

Learning Perl

Exercises 13

<https://github.com/onevc/LearningPerl>

王巍

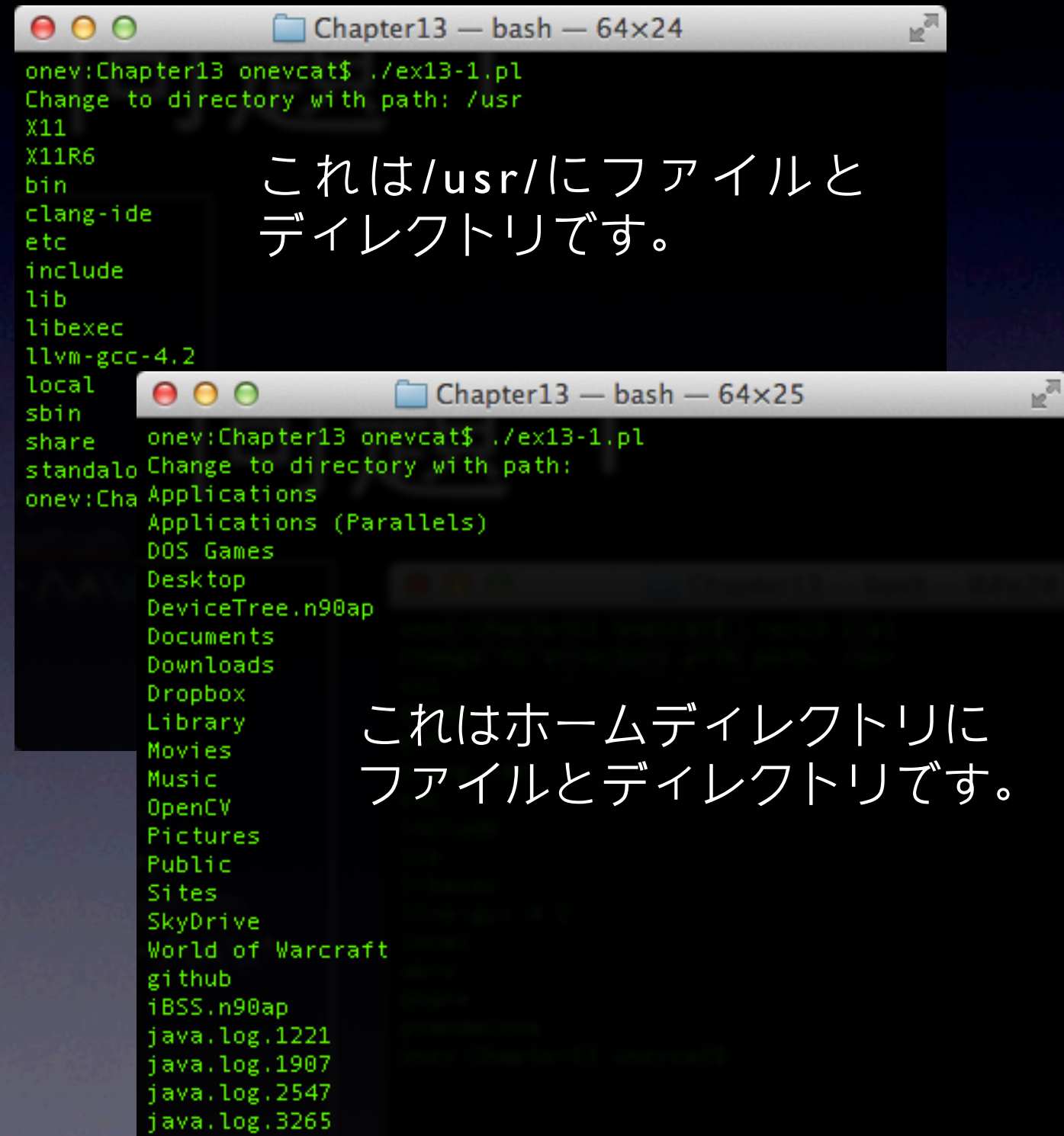
問題 1

ソースコード:

```
#!/usr/bin/perl
use strict;

print "Change to directory with path: ";
chomp ( my $folederPath = <STDIN> );
### Try to change the dir to $folederPath
my $dirChanged = ($folederPath =~ /\A\s*\z/) ? chdir : chdir $folederPath;

if ($dirChanged) {
    foreach (sort glob '*') {
        print "$_ \n";
    }
}
else {
    die "Change DIR Failed! $!";
}
```



Chapter13 — bash — 64x24

```
onev:Chapter13 onevc$ ./ex13-1.pl
Change to directory with path: /usr
X11
X11R6
bin
clang-ide
etc
include
lib
libexec
llvm-gcc-4.2
local
sbin
share
standalone
Applications
Applications (Parallels)
DOS Games
Desktop
DeviceTree.n90ap
Documents
Downloads
Dropbox
Library
Movies
Music
OpenCV
Pictures
Public
Sites
SkyDrive
World of Warcraft
github
iBSS.n90ap
java.log.1221
java.log.1907
java.log.2547
java.log.3265
```

これは /usr/ にファイルとディレクトリです。

Chapter13 — bash — 64x25

```
onev:Chapter13 onevc$ ./ex13-1.pl
Change to directory with path:
Applications
Applications (Parallels)
DOS Games
Desktop
DeviceTree.n90ap
Documents
Downloads
Dropbox
Library
Movies
Music
OpenCV
Pictures
Public
Sites
SkyDrive
World of Warcraft
github
iBSS.n90ap
java.log.1221
java.log.1907
java.log.2547
java.log.3265
```

