LUO Qiuqi (罗秋琪)'s TA report for assignment05
SID: 12132210
Github: https://github.com/luoqiuqilqq/ESE5023_Assignments_12132210
Responsible TA: HUANG Hao
Grade: 28

1. More Linux Commands

1.1 **[2** **points]** Make a link called data_demo_link to data_demo folder using ln.

1.2 [2 points] Print your home directory using echo.

1.3 [2 points] Go to data_demo/molecules/, make an empty file test.pdb with touch.

1.4 [3 points] Find how many files in data_demo/data/elements/ using find.

-type - 指定要搜索的文件类型，在上面的情况下，f 表示查找所有常规文件。

1.5[2points] Compare data_demo/data/pdb/ethane.pdb and data_demo/data/pdb/ethanol.pdb with diff.

```
[ese-luoqq@login01 ~]$ diff ./data_demo/data/pdb/ethane.pdb ./data_demo/data/pdb/ethanol.pdb
1,11c1,12
< COMPND      ETHANE
< AUTHOR      DAVE WOODCOCK  95 12 18
< ATOM     1  C        1       -0.752   0.001  -0.141  1.00  0.00
< ATOM     2  C        1        0.752  -0.001   0.141  1.00  0.00
< ATOM     3  H        1       -1.158   0.991   0.070  1.00  0.00
< ATOM     4  H        1       -1.240  -0.737   0.496  1.00  0.00
< ATOM     5  H        1       -0.924  -0.249  -1.188  1.00  0.00
< ATOM     6  H        1        1.158  -0.991  -0.070  1.00  0.00
< ATOM     7  H        1        0.924   0.249   1.188  1.00  0.00
< ATOM     8  H        1        1.240   0.737  -0.496  1.00  0.00
< TER      9                  1
---
> COMPND      ETHANOL
> AUTHOR      DAVE WOODCOCK  96 01 03
> ATOM     1  C        1       -0.426  -0.115  -0.147  1.00  0.00
> ATOM     2  O        1       -0.599   1.244  -0.481  1.00  0.00
> ATOM     3  H        1       -0.750  -0.738  -0.981  1.00  0.00
> ATOM     4  H        1       -1.022  -0.351   0.735  1.00  0.00
> ATOM     5  H        1       -1.642   1.434  -0.689  1.00  0.00
> ATOM     6  C        1        1.047  -0.383   0.147  1.00  0.00
> ATOM     7  H        1        1.370   0.240   0.981  1.00  0.00
> ATOM     8  H        1        1.642  -0.147  -0.735  1.00  0.00
> ATOM     9  H        1        1.180  -1.434   0.405  1.00  0.00
> TER     10                  1
```

1.6 [3 points] Count how many But she string appears in data_demo/writing/data/LittleWomen.txt with grep.

```
[ese-luoqq@login01 data_demo]$ cd ~
[ese-luoqq@login01 ~]$ grep "But she" ./data_demo/writing/data/LittleWomen.txt
"Oh, bless you, no!  But she let old Belsham rest, and when I ran back
small quaver in her voice, "I came to thank you, sir, for..." But she
than she went.  But she begged so hard, and Sallie had promised to take
    But she does not hunt as our darling did,
    But she only spits at the dogs our pet
    But she is not fair to see,
queer thing for her to do, she doesn't act a bit like herself.  But she
aspirant for fame, with philosophic composure. But she made a wry face
her.  But she can pet and comfort him after I'm gone, and so cure him
to see signs of hope in the faint color on Beth's cheeks.  But she
But she did not get it, for though he joined her and answered all her
sketchbook.  But she tucked it under her arm with a sharp...
Amy did any of these fond and foolish things.  But she certainly did
But she did show something better than brilliancy or skill, for she
grasshopper.  But she would have consented if he had proposed to sing a
[ese-luoqq@login01 ~]$ grep "But she" ./data_demo/writing/data/LittleWomen.txt |wc -l
15
```

Or:

```
[ese-luoqq@login01 ~]$ grep -c "But she" ./data_demo/writing/data/LittleWomen.txt
15
```

1.7 [2 points] Check the total file size of the data_demo/data/ folder using du.

```
[ese-luoqq@login01 ~]$ du -c ./data_demo/data/
539     ./data_demo/data/pdb
52      ./data_demo/data/elements
1       ./data_demo/data/animal-counts
851     ./data_demo/data/
851     total
```

