

# C++

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- 
- .....
  - .....
  - .....
    - ff .....
    - f .....

CC++

<http://bbs.sjtu.edu.cn/bbstcon,board,C,reid,1330078933,file,M.1330078933.A.html>

cast-down

```
1  template <bool _Test, class _Type =
void>
2  struct enable_if { };
3
4  template<class _Type>
5  struct enable_if<true, _Type> {
6      typedef _Type type;
7  };
8
9  class A { };
10 class B : A { };
11
12 template <typename T>
13 struct traits { static int const val
ue = false; };
14
15 template <>
```

```
16 struct traits<A> { static int const
value = true; };
17
18 template <typename T>
19 void f(T, typename enable_if<traits<T
>::value>::type* = 0) { }
20
21 template <>
22 void f<A>(A, enable_if<traits<A>::va
lue>::type*) { }
23
24
25
26 template <typename T>
27 class BB {};
28
29 template <typename T>
30 class DD : public BB<T> {};
31
32 template <typename T> void ff(BB<T>)
{};
33
34 int main(int argc, char * argv[])
35 {
36     A a; B b;
37     DD<long> dd;
38     //f(b);
39     ff(dd);
40 }
```

f f<A>

ff ff<BB<long>>

VC10GCC3.4

# : A#B B A<T> T

ff

.....

1 DD<long> dd;

DD<long>

DD#long

BB

1 ff(dd);

DD#long -> BB<T>

ff<T> T

```
:code:`class_template_name<T>` :co  
de:`T`
```

T long

BB

CC

ff<T>

long -> T

ff#long

{ff#long}

ff#long

DD#long

BB#lo

f

.....

```
1 f(b);
```

f

```
:code:`T` :code:`T`
```

B -> T

B      A              f<A>              f<T>

B      f<T>              f#B              traits#B

B              traits<T>

traits#B::value=false              enable\_if#false  
type

SFINAE