これはホームディレクトリにファイルとディレクトリです。

問題 2

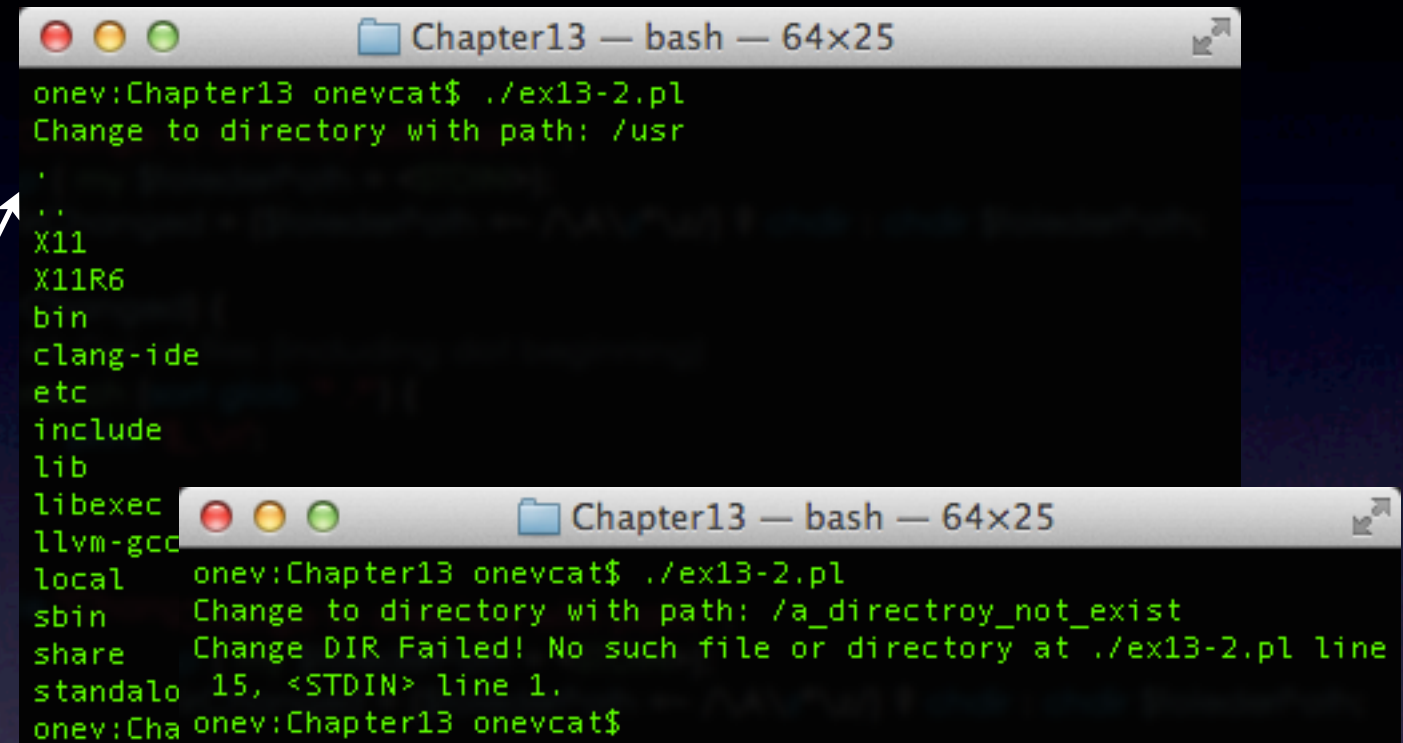
ソースコード:

```
#!/usr/bin/perl
use strict;

print "Change to directory with path: ";
chomp ( my $folderPath = <STDIN> );
my $dirChanged = ($folderPath =~ /\A\s*\z/) ? chdir : chdir $folderPath;

if ($dirChanged) {
    ### Get all files (including dot beginning)
    foreach (sort glob '*.*') {
        print "$_\n";
    }
}
else {
    die "Change DIR Failed! $!";
}
```

‘.*’マーク



```
Chapter13 — bash — 64x25
onev:Chapter13 onevcat$ ./ex13-2.pl
Change to directory with path: /usr
.
..
X11
X11R6
bin
clang-ide
etc
include
lib
libexec
llvm-gcc
local
sbin
share
standalone
onev:Chapter13 onevcat$

Chapter13 — bash — 64x25
onev:Chapter13 onevcat$ ./ex13-2.pl
Change to directory with path: /a_directory_not_exist
Change DIR Failed! No such file or directory at ./ex13-2.pl line
15, <STDIN> line 1.
onev:Chapter13 onevcat$
```

