1、

（1） 软链接：（文件本体删除后，创建的软链接也失效）

```
[ese-caikzh@login03 data_demo]$ ln -s data_demo_link data_demo
```

硬链接：（相当于创建文件的副本）

```
[ese-caikzh@login03 data_demo]$ ln data_demo_link data_demo
```

（2） Echo 命令

```
[ese-caikzh@login03 ~]$ echo *
data_demo exam
```

（3） Touch 命令

```
[ese-caikzh@login03 molecules]$ touch test.pdb
[ese-caikzh@login03 molecules]$ ls
cubane.pdb  methane.pdb  pentane.pdb  test.pdb
ethane.pdb  octane.pdb   propane.pdb
```

（4） Find 命令

```
[ese-caikzh@login03 elements]$ find . -type f -print | wc -l
103
```

（5） Diff 命令

```
[ese-caikzh@login03 ~]$ cd data_demo/data/pdb
[ese-caikzh@login03 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
```

1，11c1，12 含义：第一个文件中的第[1,11]行(闭合区间，包括第 1 行和第 11 行)需要做出修改才能与第二个文件中的[1,12]行相匹配。

(6) Grep 命令

```
[ese-caikzh@login03 data]$ grep -c 'But she' *n.txt
15
```

(7) Du 命令

```
[ese-caikzh@login03 data]$ du
1281    .
```

(8) Zip 命令

```
[ese-caikzh@login03 data_demo]$ zip -q -r writing_new.zip *
[ese-caikzh@login03 data_demo]$ ls
creatures  data_demo_link  north-pacific-gyre  solar.pdf  writing_new
data       draft.txt       notes               thesis     writing_new.zip
data_demo  molecules       pizza.cfg           writing
```

Unzip 命令

```
[ese-caikzh@login03 data_demo]$ unzip writing_new.zip
Archive:  writing_new.zip
replace creatures/basilisk.dat? [y]es, [n]o, [A]ll, [N]one, [r]ename:
```

(9) Chmod 命令

```
[ese-caikzh@login03 data_demo]$ chmod 750 writing_new
drwxr-x--- 5 ese-caikzh ese-ouycc  4096 Nov 25 11:53 writing_new
```

(10) History 命令

```
[ese-caikzh@login03 data_demo]$ history | tail -n 10
  256  rm writing_new.zip
  257  ls
  258  chmod drwxr-x--- writing_new
  259  chmod --help
  260  chmod 750 writing_new
  261  ls
  262  writing_new
  263  ls -l
  264  history
  265  history | tail -n 10
```

2、BASH for Loop

```
[ese-caikzh@login03 pdb]$ for file in *.pdb
> do
> echo $file
> done
aldrin.pdb
ammonia.pdb
ascorbic-acid.pdb
benzaldehyde.pdb
camphene.pdb
cholesterol.pdb
cinnamaldehyde.pdb
citronellal.pdb
codeine.pdb
cubane.pdb
cyclobutane.pdb
cyclohexanol.pdb
cyclopropane.pdb
ethane.pdb
ethanol.pdb
ethylcyclohexane.pdb
glycol.pdb
heme.pdb
lactic-acid.pdb
lactose.pdb
lanoxin.pdb
lsd.pdb
maltose.pdb
menthol.pdb
methane.pdb
methanol.pdb
mint.pdb
morphine.pdb
mustard.pdb
nerol.pdb
norethindrone.pdb
octane.pdb
pentane.pdb
piperine.pdb
propane.pdb
pyridoxal.pdb
```