

#1.1

```
cd ~  
cd data_demo  
ln -s data_demo_link /work/ese-xied/data_demo  
ls -F
```

```
[ese-xied@login03 ~]$ ls -F  
creatures/  data/  data_demo@_link@  molecules/  north-pacific-gyre/  notes*  pizza.cfg*  solar.pdf*  thesis/  writing/  writing_new/
```

#1.2

```
echo $cd ~
```

```
[ese-xied@login03 data_demo]$ echo cd ~  
cd /work/ese-xied
```

#1.3

```
cd molecules  
touch test.pdb  
ls
```

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

#1.4

```
cd ..  
cd data/elements  
find . -type f -print | wc -l
```

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

#1.5

```
cd ..  
cd pdb  
ls  
diff ethane.pdb ethanol.pdb
```

```
[ese-xied@login03 elements]$ cd ..  
[ese-xied@login03 data]$ cd pdb  
[ese-xied@login03 pdb]$ ls  
aldrin.pdb  camphene.pdb  cholesterol.pdb  codeine.pdb  cyclopropane.pdb  glycol.pdb  linoxin.pdb  methane.pdb  mustard.pdb  pentane.pdb  quinine.pdb  testosterone.pdb  tyrian-purple.pdb  
ammonia.pdb  cubane.pdb  cyclobutane.pdb  ethanol.pdb  ethylcyclohexane.pdb  lactose.pdb  maltose.pdb  menthol.pdb  morphine.pdb  octane.pdb  piperine.pdb  strychnine.pdb  thiamine.pdb  vanillin.pdb  
ascorbic-acid.pdb  citromellal.pdb  cyclohexanol.pdb  ethylcyclohexane.pdb  lactose.pdb  maltose.pdb  menthol.pdb  morphine.pdb  octane.pdb  piperine.pdb  strychnine.pdb  thiamine.pdb  vanillin.pdb  
benzoin.pdb  citromellal.pdb  cyclohexanol.pdb  ethylcyclohexane.pdb  lactose.pdb  maltose.pdb  menthol.pdb  morphine.pdb  octane.pdb  piperine.pdb  strychnine.pdb  thiamine.pdb  vanillin.pdb  
[ese-xied@login03 pdb]$ diff ethane.pdb ethanol.pdb  
1,11c1,12  
< COMPND      ETHANE  
< 1 C          1      -0.752  0.001  -0.141  1.00  0.00  
< 2 C          1      0.752  -0.001  0.141  1.00  0.00  
< 3 H          1      -1.158  0.991  0.070  1.00  0.00  
< 4 H          1      -1.240  -0.737  0.496  1.00  0.00  
< 5 H          1      -0.924  -0.249  -1.188  1.00  0.00  
< 6 H          1      1.158  -0.991  -0.070  1.00  0.00  
< 7 H          1      0.924  0.249  1.188  1.00  0.00  
< 8 H          1      1.240  0.737  -0.496  1.00  0.00  
< 9          1  
< TER  
--  
> COMPND      ETHANOL  
> 1 C          1      -0.426  -0.115  -0.147  1.00  0.00  
> 2 O          1      -0.599  1.244  -0.481  1.00  0.00  
> 3 H          1      -0.750  -0.738  -0.501  1.00  0.00  
> 4 H          1      -1.022  -0.351  0.729  1.00  0.00  
> 5 H          1      -1.642  1.434  -0.689  1.00  0.00  
> 6 C          1      1.047  -0.383  0.147  1.00  0.00  
> 7 H          1      1.370  0.240  0.501  1.00  0.00  
> 8 H          1      1.642  -0.147  -0.735  1.00  0.00  
> 9 H          1      1.180  -1.434  0.405  1.00  0.00  
> 10         1
```

#1.6

```
cd ~  
cd data_demo/writing/data  
grep -o 'But she' LittleWomen.txt | wc -l
```

```
[ese-xied@login03 pdb]$ cd ~
[ese-xied@login03 ~]$ cd data_demo/writing/data
[ese-xied@login03 data]$ grep -o 'But she' LittleWomen.txt | wc -l
15
```

#1.7

cd ~

cd data_demo/data

du -sh

```
[ese-xied@login03 data]$ cd ~
[ese-xied@login03 ~]$ cd data_demo/data
[ese-xied@login03 data]$ du -sh
721K .
```

#1.8

cd ..