ディレクトリが存在しないの場合、
エラーメッセージを表示します

問題 3

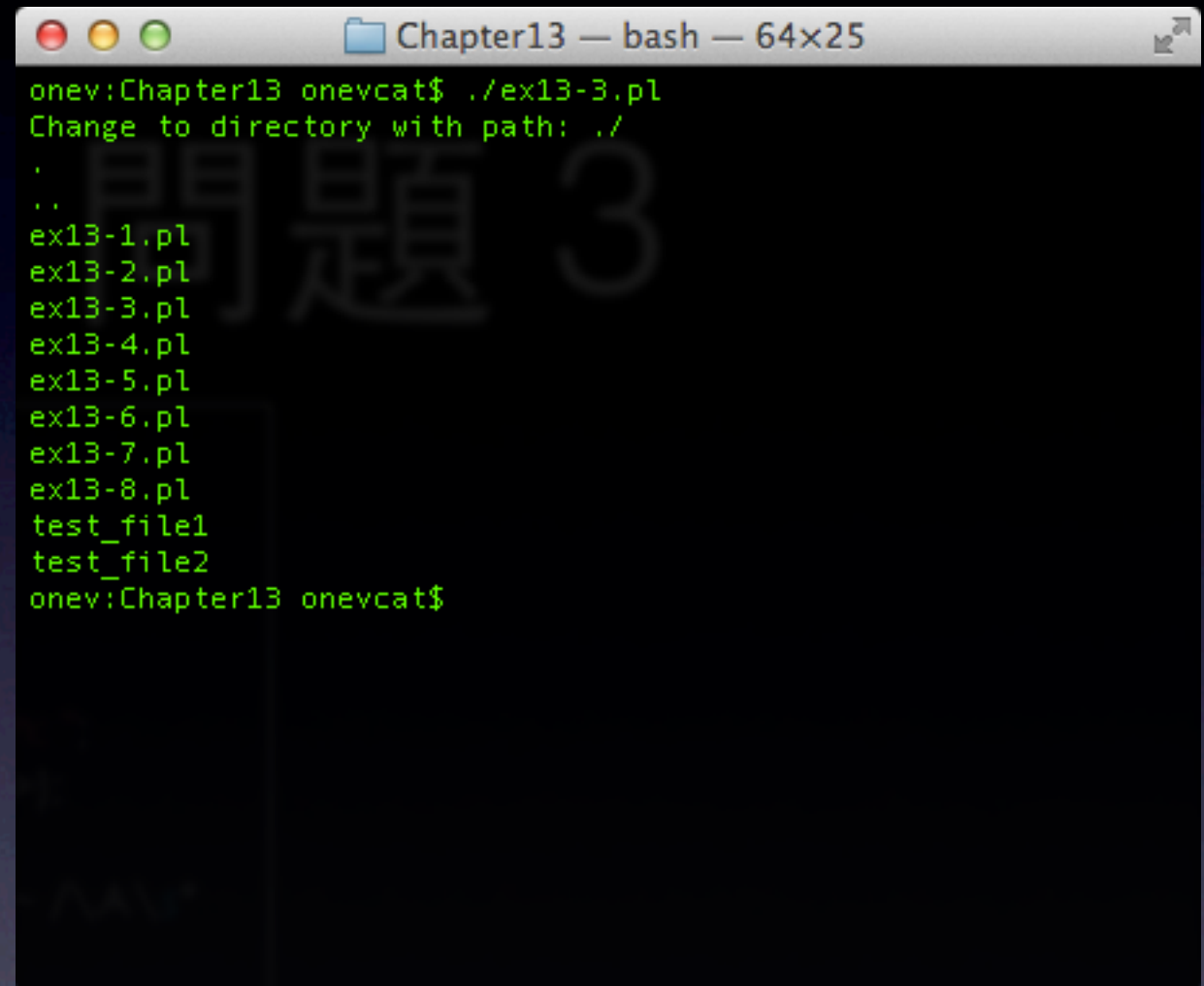
ソースコード:

```
#!/usr/bin/perl
use strict;

print "Change to directory with path: ";
chomp ( my $folderPath = <STDIN>);

my $dirChanged = ($folderPath =~ /\A\s*\z/) ? chdir : chdir $folderPath;

### Open current folder
opendir my $folderHandle, "." or die "Change
DIR Failed! $!";
### and read the file list
foreach (sort readdir $folderHandle) {
    print "$_ \n";
}
```



```
Chapter13 — bash — 64x25
onev:Chapter13 onevc$ ./ex13-3.pl
Change to directory with path: ./
.
..
ex13-1.pl
ex13-2.pl
ex13-3.pl
ex13-4.pl
ex13-5.pl
ex13-6.pl
ex13-7.pl
ex13-8.pl
test_file1
test_file2
onev:Chapter13 onevc$
```

