Recap for The Art of Naming

Recap for The Art of Naming
“命名”课回顾

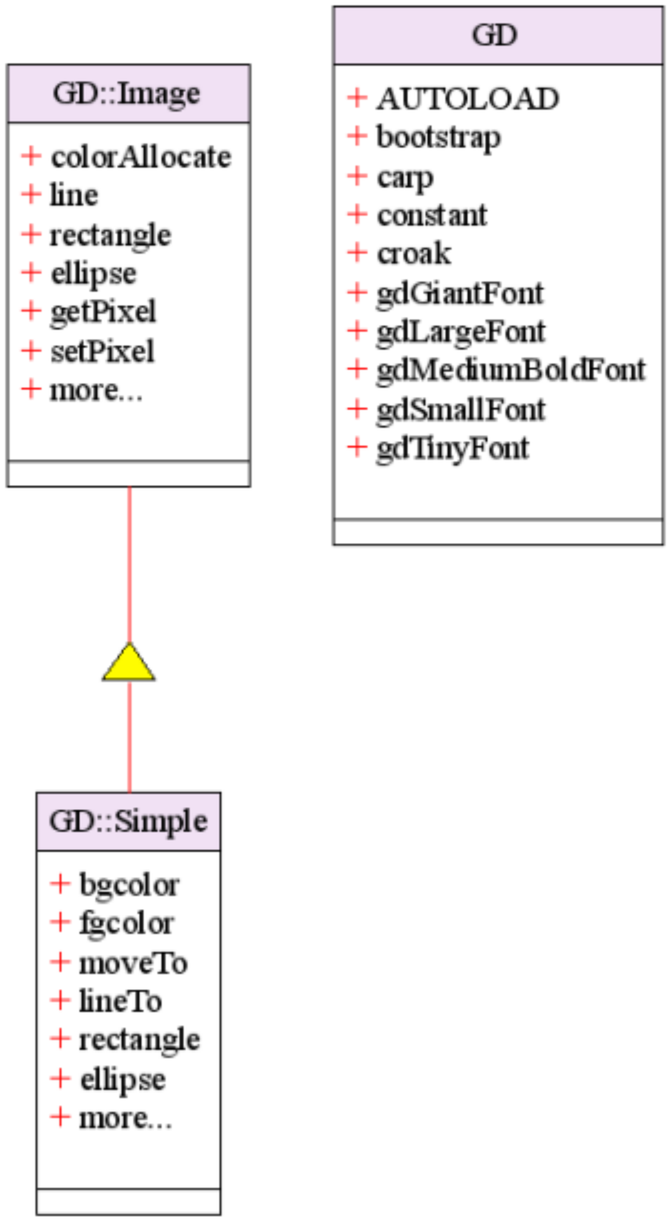
☺*agentzh (章亦春)*☺

2006.10

To *simplify* a class interface,
use of inheritance is *deprecated*.

若想简化类的接口，
则不应使用继承。

A *bad* example in perl 5 ⇒


GD::Image
+ colorAllocate
+ line
+ rectangle
+ ellipse
+ getPixel
+ setPixel
+ more...
GD
+ AUTOLOAD
+ bootstrap
+ carp
+ constant
+ croak
+ gdGiantFont
+ gdLargeFont
+ gdMediumBoldFont
+ gdSmallFont
+ gdTinyFont
GD::Simple
+ bgcolor
+ fgcolor
+ moveTo
+ lineTo
+ rectangle
+ ellipse
+ more...

```perl
# This works:
use GD::Simple;

my $img = new GD::Simple(40, 50);
$img->bgcolor('white');
$img->fgcolor('red');
$img->rectangle(10, 10, 50, 50);
```

```perl
# But this doesn't work, since
# setPixel is a method derived
# directly from GD::Image
use GD::Simple;

my $img = new GD::Simple(40, 50);
$img->bgcolor('white');
$img->fgcolor('red');
$img->setPixel(10, 10, 'red');
```

```perl
# We have to degrade to the harder way:
use GD::Simple;

my $img = new GD::Simple(40, 50);
my $red = $img->colorAllocate(255, 0, 0);
$img->setPixel(10, 10, $red);
```

```
# The Perl 5 way:
print "hello, world!\n";
```

```
# The Perl 5 way:
print "hello, world!\n";
```

