

Learning Perl

Exercises 4

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

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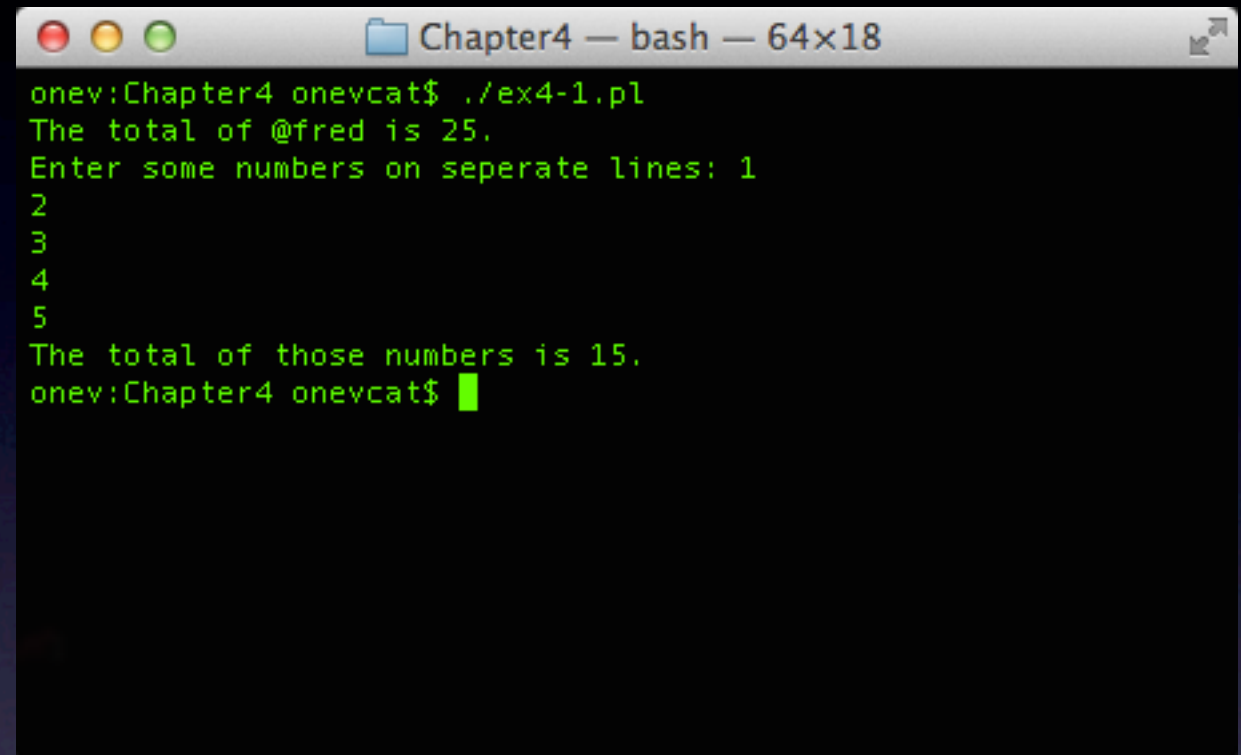
問題 1

ソースコード:

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

#Calculate total of several numbers.
sub total
{
    my $sum;
    foreach (@_)
    {
        $sum += $_;
    }
    $sum;
}

my @fred = qw { 1 3 5 7 9 };
my $fred_total = total(@fred);
print "The total of \@fred is $fred_total.\n";
print "Enter some numbers on seperate lines: ";
my $user_total = total(<STDIN>);
print "The total of those numbers is $user_total.\n";
```