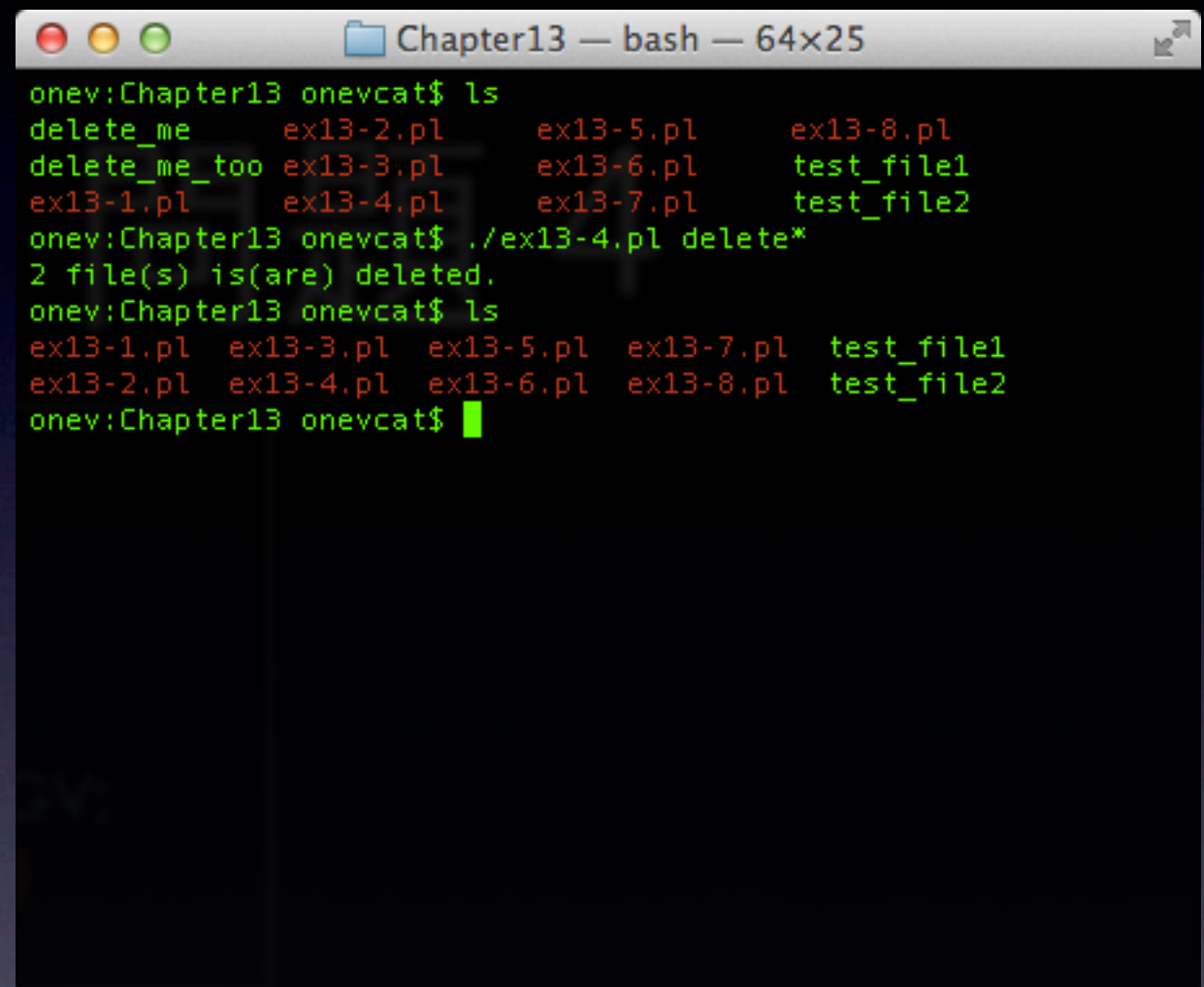
問題 4

ソースコード:

```
#!/usr/bin/perl
```

```
use strict;
```

```
my $number = unlink @ARGV;  
print "$number file(s) is(are)  
deleted.\n";
```



A terminal window titled "Chapter13 — bash — 64x25" showing the execution of a Perl script. The user runs 'ls' and lists files: delete_me, delete_me_too, ex13-1.pl, ex13-2.pl, ex13-3.pl, ex13-4.pl, ex13-5.pl, ex13-6.pl, ex13-7.pl, ex13-8.pl, test_file1, and test_file2. Then, the user runs './ex13-4.pl delete*', and the script outputs "2 file(s) is(are) deleted.". Finally, the user runs 'ls' again, and the output shows that delete_me and delete_me_too have been removed from the directory listing.