5 characters

```
# The Perl 6 way:
say "hello, world!";
```

```
# The Perl 6 way:
say "hello, world!";
```

3 characters

☺ That's the Huffman coding *principle*

这正是哈夫曼编码原理。

- ✓ Rant on the software vendors and show them where the technology *really* wants to go!

向那些软件商怒吼，
并向他们指出技术真正想去的地方！

RANT ON!

Broad background knowledge is *very* important to *good* programmers.

宽广的背景知识对于好的程序员来说是非常重要的。

AN2000

<agentzh> yeah

<agentzh> audreyt++ # you seem to know *everything*.

<audreyt> nah, not really :)

<agentzh> hehe

<audreyt> that's what you get from spending far too much time on wikipedia...

<agentzh> ah, wikipedia++

<章亦春> 是

<章亦春> 唐凤++ # 你似乎知道所有的事情

<唐凤> 才不是呢 :)

<章亦春> 呵呵

<唐凤> 这是在 **wikipedia** 网站上花费了很多时间的结果……

<章亦春> 啊，**wikipedia++**

☺ Understanding the *culture*
behind the technology is very important.

理解技术背后的文化是很重要的。

The *culture* of Windows feels like...

♨

Windows 的文化就感觉像……

While the *culture* of UNIX feels like…

♨

而 UNIX 的文化就感觉像……

THE AQUARIUS COLLECTION
WIZARD
MYLES PINKNEY

Java gives me the *feeling* like...

♨

Java 给我的感觉就像是……

Perl gives me the *feeling* like...

♨

Perl 给我的感觉就像是……

The *top* 3 jumps in my programming learning *curve* ⇒

我的编程学习曲线中的三次飞跃 ⇒

☆ ***OOP*** **(Object-Oriented Programming)**

2001.2 ***C++, Java, C#, encapsulation***

☆ ***OOP*** **(Object-Oriented Programming)**

2001.2 ***C++, Java, C#, encapsulation***

☆ ***Dynamic*** **Programming**

2002.9 ***Perl, Awk, regexes, the UNIX culture***

☆ ***OOP*** **(Object-Oriented Programming)**

2001.2 ***C++, Java, C#, encapsulation***

☆ ***Dynamic*** **Programming**

2002.9 ***Perl, Awk, regexes, the UNIX culture***

☆ ***TDD*** **(Test-Driven Development)**

2004.4 ***C# NUnit, Perl's Test::More, Pugs***

The *potential* 4th jump at present:

The *potential* 4th jump at present:

☆ ***Functional* Programming**

2006.? ***Haskell, CPS, Perl 6***

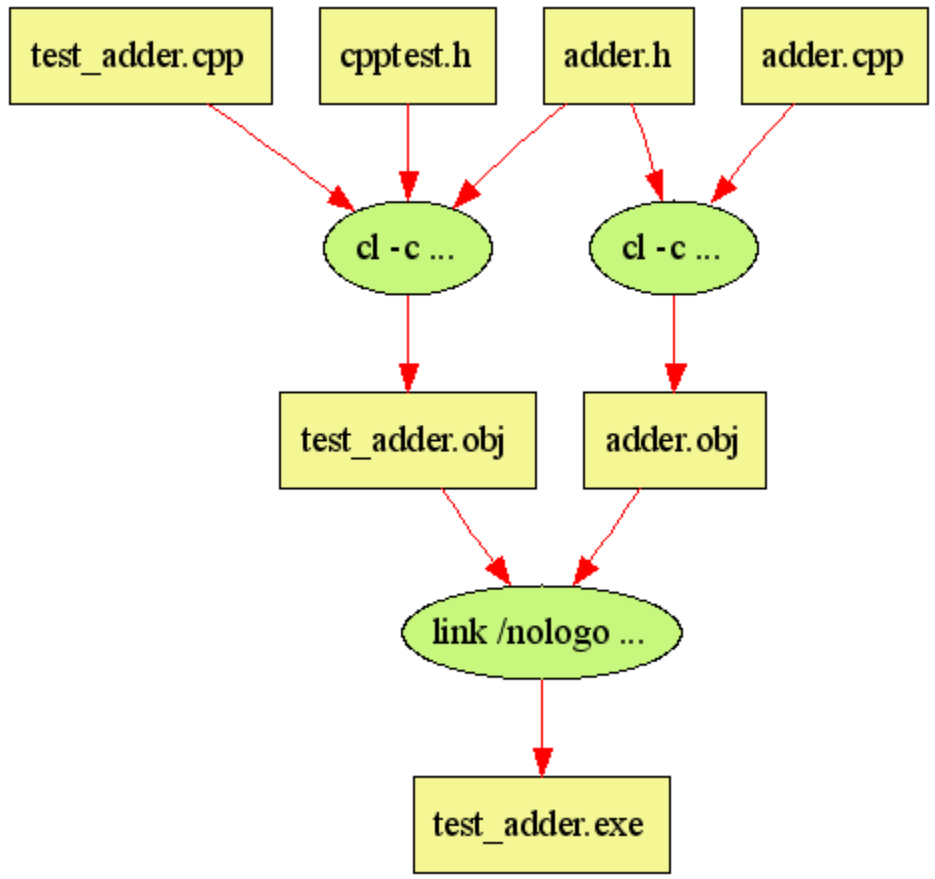
☺ A small *perlish* TDD example in C/C++ ⇒