```
Chapter4 — bash — 64x18
onev:Chapter4 onevcat$ ./ex4-1.pl
The total of @fred is 25.
Enter some numbers on seperate lines: 1
2
3
4
5
The total of those numbers is 15.
onev:Chapter4 onevcat$
```

$$1+3+5+7+9 = 25$$

$$1+2+3+4+5 = 15$$

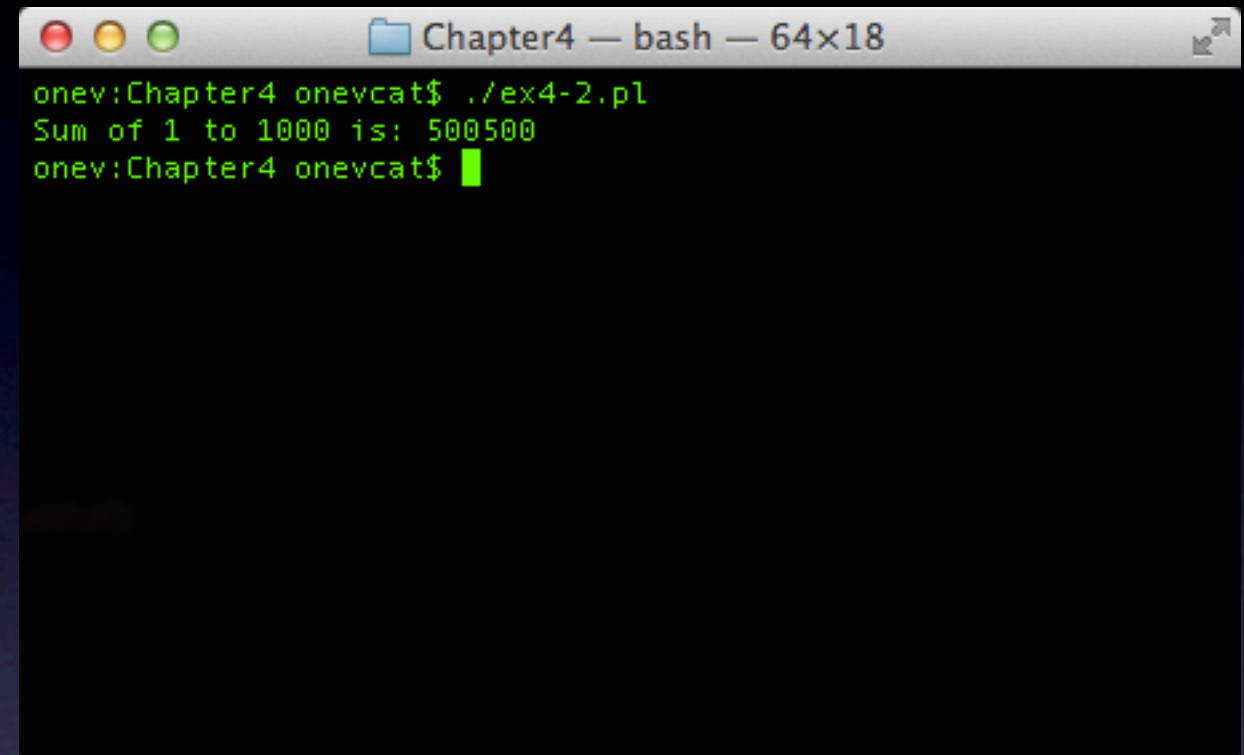
問題 2

ソースコード:

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

#Calculate total of several numbers.
sub total
{
    my $sum;
    foreach (@_)
    {
        $sum += $_;
    }
    $sum;
}

my @numbers = (1..1000);
my $sum = total(@numbers);
print "Sum of $numbers[0] to $numbers[-1] is:
$sum";
```

A terminal window titled "Chapter4 — bash — 64x18" showing the execution of the Perl script. The prompt is "onev:Chapter4 onevc\$". The command entered is "./ex4-2.pl". The output is "Sum of 1 to 1000 is: 500500". The prompt is now "onev:Chapter4 onevc\$".

```
Chapter4 — bash — 64x18
onev:Chapter4 onevc$ ./ex4-2.pl
Sum of 1 to 1000 is: 500500
onev:Chapter4 onevc$
```