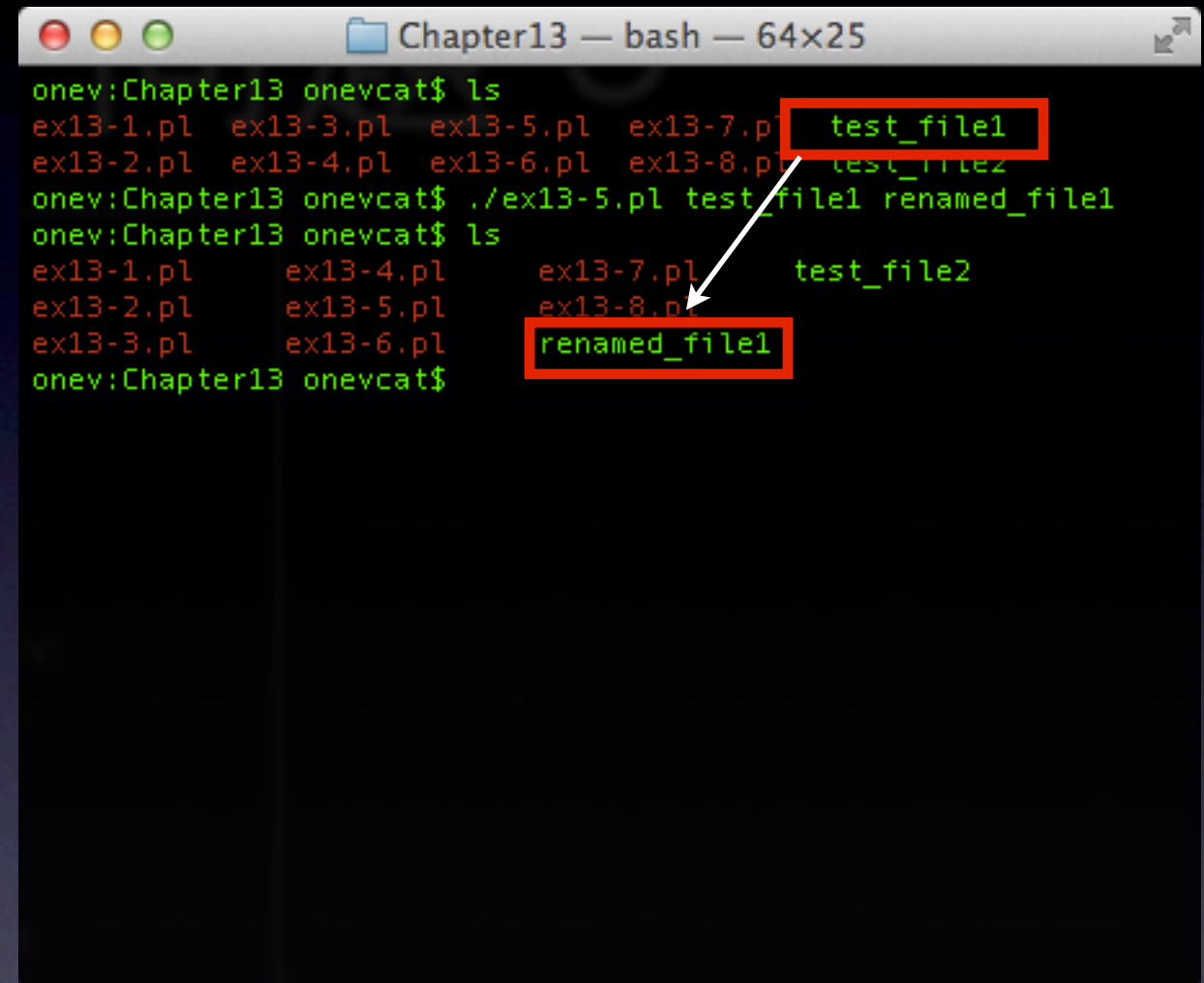
```
onev:Chapter13 onevc$ ls  
delete_me      ex13-2.pl      ex13-5.pl      ex13-8.pl  
delete_me_too  ex13-3.pl      ex13-6.pl      test_file1  
ex13-1.pl      ex13-4.pl      ex13-7.pl      test_file2  
onev:Chapter13 onevc$ ./ex13-4.pl delete*  
2 file(s) is(are) deleted.  
onev:Chapter13 onevc$ ls  
ex13-1.pl      ex13-3.pl      ex13-5.pl      ex13-7.pl      test_file1  
ex13-2.pl      ex13-4.pl      ex13-6.pl      ex13-8.pl      test_file2  
onev:Chapter13 onevc$
```

問題 5

ソースコード:

```
#!/usr/bin/perl
use strict;
use File::Basename;
use File::Spec;

my ($source, $destination) = @ARGV;
### source: $source
### destination: $destination
if (-d $destination) {
    ### destination is a directory.
    $destination = File::Spec->catfile
($destination, basename $source);
    ### destination: $destination
}
rename $source, $destination or die "Rename
File error. $!";
```



The screenshot shows a terminal window titled "Chapter13 — bash — 64x25". The user runs the following commands:

```
onev:Chapter13 onevc$ ls
ex13-1.pl  ex13-3.pl  ex13-5.pl  ex13-7.pl  test_file1
ex13-2.pl  ex13-4.pl  ex13-6.pl  ex13-8.pl  test_file2
onev:Chapter13 onevc$ ./ex13-5.pl test_file1 renamed_file1
onev:Chapter13 onevc$ ls
ex13-1.pl  ex13-4.pl  ex13-7.pl  test_file2
ex13-2.pl  ex13-5.pl  ex13-8.pl
ex13-3.pl  ex13-6.pl  renamed_file1
onev:Chapter13 onevc$
```