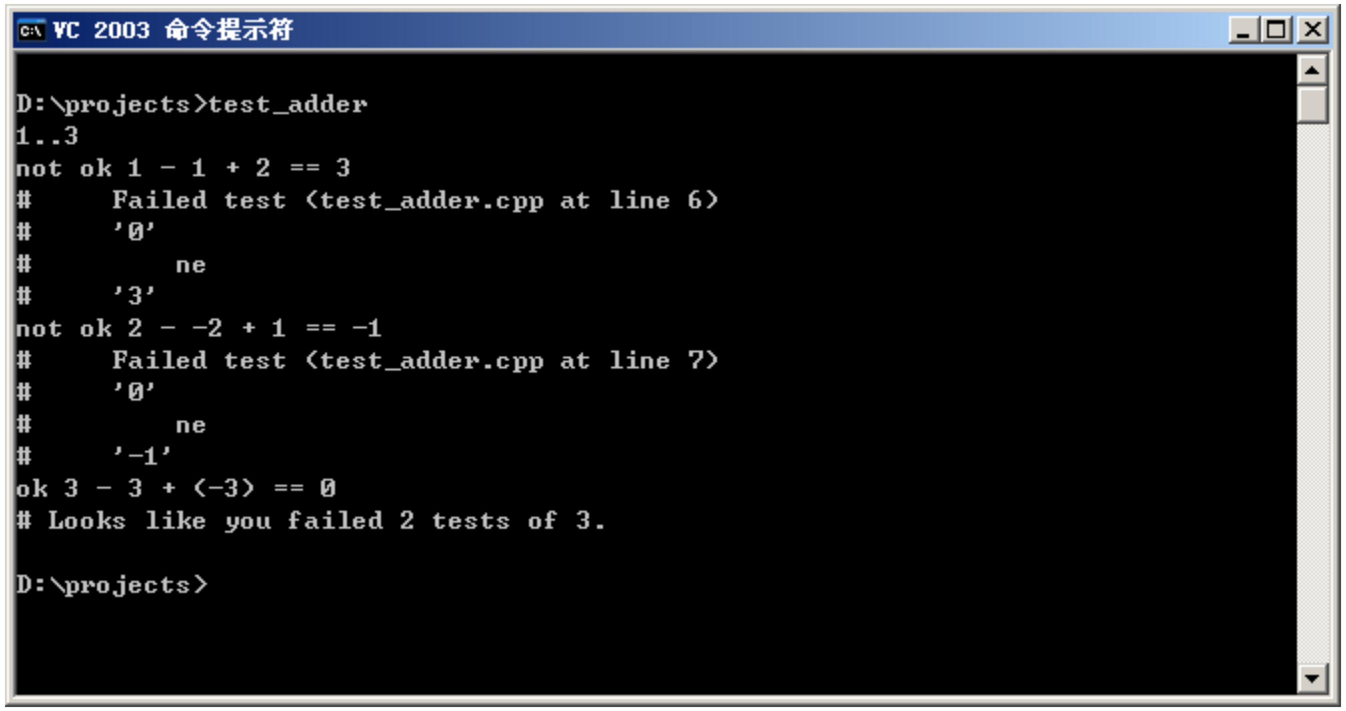
C/C++ 中的一个 perl 风味的测试驱动的示例 ⇒

```c
/* adder.h */
#ifndef _ADDER_H_
#define _ADDER_H_

int add(int a, int b);

#endif
```

```cpp
/* adder.cpp */
#include "adder.h"

int add(int a, int b) {
    // doesn't do anything useful right now:
    return 0;
}
```

```
/* test_adder.cpp #/
#include "adder.h"
#include "cpptest.h"

int main() {
    plan(3);
    is_(add(1, 2),  3, "1 + 2 == 3");
    is_(add(-2,1), -1, "-2 + 1 == -1");
    is_(add(3,-3),  0, "3 + (-3) == 0");
    summary();
    return 0;
 }
```


test_adder.cpp
cpptest.h
adder.h
adder.cpp
cl -c ...
cl -c ...
test_adder.obj
adder.obj
link /nologo ...
test_adder.exe



```
D:\projects>test_adder
1..3
not ok 1 - 1 + 2 == 3
#     Failed test (test_adder.cpp at line 6)
#     '0'
#         ne
#     '3'
not ok 2 - -2 + 1 == -1
#     Failed test (test_adder.cpp at line 7)
#     '0'
#         ne
#     '-1'
ok 3 - 3 + (-3) == 0
# Looks like you failed 2 tests of 3.

D:\projects>
```

```
D:\projects>test_adder
1..3
not ok 1 - 1 + 2 == 3
#     Failed test (test_adder.cpp at line 6)
#     '0'
#         ne
#     '3'
not ok 2 - -2 + 1 == -1
#     Failed test (test_adder.cpp at line 7)
#     '0'
#         ne
#     '-1'
ok 3 - 3 + (-3) == 0
# Looks like you failed 2 tests of 3.
```