1.8 [3 points] Copy the data_demo/writing/ folder to data_demo/writing_new/, compress data_demo/writing_new/ using zip, and decompress the .zip file with unzip.

```
[ese-luoqq@login01 data_demo]$ cd ~
[ese-luoqq@login01 ~]$ cp -r ./data_demo/writing/ ./data_demo/writing_new/
[ese-luoqq@login01 ~]$ cd data_demo
[ese-luoqq@login01 data_demo]$ ls
creatures  err.log  job.sh  log2      north-pacific-gyre  pizza.cfg  solar.pdf  t2.py    writing_new
data       job.log  log1    molecules notes                          result.log t1.py    writing
[ese-luoqq@login01 data_demo]$
```

```
[ese-luoqq@login01 data_demo]$ man zip
[ese-luoqq@login01 data_demo]$ zip -r writing_new.zip ./writing_new/
  adding: writing_new/ (stored 0%)
  adding: writing_new/haiku.txt (deflated 29%)
  adding: writing_new/tools/ (stored 0%)
  adding: writing_new/tools/stats (stored 0%)
  adding: writing_new/tools/old/ (stored 0%)
  adding: writing_new/tools/old/oldtool (stored 0%)
  adding: writing_new/tools/format (deflated 13%)
  adding: writing_new/data/ (stored 0%)
  adding: writing_new/data/one.txt (deflated 53%)
  adding: writing_new/data/LittleWomen.txt (deflated 61%)
  adding: writing_new/data/two.txt (deflated 59%)
  adding: writing_new/thesis/ (stored 0%)
  adding: writing_new/thesis/empty-draft.md (stored 0%)
[ese-luoqq@login01 data_demo]$ ls
creatures  err.log  job.sh  log2      north-pacific-gyre  pizza.cfg  solar.pdf  t2.py    writing_new
data       job.log  log1    molecules notes                          result.log t1.py    writing  writing_new.zip
```

```
[ese-luoqq@login01 data_demo]$ unzip ./writing_new.zip
Archive:  ./writing_new.zip
replace writing_new/haiku.txt? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
  inflating: writing_new/haiku.txt
replace writing_new/tools/stats? [y]es, [n]o, [A]ll, [N]one, [r]ename: A
 extracting: writing_new/tools/stats
 extracting: writing_new/tools/old/oldtool
  inflating: writing_new/tools/format
  inflating: writing_new/data/one.txt
  inflating: writing_new/data/LittleWomen.txt
  inflating: writing_new/data/two.txt
 extracting: writing_new/thesis/empty-draft.md
[ese-luoqq@login01 data_demo]$ ls
creatures  err.log  job.sh  log2      north-pacific-gyre  pizza.cfg  solar.pdf  t2.py    writing_new
data       job.log  log1    molecules notes                          result.log t1.py    writing  writing_new.zip
```

1.9 [3 points] Change the file permissions flags on writing_new to drwxr-x--
- using chmod.

权限项	读	写	执行	读	写	执行	读	写	执行
字符表示	r	w	x	r	w	x	r	w	x
数字表示	4	2	1	4	2	1	4	2	1
权限分配	文件所有者			文件所属组			其他用户		

```
[ese-luoqq@login01 data_demo]$ chmod 750 ./writing_new
```

1.10 [3 points] Print the last 10 commands you made using history.

```
[ese-luoqq@login01 data_demo]$ history 10
  575  man zIp
  576  zip ./writing_new/
  577  man zip
  578  zip -r writing_new.zip ./writing_new/
  579  ls
  580  unzip ./writing_new.zip
  581  ls
  582  chmod 750 ./writing_new
  583  man history
  584  history 10
```

2. BASH `for` Loop

The general syntax of a BASH loop goes like:

```
for thing in list_of_things
do
    operation_using $thing
done
```

[5 points] Write a shell script to print file size (in bytes) of each `*.pdb` file in `data_demo/data/pdb/` , line by line.

Don't know how to get the list_of_things in this for loop section.

A sample code in your fileseize.sh is provided as follow:

for file in data_demo/data/pdb/*.pdb
do
du -b $file
done

2 points were deducted


```
whoami: Cannot find name for user ID 2352
[ese-luoqq@login01 data]$ nano fileseize.sh
```

```
3. 172.18.6.175 (ese-luoqq)        ×
GNU nano 2.3.1

du -h ./pdb/*.pdb |sort -n
```

```
[ese-luoqq@login01 data]$ chmod 750 fileseize.sh
whoami: cannot find name for user ID 2352
[ese-luoqq@login01 data]$ ./fileseize.sh
128K    ./pdb/cholesterol.pdb
128K    ./pdb/heme.pdb
128K    ./pdb/lanoxin.pdb
512     ./pdb/aldrin.pdb
512     ./pdb/ammonia.pdb
512     ./pdb/ascorbic-acid.pdb
512     ./pdb/benzaldehyde.pdb
512     ./pdb/camphene.pdb
512     ./pdb/cinnamaldehyde.pdb
512     ./pdb/citronellal.pdb
512     ./pdb/codeine.pdb
512     ./pdb/cubane.pdb
512     ./pdb/cyclobutane.pdb
512     ./pdb/cyclohexanol.pdb
512     ./pdb/cyclopropane.pdb
512     ./pdb/ethane.pdb
512     ./pdb/ethanol.pdb
512     ./pdb/ethylcyclohexane.pdb
512     ./pdb/glycol.pdb
512     ./pdb/lactic-acid.pdb
512     ./pdb/lactose.pdb
512     ./pdb/lsd.pdb
512     ./pdb/maltose.pdb
512     ./pdb/menthol.pdb
512     ./pdb/methane.pdb
512     ./pdb/methanol.pdb
512     ./pdb/mint.pdb
512     ./pdb/morphine.pdb
512     ./pdb/mustard.pdb
512     ./pdb/nerol.pdb
512     ./pdb/norethindrone.pdb
512     ./pdb/octane.pdb
512     ./pdb/pentane.pdb
512     ./pdb/piperine.pdb
512     ./pdb/propane.pdb
512     ./pdb/pyridoxal.pdb
512     ./pdb/quinine.pdb
512     ./pdb/strychnine.pdb
512     ./pdb/styrene.pdb
512     ./pdb/sucrose.pdb
512     ./pdb/testosterone.pdb
512     ./pdb/thiamine.pdb
512     ./pdb/tnt.pdb
512     ./pdb/tuberin.pdb
512     ./pdb/tyrian-purple.pdb
512     ./pdb/vanillin.pdb
512     ./pdb/vinyl-chloride.pdb
512     ./pdb/vitamin-a.pdb
```