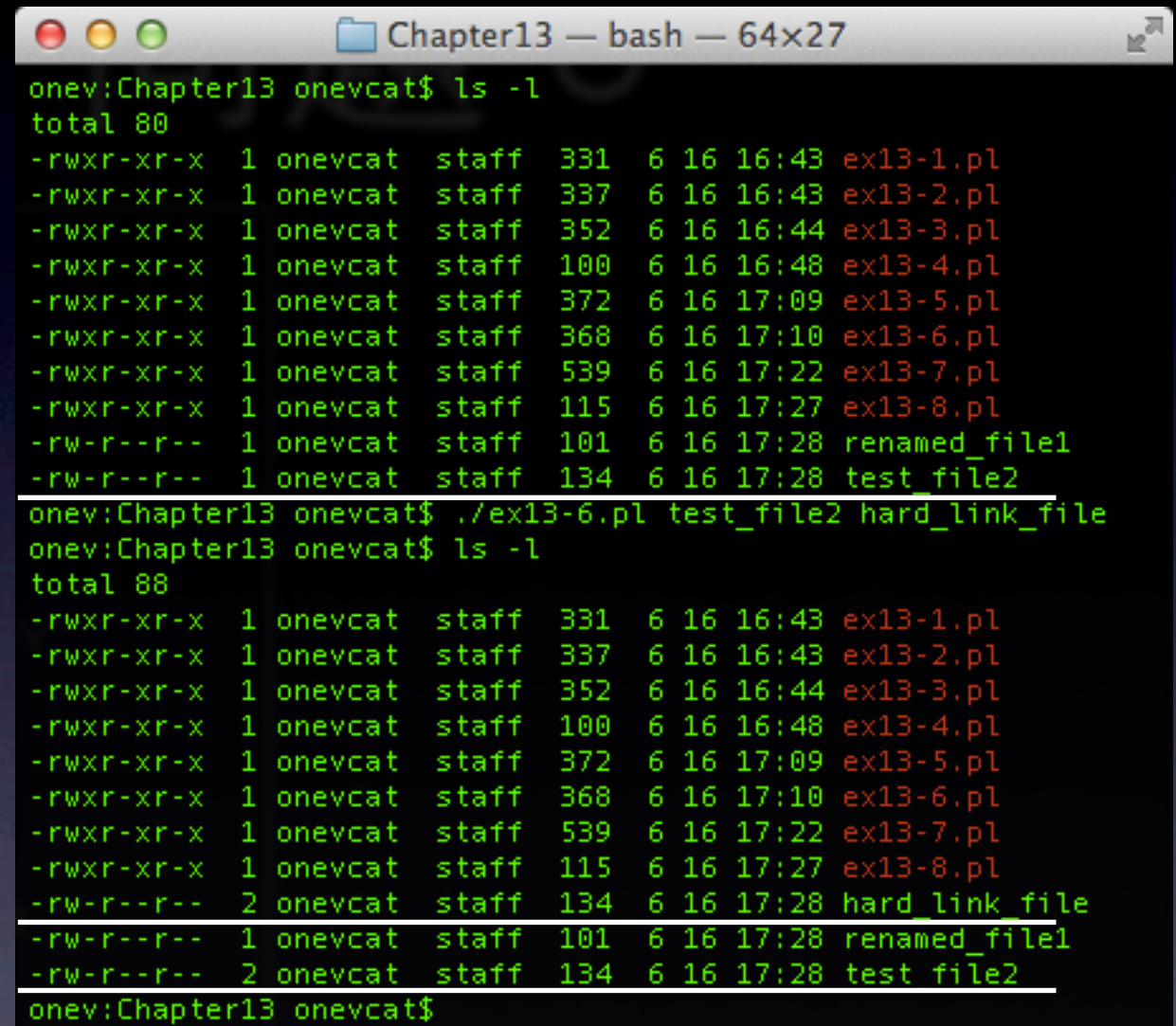
In the first `ls` command, `test_file1` is highlighted with a red box. In the second `ls` command, `renamed_file1` is highlighted with a red box. A white arrow points from the `test_file1` box in the first command to the `renamed_file1` box in the second command, illustrating the successful rename operation.

問題 6

ソースコード:

```
#!/usr/bin/perl
use strict;
use File::Basename;
use File::Spec;

my ($source, $destination) = @ARGV;
### source: $source
### destination: $destination
if (-d $destination) {
    ### destination is a directory.
    $destination = File::Spec->catfile
($destination, basename $source);
    ### destination: $destination
}
link $source, $destination or die "Link File error.
$!";
```



The screenshot shows a terminal window titled "Chapter13 — bash — 64x27". The user runs `ls -l` in the `onev:Chapter13 onevcat$` directory, showing a list of files including `ex13-1.pl` through `ex13-8.pl`, `renamed_file1`, and `test_file2`. Then, the user runs `./ex13-6.pl test_file2 hard_link_file`. A second `ls -l` command shows the updated directory listing, where `hard_link_file` now appears with a link count of 2, indicating it is a hard link to `test_file2`.

```
onev:Chapter13 onevcat$ ls -l
total 80
-rwxr-xr-x  1 onevcat  staff  331  6 16 16:43 ex13-1.pl
-rwxr-xr-x  1 onevcat  staff  337  6 16 16:43 ex13-2.pl
-rwxr-xr-x  1 onevcat  staff  352  6 16 16:44 ex13-3.pl
-rwxr-xr-x  1 onevcat  staff  100  6 16 16:48 ex13-4.pl
-rwxr-xr-x  1 onevcat  staff  372  6 16 17:09 ex13-5.pl
-rwxr-xr-x  1 onevcat  staff  368  6 16 17:10 ex13-6.pl
-rwxr-xr-x  1 onevcat  staff  539  6 16 17:22 ex13-7.pl
-rwxr-xr-x  1 onevcat  staff  115  6 16 17:27 ex13-8.pl
-rw-r--r--  1 onevcat  staff  101  6 16 17:28 renamed_file1
-rw-r--r--  1 onevcat  staff  134  6 16 17:28 test_file2
onev:Chapter13 onevcat$ ./ex13-6.pl test_file2 hard_link_file
onev:Chapter13 onevcat$ ls -l
total 88
-rwxr-xr-x  1 onevcat  staff  331  6 16 16:43 ex13-1.pl
-rwxr-xr-x  1 onevcat  staff  337  6 16 16:43 ex13-2.pl
-rwxr-xr-x  1 onevcat  staff  352  6 16 16:44 ex13-3.pl
-rwxr-xr-x  1 onevcat  staff  100  6 16 16:48 ex13-4.pl
-rwxr-xr-x  1 onevcat  staff  372  6 16 17:09 ex13-5.pl
-rwxr-xr-x  1 onevcat  staff  368  6 16 17:10 ex13-6.pl
-rwxr-xr-x  1 onevcat  staff  539  6 16 17:22 ex13-7.pl
-rwxr-xr-x  1 onevcat  staff  115  6 16 17:27 ex13-8.pl
-rw-r--r--  2 onevcat  staff  134  6 16 17:28 hard_link_file
-rw-r--r--  1 onevcat  staff  101  6 16 17:28 renamed_file1
-rw-r--r--  2 onevcat  staff  134  6 16 17:28 test_file2
onev:Chapter13 onevcat$
```