☺ The first 2 tests failed *as expected*~~~

前 2 个测试如期失败~~~

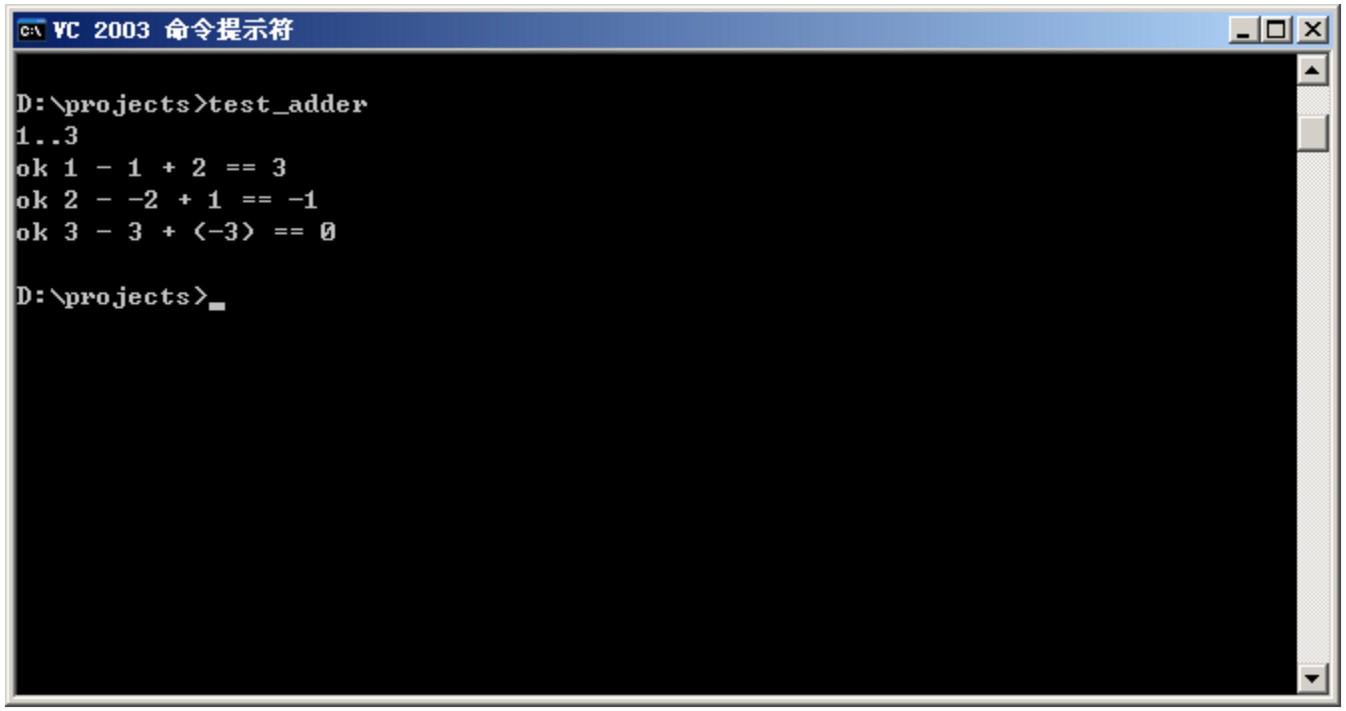
☺ Now it's time to *actually* implement the add function.

现在是真正给出 add 函数的实现的时候了。

```
/* adder.cpp */
#include "adder.h"

int add(int a, int b) {
    // now we add the functionality:
    return a + b;
}
```

☺ Now let's rebuild the project and *rerun* the tests...

现在让我们来重新生成项目并再次运行测试……



```
D:\projects>test_adder
1..3
ok 1 - 1 + 2 == 3
ok 2 - -2 + 1 == -1
ok 3 - 3 + (-3) == 0

D:\projects>_
```

```
D:\projects>test_adder
1..3
ok 1 - 1 + 2 == 3
ok 2 - -2 + 1 == -1
ok 3 - 3 + (-3) == 0
```

Write test...

...watch test fail.

Write code...

...watch test pass.

Refactor...

...watch test pass.

Write test...

...watch test fail.

Write code...

...watch test pass.

Refactor...

...watch test pass.

…

编写测试……

……观察测试失败。

编写代码……

……观察测试通过。

重构……

……观察测试通过。

编写测试……

……观察测试失败。

编写代码……

……观察测试通过.

重构……

……观察测试通过。

……

Get my slides!

http://agentzh.org/misc/slides/naming_recap.pdf

Contact me on the *web*!

♨

agentzh@gmail.com

These slides are *powered* by
Sporx and *Takahashi*++

Thank you!

☺