



```
[ese-wangy1@login03 ~]$ 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
---
> 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
[ese-wangy1@login03 ~]$
```

## 1.6

```
[ese-wangy1@login03 ~]$ 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-wangy1@login03 ~]$ grep 'But she' data_demo/writing/data/LittleWomen.txt | wc
    15     188     969
[ese-wangy1@login03 ~]$
```

## 1.7

```
[ese-wangy1@login03 ~]$ du -c -b data_demo/data/
100717 data_demo/data/pdb
35594 data_demo/data/elements
4251 data_demo/data/animal-counts
228435 data_demo/data/
228435 total
[ese-wangy1@login03 ~]$
```

## 1.8

```
[ese-wangy1@login03 ~]$ cp -r data_demo/writing/ data_demo/writing_new/
```



```
[ese-wangy1@login03 ~]$ zip -r data_demo/writing_new.zip data_demo/writing_new
adding: data_demo/writing_new/ (stored 0%)
adding: data_demo/writing_new/haiku.txt (deflated 29%)
adding: data_demo/writing_new/tools/ (stored 0%)
adding: data_demo/writing_new/tools/stats (stored 0%)
adding: data_demo/writing_new/tools/old/ (stored 0%)
adding: data_demo/writing_new/tools/old/oldtool (stored 0%)
adding: data_demo/writing_new/tools/old/format (deflated 13%)
adding: data_demo/writing_new/data/ (stored 0%)
adding: data_demo/writing_new/data/one.txt (deflated 53%)
adding: data_demo/writing_new/data/LittleWomen.txt (deflated 61%)
adding: data_demo/writing_new/data/two.txt (deflated 59%)
adding: data_demo/writing_new/thesis/ (stored 0%)
adding: data_demo/writing_new/thesis/empty-draft.md (stored 0%)
```

```
[ese-wangy1@login03 data_demo]$ ls
creatures data log1 log2 molecules north-pacific-gyre notes pizza.cfg solar.pdf writing writing_new writing_new.zip
[ese-wangy1@login03 data_demo]$
```

```
[ese-wangy1@login03 ~]$ unzip -o data_demo/writing_new.zip
Archive: data_demo/writing_new.zip
  inflating: data_demo/writing_new/haiku.txt
  extracting: data_demo/writing_new/tools/stats
  extracting: data_demo/writing_new/tools/old/oldtool
    inflating: data_demo/writing_new/tools/old/format
    inflating: data_demo/writing_new/data/one.txt
    inflating: data_demo/writing_new/data/LittleWomen.txt
    inflating: data_demo/writing_new/data/two.txt
  extracting: data_demo/writing_new/thesis/empty-draft.md
[ese-wangy1@login03 ~]$ cd data_demo
[ese-wangy1@login03 data_demo]$ ls
creatures data log1 log2 molecules north-pacific-gyre notes pizza.cfg solar.pdf writing writing_new writing_new.zip
[ese-wangy1@login03 data_demo]$
```