問題 7

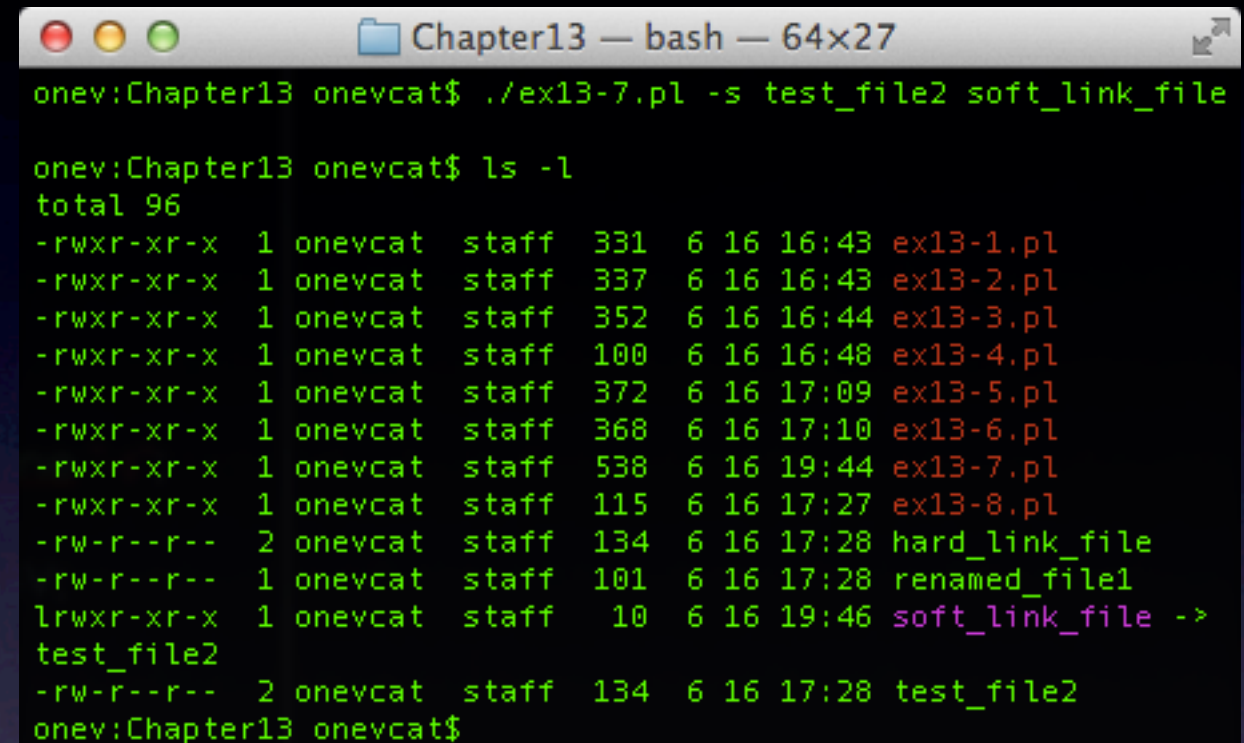
ソースコード:

```
#!/usr/bin/perl
use strict;
use File::Basename;
use File::Spec;

my $softArg = shift @ARGV;
unshift @ARGV, $softArg if $softArg ne "-s";

my ($source, $destination) = @ARGV;

if (-d $destination) {
    ### destination is a directory.
    $destination = File::Spec->catfile
($destination, basename $source);
}
if ($softArg eq "-s") {
    symlink $source, $destination or die "Link
File error. $!";
}
else {
    link $source, $destination or die "Link File
error. $!";
}
```



The screenshot shows a terminal window titled "Chapter13 — bash — 64x27". The user runs the script `./ex13-7.pl -s test_file2 soft_link_file`. Then, they run `ls -l` to list the directory contents. The output shows a list of files including `ex13-1.pl` through `ex13-8.pl`, `hard_link_file`, `renamed_file1`, `soft_link_file -> test_file2`, and `test_file2`. The `soft_link_file` entry is highlighted in pink in the original image, indicating it is a symbolic link pointing to `test_file2`.

```
onev:Chapter13 onevc$ ./ex13-7.pl -s test_file2 soft_link_file

onev:Chapter13 onevc$ ls -l
total 96
-rwxr-xr-x  1 onevc  staff  331  6 16 16:43 ex13-1.pl
-rwxr-xr-x  1 onevc  staff  337  6 16 16:43 ex13-2.pl
-rwxr-xr-x  1 onevc  staff  352  6 16 16:44 ex13-3.pl
-rwxr-xr-x  1 onevc  staff  100  6 16 16:48 ex13-4.pl
-rwxr-xr-x  1 onevc  staff  372  6 16 17:09 ex13-5.pl
-rwxr-xr-x  1 onevc  staff  368  6 16 17:10 ex13-6.pl
-rwxr-xr-x  1 onevc  staff  538  6 16 19:44 ex13-7.pl
-rwxr-xr-x  1 onevc  staff  115  6 16 17:27 ex13-8.pl
-rw-r--r--  2 onevc  staff  134  6 16 17:28 hard_link_file
-rw-r--r--  1 onevc  staff  101  6 16 17:28 renamed_file1
lrwxr-xr-x  1 onevc  staff   10  6 16 19:46 soft_link_file ->
test_file2
-rw-r--r--  2 onevc  staff  134  6 16 17:28 test_file2
onev:Chapter13 onevc$
```