問題 3

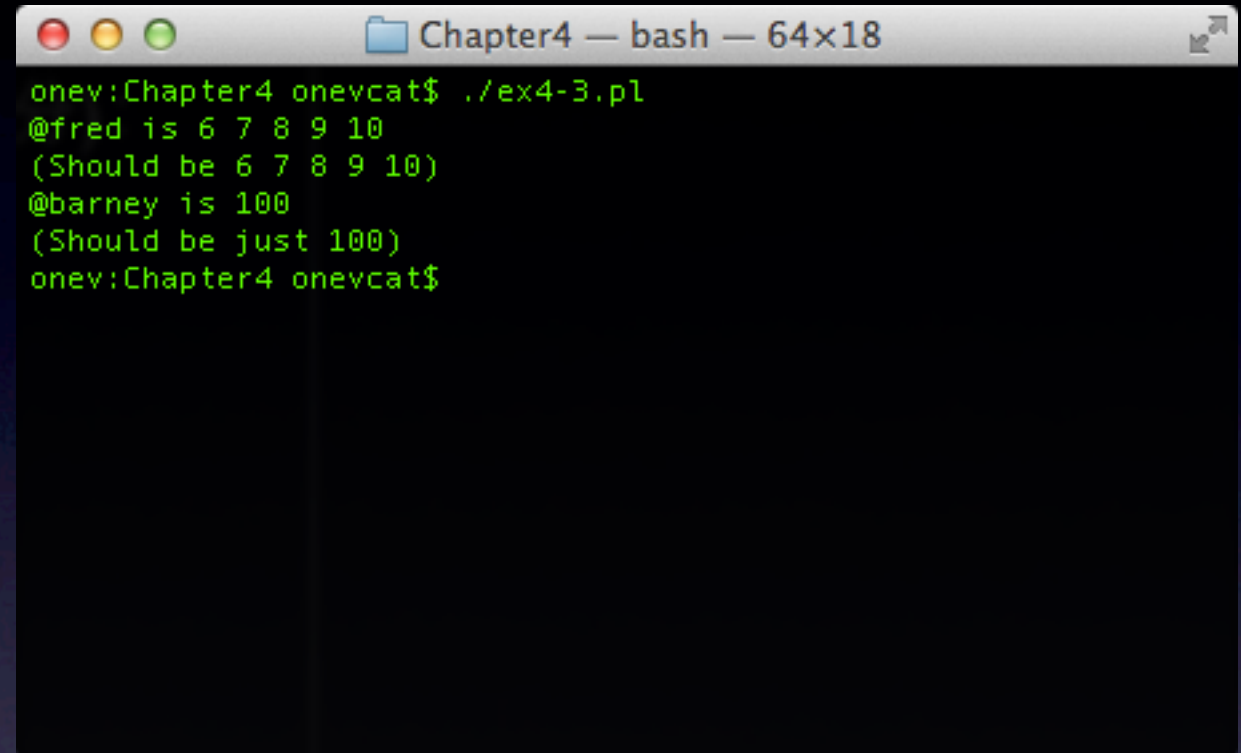
ソースコード(大切な部分):

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

#Calculate total of several numbers.
sub total {
    my $sum;
    foreach (@_) {
        $sum += $_;
    }
    $sum;
}

#Calculate average of several numbers.
sub average {
    #In case the 0-divided exceptions.
    if (@_) {
        #Average = Total / Count
        my $average = total(@_) / @_;
    }
    #If the list is empty, it's OK to return a undef.
}

sub above_average{
    my $average = average(@_);
    my @numbersAboveAverage;
    foreach (@_) {
        if ($_ > $average) {
            push @numbersAboveAverage, $_
        }
    }
    @numbersAboveAverage;
}
```



