

弱问个问题。

对于 cmp 这个函数，在 LINUX G++ 5.4.0 下以 -Wall -Wextra 编译，不报错。

```
for( int i = 1 ; i <= n ; i++)
{
    int ni ;
    cin >> ni ;
    int first = 1 , last = maxn , pos , middle ;
    while( first < last )
    {
        middle = (first + last ) / 2 ;
        if( a[middle].value < ni )
        {
            first = middle + 1 ;
            pos = first ;
        }
        else
        {
            last = middle ;
            pos = last ;
        }
    }
    //cout << pos << ' ' << a[pos].key << ' ' << a[pos].value << endl ;
    ans += a[pos].key ;
}
cout << "Case " << ++kase << ": " << ans << " Xukha" << endl ;
return 0 ;
}
```

```
bool cmp( struct node &a , struct node &b )
{
    if( a.value < b.value )
        return true ;
    else if( a.value == b.value )
        return a.key < b.key ;
    else
        return false ;
}
```

```
int main()
{
    int t ;
    cin >> t ;
    int kase = 0 ;
    while( t-- )
        init() ;
}
```

```
giekeyi@ubuntu:~$ g++ a.cpp -o a -Wall -Wextra
giekeyi@ubuntu:~$
```

在 windows 环境下 G++ 4.8.1 -Wall 编译 报错 (似乎是 struct node & 不能转换为 const struct node & 类型?)

```
_RandomAccessIterator __last,
const _Tp& __pivot, _Compare __comp)
{
    while (true)
    {
        while ( __comp(*__first, __pivot))
            ++__first;
        --__last;
        while ( __comp(__pivot, *__last))
            --__last;
        if (!(__first < __last))
            return __first;
        std::iter_swap(__first, __last);
        ++__first;
    }
}
```

行	列	单元	信息
2319	78	d:\软件\dev-cpp\mingw64\lib\gcc\x86_64-w64-mingw3...	required from '_RandomAccessIterator std::__unguarded_partition_pivot(_RandomAccessIterator, _RandomAccessIterator, _Compare) [with _RandomAccessite...
2360	62	d:\软件\dev-cpp\mingw64\lib\gcc\x86_64-w64-mingw3...	required from 'void std::__introsort_loop(_RandomAccessIterator, _RandomAccessIterator, _Size, _Compare) [with _RandomAccessIterator = node*, _Size = lon...
5513	44	d:\软件\dev-cpp\mingw64\lib\gcc\x86_64-w64-mingw3...	required from 'void std::sort(_RAIter, _RAIter, _Compare) [with _RAIter = node*, _Compare = bool (*)(const node&, const node&)]'
53	30	C:\Users\Thinkpad\Desktop\1.cpp	required from here
2287	35	d:\软件\dev-cpp\mingw64\lib\gcc\x86_64-w64-mingw3...	[Error] invalid initialization of reference of type 'node&' from expression of type 'const node'
2290	34	d:\软件\dev-cpp\mingw64\lib\gcc\x86_64-w64-mingw3...	[Error] invalid initialization of reference of type 'node&' from expression of type 'const node'

行: 1 列: 1 已选择: 0 总行数: 6347 长度: 218122 插入 在 0.015 秒内完成解析

在 VJ 上 (版本 编译参数不明) 同样报错

安全 | <https://vjudge.net/contest/170625#status/xiekeyi98/L/0/>

Begin: 2017-07-15 00:00:00

Elapsed: 58:11

Overview

Previous 1

Run ID

9691331	
9690646	
9690553	
9690522	
9690373	

#9691331 xiekeyi98's solution for [Problem L]

Status	Length	Lang	Submitted	Shared
Compilation Error	1536	C++	2017-07-17 18:04:36	<input checked="" type="checkbox"/>

```
In file included from /usr/include/c++/4.8/algorithm:62:0,
                 from /usr/include/x86_64-linux-gnu/c++/4.8/bits/stdc++.h:64,
                 from Main.cc:4:
/usr/include/c++/4.8/bits/stl_algo.h: In instantiation of '_RandomAccessIterator std::__unguarded_partition(_RandomAccessIterator, _RandomAccessIterator, const _Key&, _Compare):
/usr/include/c++/4.8/bits/stl_algo.h:2319:78:   required from '_RandomAccessIterator std::__unguarded_partition(_RandomAccessIterator, _RandomAccessIterator, const _Key&, _Compare) [with _RandomAccessIterator = __gnu_cxx::__normal_iterator<node*>, _RandomAccessIterator = __gnu_cxx::__normal_iterator<node*>, _Key = node, _Compare = const _Compare];'
/usr/include/c++/4.8/bits/stl_algo.h:2360:62:   required from 'void std::__introsort_loop(_RandomAccessIterator, _RandomAccessIterator, const _Compare, _RandomAccessIterator) [with _RandomAccessIterator = __gnu_cxx::__normal_iterator<node*>, _RandomAccessIterator = __gnu_cxx::__normal_iterator<node*>, _Compare = const _Compare];'
/usr/include/c++/4.8/bits/stl_algo.h:5513:44:   required from 'void std::sort(_RAIter, _RAIter, const _Compare) [with _RAIter = __gnu_cxx::__normal_iterator<node*>, _RAIter = __gnu_cxx::__normal_iterator<node*>, _Compare = const _Compare];'
Main.cc:53:30:   required from here
/usr/include/c++/4.8/bits/stl_algo.h:2287:35: error: invalid initialization of reference of type 'node&'
                 while (__comp(*__first, __pivot))
                               ^
                                   ^
/usr/include/c++/4.8/bits/stl_algo.h:2290:34: error: invalid initialization of reference of type 'node&'
                 while (__comp(__pivot, *__last))
                               ^
                                   ^
```

Select Code

本弱想问下，这是早期 G++ 版本的问题？还是说 在类似 cmp 函数中，使用引用而不是 const 引用是不合法的？

是不是引用向 const 引用的默认类型转换本身就是不合法的，应该极力避免？