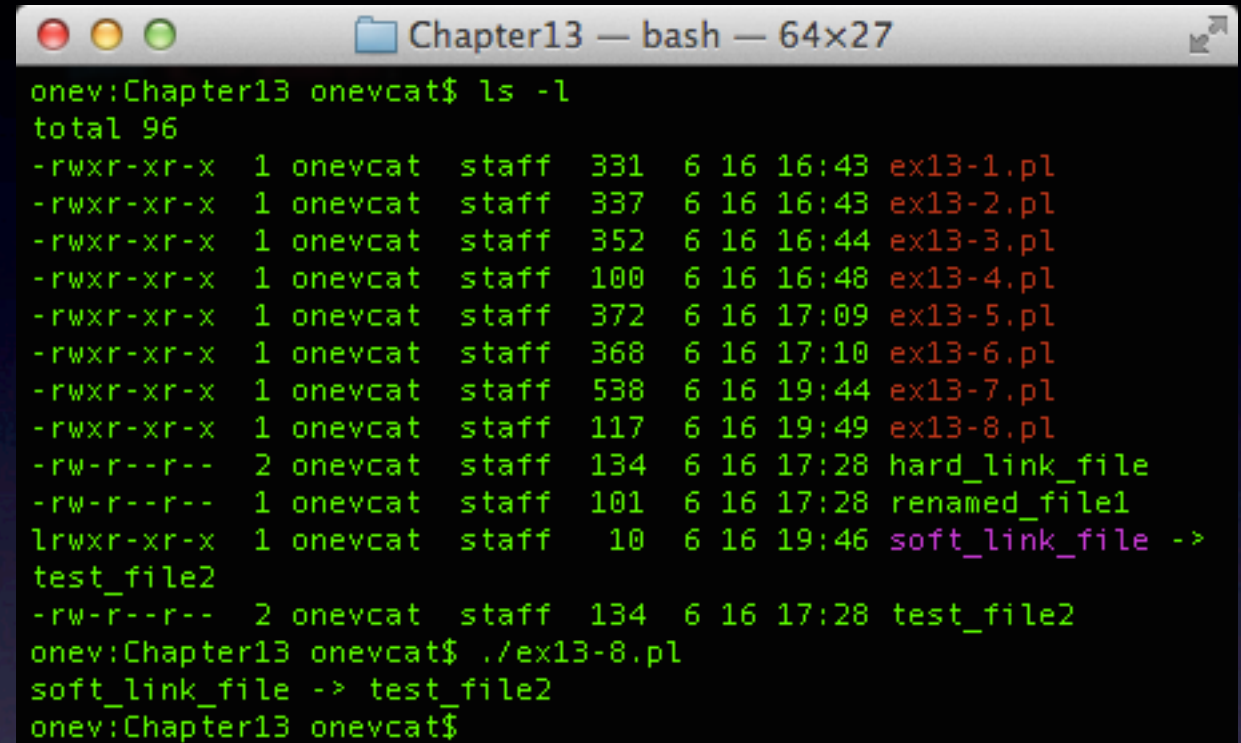

問題 8

ソースコード:

```
#!/usr/bin/perl
```

```
use strict;
```

```
foreach (glob '*.*') {  
    if (-l) {  
        my $des = readlink;  
        print "$_ -> $des\n";  
    }  
}
```



```
Chapter13 — bash — 64x27  
onev:Chapter13 onevcats$ ls -l  
total 96  
-rwxr-xr-x  1 onevcats  staff   331  6 16 16:43 ex13-1.pl  
-rwxr-xr-x  1 onevcats  staff   337  6 16 16:43 ex13-2.pl  
-rwxr-xr-x  1 onevcats  staff   352  6 16 16:44 ex13-3.pl  
-rwxr-xr-x  1 onevcats  staff   100  6 16 16:48 ex13-4.pl  
-rwxr-xr-x  1 onevcats  staff   372  6 16 17:09 ex13-5.pl  
-rwxr-xr-x  1 onevcats  staff   368  6 16 17:10 ex13-6.pl  
-rwxr-xr-x  1 onevcats  staff   538  6 16 19:44 ex13-7.pl  
-rwxr-xr-x  1 onevcats  staff   117  6 16 19:49 ex13-8.pl  
-rw-r--r--  2 onevcats  staff   134  6 16 17:28 hard_link_file  
-rw-r--r--  1 onevcats  staff   101  6 16 17:28 renamed_file1  
lrwxr-xr-x  1 onevcats  staff    10  6 16 19:46 soft_link_file ->  
test_file2  
-rw-r--r--  2 onevcats  staff   134  6 16 17:28 test_file2  
onev:Chapter13 onevcats$ ./ex13-8.pl  
soft_link_file -> test_file2  
onev:Chapter13 onevcats$
```