```
Chapter4 — bash — 64x18
onev:Chapter4 onevcat$ ./ex4-3.pl
@fred is 6 7 8 9 10
(Should be 6 7 8 9 10)
@barney is 100
(Should be just 100)
onev:Chapter4 onevcat$
```

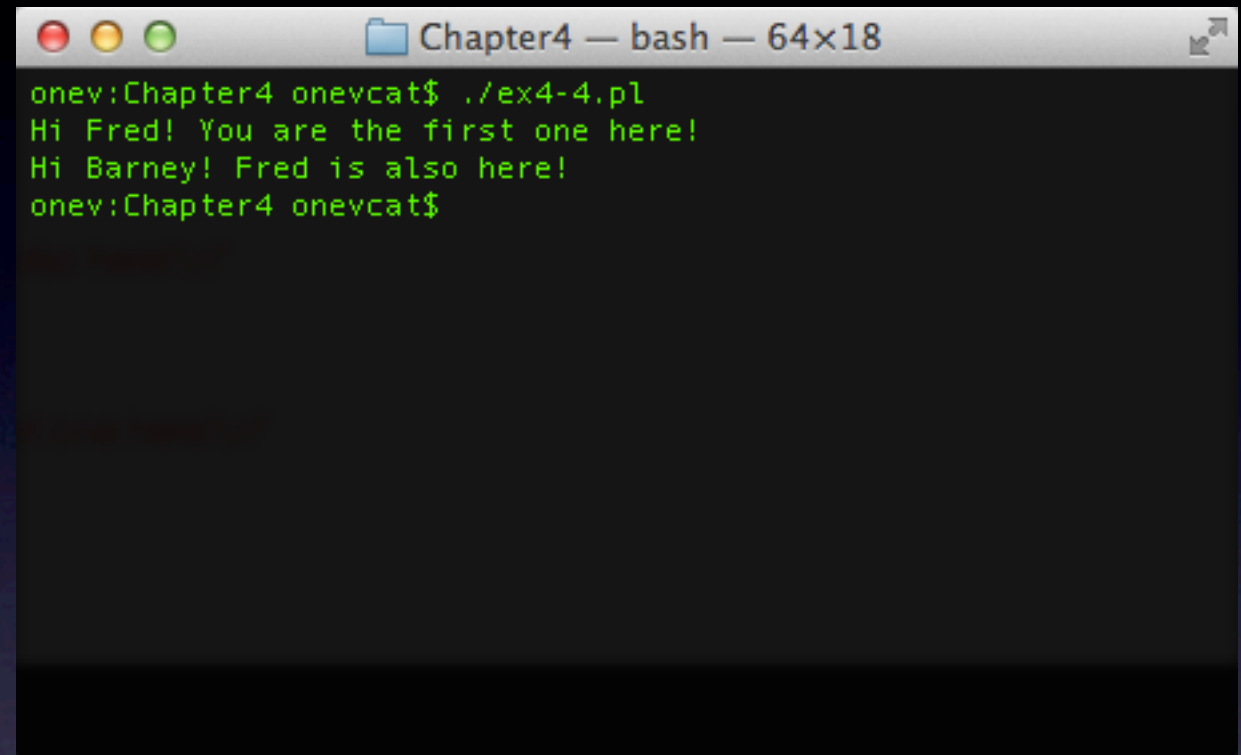
問題 4

ソースコード:

```
#!/usr/bin/perl
use strict;
use 5.010;

sub greet
{
    state $lastPerson;
    my $currentPerson = $_[0];
    if ($lastPerson)
    {
        print "Hi $currentPerson! $lastPerson is
also here!\n";
    }
    else
    {
        print "Hi $currentPerson! You are the first
one here!\n";
    }
    $lastPerson = $currentPerson;
}