1.9

```
[ese-wangy1@login03 data_demo]$ ll
total 645
drwxr-xr-x 2 ese-wangy1 ese-ouycc 4096 Nov 24 19:20 creatures
drwxr-xr-x 5 ese-wangy1 ese-ouycc 4096 Nov 24 19:20 data
-rw-r--r-- 1 ese-wangy1 ese-ouycc 100 Dec 3 16:28 log1
-rw-r--r-- 1 ese-wangy1 ese-ouycc 200 Dec 3 16:28 log2
drwxr-xr-x 2 ese-wangy1 ese-ouycc 4096 Dec 3 20:26 molecules
drwxr-xr-x 3 ese-wangy1 ese-ouycc 4096 Nov 24 19:20 north-pacific-gyre
-rwxr-xr-x 1 ese-wangy1 ese-ouycc 69 Nov 24 19:20 notes
-rwxr-xr-x 1 ese-wangy1 ese-ouycc 32 Nov 24 19:20 pizza.cfg
-rwxr-xr-x 1 ese-wangy1 ese-ouycc 21583 Nov 24 19:20 solar.pdf
drwxr-xr-x 5 ese-wangy1 ese-ouycc 4096 Nov 24 19:20 writing
drwxr-xr-x 5 ese-wangy1 ese-ouycc 4096 Dec 3 21:06 writing_new
-rw-r--r-- 1 ese-wangy1 ese-ouycc 422844 Dec 3 21:01 writing_new.zip
```

```
[ese-wangy1@login03 data_demo]$ chmod 750 writing_new
[ese-wangy1@login03 data_demo]$ ll
total 645
drwxr-xr-x 2 ese-wangy1 ese-ouycc 4096 Nov 24 19:20 creatures
drwxr-xr-x 5 ese-wangy1 ese-ouycc 4096 Nov 24 19:20 data
-rw-r--r-- 1 ese-wangy1 ese-ouycc 100 Dec 3 16:28 log1
-rw-r--r-- 1 ese-wangy1 ese-ouycc 200 Dec 3 16:28 log2
drwxr-xr-x 2 ese-wangy1 ese-ouycc 4096 Dec 3 20:26 molecules
drwxr-xr-x 3 ese-wangy1 ese-ouycc 4096 Nov 24 19:20 north-pacific-gyre
-rwxr-xr-x 1 ese-wangy1 ese-ouycc 69 Nov 24 19:20 notes
-rwxr-xr-x 1 ese-wangy1 ese-ouycc 32 Nov 24 19:20 pizza.cfg
-rwxr-xr-x 1 ese-wangy1 ese-ouycc 21583 Nov 24 19:20 solar.pdf
drwxr-xr-x 5 ese-wangy1 ese-ouycc 4096 Nov 24 19:20 writing
drwxr-x--- 5 ese-wangy1 ese-ouycc 4096 Dec 3 21:06 writing_new
-rw-r--r-- 1 ese-wangy1 ese-ouycc 422844 Dec 3 21:01 writing_new.zip
[ese-wangy1@login03 data_demo]$
```

1.10

```
[ese-wangy1@login03 data_demo]$ history 30
290  rm writing_new/
291  rm writing_new.zip
292  ls
293  cd ~
294  cp -r data_demo/writing/ data_demo/writing_new/
295  zip -r writing_new.zip data_demo/writing_new
296  ls
297  rm writing_new.zip
298  zip -r data_demo/writing_new.zip data_demo/writing_new
299  ls
300  cd data_demo
301  ls
302  cd ~
303  unzip data_demo/writing_new.zip -d ~
304  cd data_demo
305  ls
306  cd ~
```

PS5\_2

```
[ese-wangy1@login03 data_demo]$ nano loop.sh
```

```
GNU nano 2.3.1
for i in data/pdb/*.pdb
do
    du -b $i
done
```

```
[ese-wangy1@login03 data_demo]$ chmod 750 loop.sh
```



```
[ese-wangy1@login03 data_demo]$ ./loop.sh
1516 data/pdb/aldrin.pdb
306 data/pdb/ammonia.pdb
1444 data/pdb/ascorbic-acid.pdb
1030 data/pdb/benzaldehyde.pdb
1830 data/pdb/camphene.pdb
5049 data/pdb/cholesterol.pdb
1090 data/pdb/cinnamaldehyde.pdb
1694 data/pdb/citronellal.pdb
2452 data/pdb/codeine.pdb
1158 data/pdb/cubane.pdb
895 data/pdb/cyclobutane.pdb
1384 data/pdb/cyclohexanol.pdb
695 data/pdb/cyclopropane.pdb
622 data/pdb/ethane.pdb
690 data/pdb/ethanol.pdb
2396 data/pdb/ethylcyclohexane.pdb
765 data/pdb/glycol.pdb
4209 data/pdb/heme.pdb
1064 data/pdb/lactic-acid.pdb
2562 data/pdb/lactose.pdb
11193 data/pdb/lanoxin.pdb
3395 data/pdb/lsd.pdb
2562 data/pdb/maltose.pdb
2164 data/pdb/menthol.pdb
422 data/pdb/methane.pdb
490 data/pdb/methanol.pdb
1869 data/pdb/mint.pdb
2288 data/pdb/morphine.pdb
2123 data/pdb/mustard.pdb
1680 data/pdb/nerol.pdb
2729 data/pdb/norethindrone.pdb
1828 data/pdb/octane.pdb
1226 data/pdb/pentane.pdb
2287 data/pdb/piperine.pdb
825 data/pdb/propane.pdb
1256 data/pdb/pyridoxal.pdb
3303 data/pdb/quinine.pdb
2675 data/pdb/strychnine.pdb
1159 data/pdb/styrene.pdb
2562 data/pdb/sucrose.pdb
```