cp -r writing writing_new

```
[ese-xied@login03 data_demo]$ cp -r writing writing_new
[ese-xied@login03 data_demo]$ ls -F
creatures/ data/ data_demo@_link@ molecules/ north-pacific-gyre/ notes* pizza.cfg* solar.pdf* thesis/ writing/ writing_new/
```

cd writing_new

zip -r writing_neww.zip ./*

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

unzip -o -d /writing_neww.zip

```
[ese-xied@login03 writing_new]$ unzip -o -d /writing_neww.zip
UnZip 6.00 of 20 April 2009, by Info-ZIP.  Maintained by C. Spieler.  Send
bug reports using http://www.info-zip.org/zip-bug.html; see README for details.

Usage: unzip [-Z] [-opts[modifiers]] file[.zip] [list] [-x xlist] [-d exdir]
Default action is to extract files in list, except those in xlist, to exdir;
file[.zip] may be a wildcard.  -Z => ZipInfo mode ("unzip -Z" for usage).

-p extract files to pipe, no messages      -l list files (short format)
-f freshen existing files, create none     -t test compressed archive data
-u update files, create if necessary       -z display archive comment only
-v list verbosely/show version info       -T timestamp archive to latest
-x exclude files that follow (in xlist)   -d extract files into exdir

modifiers:
-n never overwrite existing files          -q quiet mode (-qq => quieter)
-o overwrite files WITHOUT prompting       -a auto-convert any text files
-j junk paths (do not make directories)   -aa treat ALL files as text
-U use escapes for all non-ASCII Unicode  -UU ignore any Unicode fields
-C match filenames case-insensitively     -L make (some) names lowercase
-X restore UID/GID info                   -V retain VMS version numbers
-K keep setuid/setgid/tacky permissions   -M pipe through "more" pager
-O CHARSET specify a character encoding for DOS, Windows and OS/2 archives
-I CHARSET specify a character encoding for UNIX and other archives

See "unzip -hh" or unzip.txt for more help.  Examples:
unzip data1 -x joe => extract all files except joe from zipfile data1.zip
unzip -p foo | more => send contents of foo.zip via pipe into program more
unzip -fo foo ReadMe => quietly replace existing ReadMe if archive file newer
```

#1.9

chmod 710 writing_new

ll

```
[ese-xied@login03 data_demo]$ chmod 710 writing_new
[ese-xied@login03 data_demo]$ ll
total 134
drwxr-xr-x 2 ese-xied ese-ouycc 4096 Nov 24 19:30 creatures
drwxr-xr-x 6 ese-xied ese-ouycc 4096 Dec 3 16:18 data
lrwxrwxrwx 1 ese-xied ese-ouycc 9 Dec 5 11:02 data_demo -> 
lrwxrwxrwx 1 ese-xied ese-ouycc 5 Dec 6 10:37 _link -> 
drwxr-xr-x 2 ese-xied ese-ouycc 4096 Dec 5 17:48 molecules
drwxr-xr-x 3 ese-xied ese-ouycc 4096 Nov 24 19:30 north-pacific-gyre
-rwxr-xr-x 1 ese-xied ese-ouycc 69 Nov 24 19:30 notes
-rwxr-xr-x 1 ese-xied ese-ouycc 32 Nov 24 19:30 pizza.cfg
-rwxr-xr-x 1 ese-xied ese-ouycc 21583 Nov 24 19:30 solar.pdf
drwxr-xr-x 4 ese-xied ese-ouycc 4096 Dec 4 15:57 thesis
drwxr-xr-x 5 ese-xied ese-ouycc 4096 Nov 24 19:30 writing
drwx--x--- 5 ese-xied ese-ouycc 4096 Dec 6 11:09 writing_new
[ese-xied@login03 data_demo]$
```

#1.10

history 10

```
[ese-xied@login03 data_demo]$ history 10
368 ls
369 chmod 710 writing_neww
370 chmod 710 writing_new
371 ll
372 chmod 710 II writing_new
373 chmod 70 writing_new II
374 chmod 710 writing_new II
375 chmod 710 writing_new
376 ll
377 history 10
```

```
nano loop.sh
for i in $(cat pdb.list);
do
    du -x $i
```

```
GNU nano 2.3.1

for i in $(cat pdb.list);
do
    du -x $i
done
```

```

1 aldrin.pdb
1 ammonia.pdb
1 ascorbic-acid.pdb
1 benzaldehyde.pdb
1 camphene.pdb
128 cholesterol.pdb
1 cinnamaldehyde.pdb
1 citronellal.pdb
1 codeine.pdb
1 cubane.pdb
1 cyclobutane.pdb
1 cyclohexanol.pdb
1 cyclopropane.pdb
1 ethane.pdb
1 ethanol.pdb
1 ethylcyclohexane.pdb
1 glycol.pdb
128 heme.pdb
1 lactic-acid.pdb
1 lactose.pdb
128 lanoxin.pdb
1 loop.pdb
1 lsd.pdb
1 maltose.pdb
1 menthol.pdb
1 methane.pdb
1 methanol.pdb
1 mint.pdb
1 morphine.pdb
1 mustard.pdb
1 nerol.pdb
1 norethindrone.pdb
1 octane.pdb
1 pentane.pdb
1 piperine.pdb
1 propane.pdb
1 pyridoxal.pdb
1 quinine.pdb
1 strychnine.pdb
1 styrene.pdb
1 sucrose.pdb
1 testosterone.pdb
1 thiamine.pdb
1 tnt.pdb
1 tuber.in.pdb
1 tyrian-purple.pdb
1 vanillin.pdb
1 vinyl-chloride.pdb
1 vitamin-a.pdb

```