#Python5 作业

Well done!

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一

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               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 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
[ess-zhangb@login01 data]$
```

1.8

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

```
cp: cannot stat '/work/ess-zhangb/data/data_demo/writing': No such file or directory
[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
[ess-zhangb@login01 data_demo]$
```

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-x--- 6 ess-zhangb ess-dongl  4096 Dec  8 12:52 writing_new
[ess-zhangb@login01 data_demo]$ history 10
```

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: 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  strych
..                 citronellal.pdb     ethylcyclohexane.pdb menthol.pdb    octane.pdb         styre
aldrin.pdb         codeine.pdb         glycol.pdb           methane.pdb    pentane.pdb        sucros
ammonia.pdb        cubane.pdb          heme.pdb             methanol.pdb   piperine.pdb       testos
ascorbic-acid.pdb  cyclobutane.pdb     lactic-acid.pdb      mint.pdb       propane.pdb        thiam
benzaldehyde.pdb   cyclohexanol.pdb    lactose.pdb          morphine.pdb   pyridoxal.pdb      tnt.p
camphene.pdb       cyclopropane.pdb    lanoxin.pdb          mustard.pdb    quinine.pdb        tuber
cholesterol.pdb    ethane.pdb          lsd.pdb              nerol.pdb      run.sh             tyria
[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
1830    camphene.pdb
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
```

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]$
```