

#Python5 作业

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1.1 ln -s data_demo data_demo_link

```
[ess-zhangb@login01 ~]$ ln -s data_demo data_demo_link
[ess-zhangb@login01 ~]$ ls
CESM2.2 data_demo data_demo_link exam mi.txt odd
```

1.2 echo \$(pwd)

~ 代表的时家目录，所以直接使用了 pwd

```
[ess-zhangb@login01 ~]$ echo $(pwd)
/work/ess-zhangb
```

1.3 touch test.pdb

```
[ess-zhangb@login01 molecules]$ ls -a
. .. cubane.pdb ethane.pdb methane.pdb octane.pdb pentane.pdb propane.pdb
[ess-zhangb@login01 molecules]$ touch test.pdb
[ess-zhangb@login01 molecules]$ ls -a
. .. cubane.pdb ethane.pdb methane.pdb octane.pdb pentane.pdb propane.pdb test.pdb
```

1.4 find . -name "*.xml" | wc -l

```
[ess-zhangb@login01 elements]$ find . -name "*.xml" | wc -l
103
```

1.5 diff ethane.pdb ethanol.pdb

```
[ess-zhangb@login01 pdb]$ diff ethane.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
---
> 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
```

1.6 grep 'But she' LittleWomen.txt

```
[ess-zhangb@login01 data]$ grep 'But she' 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
```

1.7 du -s /work/ess-zhangb/data_demo/data/

```
[ess-zhangb@login01 data]$ du -s /work/ess-zhangb/data_demo/data/
850      /work/ess-zhangb/data_demo/data/
```

```
[ess-zhangb@login01 data]$ du -b -c
100707  ./pdb
35594   ./elements
4251    ./animal-counts
228477  .
228477  total
[ess-zhangb@login01 data]$ du -c
408     ./pdb
52      ./elements
1       ./animal-counts
720     .
720     total
```

1.8

cp -r /work/ess-zhangb/data_demo/writing /work/ess-zhangb/data_demo/writing_new

```
[ess-zhangb@login01 writing]$ cp -r /work/ess-zhangb/data_demo/writing /work/ess-zhangb/data_demo/writing_new
[ess-zhangb@login01 writing]$ cd ..
[ess-zhangb@login01 data_demo]$ ls -a
.  ..  creatures  data  log1  log2  molecules  north-pacific-gyre  notes  pizza.cfg  solar.pdf  temp  writing  writing_new
```

zip -r writing_new.zip /work/ess-zhangb/data_demo/writing_new

```
[ess-zhangb@login01 data_demo]$ zip -r writing_new.zip /work/ess-zhangb/data_demo/writing_new/
updating: work/ess-zhangb/data_demo/writing_new/ (stored 0%)
updating: work/ess-zhangb/data_demo/writing_new/haiku.txt (deflated 29%)
updating: work/ess-zhangb/data_demo/writing_new/tools/ (stored 0%)
updating: work/ess-zhangb/data_demo/writing_new/tools/stats (stored 0%)
updating: work/ess-zhangb/data_demo/writing_new/tools/old/ (stored 0%)
updating: work/ess-zhangb/data_demo/writing_new/tools/old/oldtool (stored 0%)
updating: work/ess-zhangb/data_demo/writing_new/tools/format (deflated 13%)
updating: work/ess-zhangb/data_demo/writing_new/data/ (stored 0%)
updating: work/ess-zhangb/data_demo/writing_new/data/one.txt (deflated 53%)
updating: work/ess-zhangb/data_demo/writing_new/data/LittleWomen.txt (deflated 61%)
updating: work/ess-zhangb/data_demo/writing_new/data/two.txt (deflated 59%)
updating: work/ess-zhangb/data_demo/writing_new/thesis/ (stored 0%)
updating: work/ess-zhangb/data_demo/writing_new/thesis/empty-draft.md (stored 0%)
[ess-zhangb@login01 data_demo]$ ls -a
.  ..  creatures  log1  molecules  notes  solar.pdf  writing  writing_new.zip
..  data      log2  north-pacific-gyre  pizza.cfg  temp  writing_new
```