greet("Fred");
greet("Barney");
```



```
Chapter4 — bash — 64x18
onev:Chapter4 onevcat$ ./ex4-4.pl
Hi Fred! You are the first one here!
Hi Barney! Fred is also here!
onev:Chapter4 onevcat$
```

stateは問題のキーだ。

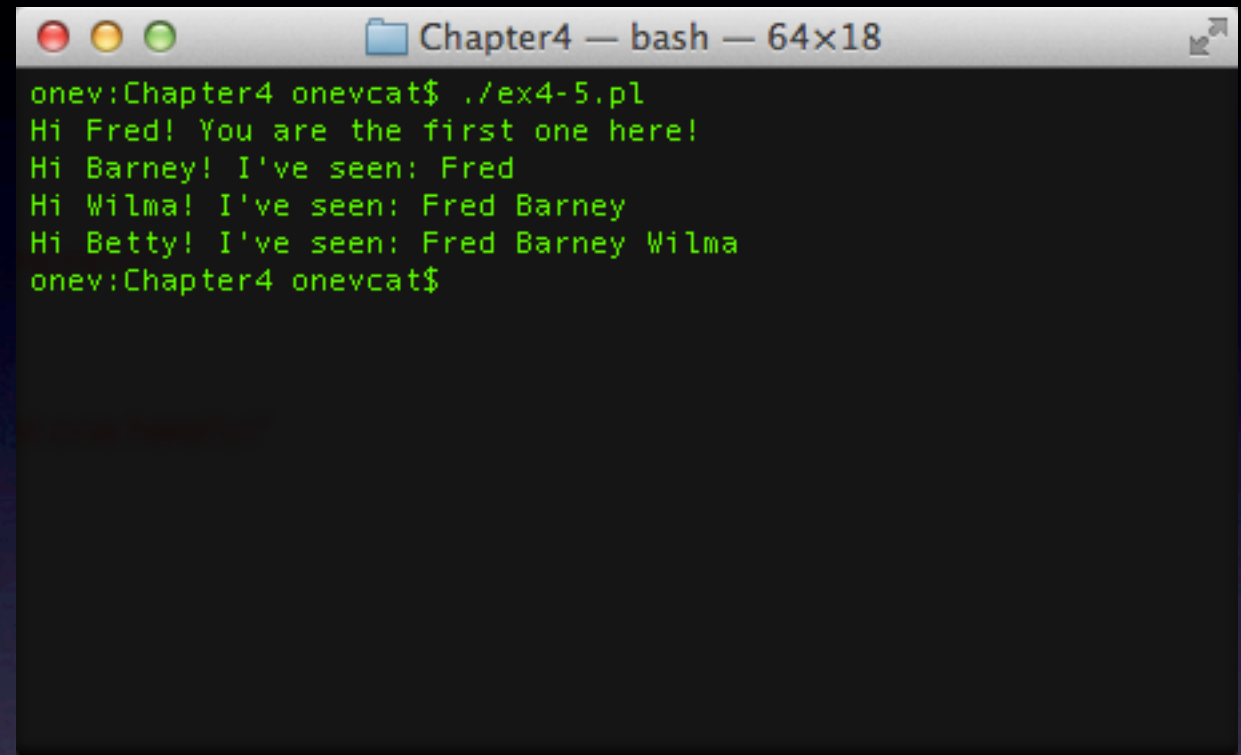
問題 5

ソースコード:

```
#!/usr/bin/perl
use strict;
use 5.010;

sub greet{
    state @persons;
    my $currentPerson = $_[0];
    if (@persons) {
        print "Hi $currentPerson! I've seen:
@persons\n";
    } else {
        print "Hi $currentPerson! You are the first
one here!\n";
    }
    push @persons, $currentPerson;
}

greet("Fred");
greet("Barney");
greet("Wilma");
greet("Betty");
```



```
Chapter4 — bash — 64x18
onev:Chapter4 onevc$ ./ex4-5.pl
Hi Fred! You are the first one here!
Hi Barney! I've seen: Fred
Hi Wilma! I've seen: Fred Barney
Hi Betty! I've seen: Fred Barney Wilma
onev:Chapter4 onevc$
```