': 管道符 '|' 用于将前一个命令的输出作为后一个命令的输入。在这里, 'du -s *'的输出会作为 'sort -nr'的输入。
- (5) 'sort' 命令用于对输入的数据进行排序。
- (6) '-n' 选项表示按照数值大小进行排序(默认是按字符顺序排序)。
- (7) `-r` 选项表示 "reverse",即按降序排列。所以 `sort -nr` 会将 `du -s *` 输出的磁盘空间占用量按数值大小从大到小进行排序。
- (8) '> '是输出重定向符号,它会将 'sort -nr' 的输出结果重定向到指定的文件中,而不是显示在终端上。

(9) `~/report.txt` 是目标文件的路径,`~` 表示用户的主目录。所以整个 `> ~/report.txt` 会将排序后的结果保存到用户主目录下的 `report.txt` 文件中。

综上所述,这条 `bash` 命令的作用是计算当前目录下每个文件和目录占用的磁盘空间总量,将结果按占用空间大小从大到小排序,并将排序后的结果保存到用户主目录下的 `report.txt` 文件中。

6.在 GitCode 平台新建一个你个人的私密的代码仓库 (非公开,别人看不到), clone 到本地,将一些你自己的工作文件 (文本文件或二进制文件都可以) 添加到仓库里, push 到平台上托管



```
×
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/repo1
$ cd
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ cd repo1
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1
/c/Users/Administrator/repol
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1
$ git clone git@gitcode.com:rejoicing/mywork.git
Cloning into 'mywork'...
warning: You appear to have cloned an empty repository.
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1
$ ls -l
total 0
drwxr-xr-x 1 Administrator 197121 0 3月 12 22:01 mywork/
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1
$ cd mywork/
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)
$ ls -l
total 0
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)
$ git log
fatal: your current branch 'main' does not have any commits yet
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)
$
```

```
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)
$ cp ~/.gitconfig ./
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)
$ ls -al
total 5
drwxr-xr-x 1 Administrator 197121 0 3月 12 22:04 ./
drwxr-xr-x 1 Administrator 197121 0 3月 12 22:01 ../
drwxr-xr-x 1 Administrator 197121 0 3月 12 22:01 .git/
-rw-r--r-- 1 Administrator 197121 211 3月 12 22:04 .gitconfig
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)
$ git status
On branch main
No commits yet
Untracked files:
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to trac
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)
$ git add .
warning: in the working copy of '.gitconfig', LF will be replaced by CRLF
the next time Git touches it
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)
$ git status
On branch main
No commits yet
No commits yet
Changes to be committed:
   (use "git rm --cached <file>..." to unstage)
                     .gitconfig
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)
$ git commit -m 'added some files for test'
[main (root-commit) 6f473de] added some files for test
 1 file changed, 8 insertions(+)
 create mode 100644 .gitconfig
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)
$ git log
commit 6f473de594e0ea5907dcd1806510dfa48fe13972 (HEAD -> main)
Author: rejoicing <rejoicing@noreply.gitcode.com>
          Wed Mar 12 22:08:12 2025 +0800
Date:
     added some files for test
```

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo1/mywork (main)

\$ git push
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 385 bytes | 385.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Start Git Hooks Checking
ASSED]
To gitcode.com:rejoicing/mywork.git
 * [new branch] main -> main