unzip writing_new.zip

1.9 chmod 750 writing_new

```
[ess-zhangb@login01 data_demo]$ ls -lrt
total 132
-rwxr-xr-x 1 ess-zhangb ess-dongl 21583 Nov 24 19:18 solar.pdf
drwxr-xr-x 5 ess-zhangb ess-dongl 4096 Nov 24 19:18 writing
-rwxr-xr-x 1 ess-zhangb ess-dongl 69 Nov 24 19:18 notes
-rwxr-xr-x 1 ess-zhangb ess-dongl 32 Nov 24 19:18 pizza.cfg
drwxr-xr-x 3 ess-zhangb ess-dongl 4096 Nov 24 19:18 north-pacific-gyre
drwxr-xr-x 2 ess-zhangb ess-dongl 4096 Nov 24 19:18 creatures
drwxr-xr-x 5 ess-zhangb ess-dongl 4096 Nov 24 19:18 data
drwxr-xr-x 2 ess-zhangb ess-dongl 4096 Dec 8 12:17 molecules
drwxr-xr-x 6 ess-zhangb ess-dongl 4096 Dec 8 12:52 writing_new
[ess-zhangb@login01 data_demo]$ chmod 750 writing_new/
[ess-zhangb@login01 data_demo]$ ls -lrt
total 132
-rwxr-xr-x 1 ess-zhangb ess-dongl 21583 Nov 24 19:18 solar.pdf
drwxr-xr-x 5 ess-zhangb ess-dongl 4096 Nov 24 19:18 writing
-rwxr-xr-x 1 ess-zhangb ess-dongl 69 Nov 24 19:18 notes
-rwxr-xr-x 1 ess-zhangb ess-dongl 32 Nov 24 19:18 pizza.cfg
drwxr-xr-x 3 ess-zhangb ess-dongl 4096 Nov 24 19:18 north-pacific-gyre
drwxr-xr-x 2 ess-zhangb ess-dongl 4096 Nov 24 19:18 creatures
drwxr-xr-x 5 ess-zhangb ess-dongl 4096 Nov 24 19:18 data
drwxr-xr-x 2 ess-zhangb ess-dongl 4096 Dec 8 12:17 molecules
drwxr-xr-x 6 ess-zhangb ess-dongl 4096 Dec 8 12:52 writing_new
```

1.10 history 10

```
[ess-zhangb@login01 data_demo]$ history 10
1064 pwd
1065 ls -a
1066 unzip writing_new.zip
1067 ls -a
1068 pwd
1069 cd ..
1070 ls -lrt
1071 chmod 750 writing_new/
1072 ls -lrt
1073 history 10
```

二

新建一个 run.sh，文件内容如下

```
print size of *.pdb

for f in *.pdb
do
    du -b $f
done
~
~
```

```
[ess-zhangb@login01 pdb]$ vim run.sh
E575: viminfo: Illegal starting char in line: cratch/test2.QPC6/run/inputdata_checksum.dat
Press ENTER or type command to continue
[ess-zhangb@login01 pdb]$ ls -a
.
cinnamaldehyde.pdb ethanol.pdb maltose.pdb norethindrone.pdb strychnine.pdb
aldrin.pdb citronellal.pdb ethylcyclohexane.pdb menthol.pdb octane.pdb styrene.pdb
codeine.pdb glycol.pdb methane.pdb pentane.pdb sucrose.pdb
ammonia.pdb cubane.pdb heme.pdb methanol.pdb piperine.pdb testosterone.pdb
ascorbic-acid.pdb cyclobutane.pdb lactic-acid.pdb mint.pdb propane.pdb thiamine.pdb
benzaldehyde.pdb cyclohexanol.pdb lactose.pdb morphine.pdb pyridoxal.pdb tnt.pdb
camphene.pdb cyclopropane.pdb lanoxin.pdb mustard.pdb quinine.pdb tubercurine.pdb
cholesterol.pdb ethane.pdb lsd.pdb nerol.pdb run.sh tyrianthraquinone.pdb
[ess-zhangb@login01 pdb]$ chmod u+x run.sh
[ess-zhangb@login01 pdb]$ ./run.sh
1516 aldrin.pdb
306 ammonia.pdb
1444 ascorbic-acid.pdb
1030 benzaldehyde.pdb
1030 camphene.pdb
5049 cholesterol.pdb
1090 cinnamaldehyde.pdb
1094 citronellal.pdb
2452 codeine.pdb
1158 cubane.pdb
805 cyclobutane.pdb
1384 cyclohexanol.pdb
695 cyclopropane.pdb
622 ethane.pdb
```

更改文件的权限，chmod，执行这个文件，会输出每个*.pdb 文件的大小。

```
5049 cholesterol.pdb
1090 cinnamaldehyde.pdb
1694 citronellal.pdb
2452 codeine.pdb
1158 cubane.pdb
895 cyclobutane.pdb
1384 cyclohexanol.pdb
695 cyclopropane.pdb
622 ethane.pdb
690 ethanol.pdb
2396 ethylcyclohexane.pdb
765 glycol.pdb
4209 heme.pdb
1064 lactic-acid.pdb
2562 lactose.pdb
11193 lanoxin.pdb
3395 lsd.pdb
2562 maltose.pdb
2164 menthol.pdb
422 methane.pdb
490 methanol.pdb
1869 mint.pdb
2288 morphine.pdb
2123 mustard.pdb
1680 nerol.pdb
2729 norethindrone.pdb
1828 octane.pdb
1226 pentane.pdb
2287 piperine.pdb
825 propane.pdb
1256 pyridoxal.pdb
3303 quinine.pdb
2675 strychnine.pdb
1159 styrene.pdb
2562 sucrose.pdb
2787 testosterone.pdb
2196 thiamine.pdb
1508 tnt.pdb
2395 tuberin.pdb
2103 tyrian-purple.pdb
1361 vanillin.pdb
423 vinyl-chloride.pdb
2894 vitamin-a.pdb
[ess-zhangb@login01 pdb]$
```