

头文件 Test.h:

```
1 //Test.h
2 #ifndef PRACTICE_TEST_H
3 #define PRACTICE_TEST_H
4
5 class Test{
6     private:
7         int N;
8         int array[1000];
9         int tmp[10];
10        int cnt;
11    public:
12        Test(int *src, int N);
13        ~Test();
14        int &operator[] (const int n);
15 };
16
17 #endif //PRACTICE_TEST_H
```

主程序 (两张图是一个程序):

```
1 #include<bits/stdc++.h>
2 #include "Test.h"
3
4 using namespace std;
5
6 Test::Test(int *src, int n) {           //初始赋值
7     N = n;
8     for (int i = 0; i < N; i++) array[i] = src[i];
9 }
10
11 Test::~Test() {}                       //调用析构函数
12
13 int &Test::operator[](const int n) {
14     void reserve_quick_sort(int array[], int l, int r);           //声明快速排序函数
15     reserve_quick_sort(array, 0, N);                             //从大到小排序
16     int left = 10 * n + 1, right = 10 * n + 10;                 //确定每个区间的左右边界
17     cnt = 0;             //初始化计数器
18     for (int i = 0; i < N; i++) {
19         if (array[i] <= right && array[i] >= left)               //当前数据在此区间范围内
20             cnt++;
21         if (array[i] < left) break;
22     }
23     return cnt;
24 }
```

```

26 void reserve_quick_sort(int array[], int st, int ed) {
27     if (st >= ed - 1) return;    //终止条件
28
29     int l = st, r = ed, tmp = 0;
30     int p = array[l];
31     for (int i = l + 1; i < r; /*不同情况下最后的处理不同，所以不填第三个参数*/) {
32         if (array[i] > array[l]) {
33             tmp = array[l];
34             array[l] = array[i];
35             array[i] = tmp;
36             l++, i++;
37         } else {
38             tmp = array[i];
39             for (int j = i; j < r; j++) array[j] = array[j + 1];
40             array[r - 1] = tmp;
41             r--;
42         }
43     }
44     array[l] = p;
45     reserve_quick_sort(array, st, ed: l);
46     reserve_quick_sort(array, st: l + 1, ed);
47 }
48
49 int main() {
50     //含待处理成绩的数组
51     int q[100] = { [0]: 1, [1]: 45, [2]: 12, [3]: 56, [4]: 79, [5]: 78, [6]: 45, [7]: 12, [8]: 32, [9]: 45, [10]: 15,
52                   [11]: 78, [12]: 98, [13]: 52, [14]: 100, [15]: 12, [16]: 45, [17]: 35, [18]: 65, [19]: 48, [20]: 12,
53                   [21]: 6, [22]: 78, [23]: 78, [24]: 54, [25]: 99, [26]: 65, [27]: 45, [28]: 46, [29]: 1, [30]: 28,
54                   [31]: 78, [32]: 65, [33]: 44, [34]: 55, [35]: 33, [36]: 66, [37]: 88, [38]: 98, [39]: 78, [40]: 87,
55                   [41]: 88, [42]: 77, [43]: 79, [44]: 45, [45]: 45, [46]: 65, [47]: 78, [48]: 48, [49]: 13, [50]: 45,
56                   [51]: 25, [52]: 6, [53]: 98, [54]: 78, [55]: 45, [56]: 26, [57]: 54, [58]: 16, [59]: 79, [60]: 54,
57                   [61]: 64, [62]: 89, [63]: 74, [64]: 12, [65]: 6, [66]: 84, [67]: 54, [68]: 65, [69]: 98, [70]: 91,
58                   [71]: 51, [72]: 15, [73]: 94, [74]: 96, [75]: 61, [76]: 83, [77]: 73, [78]: 43, [79]: 46, [80]: 53,
59                   [81]: 46, [82]: 49, [83]: 19, [84]: 29, [85]: 39, [86]: 79, [87]: 34, [88]: 94, [89]: 35, [90]: 37,
60                   [91]: 38, [92]: 78, [93]: 94, [94]: 61, [95]: 6, [96]: 44, [97]: 2, [98]: 6, [99]: 7};
61
62     Test obj( src: q, n: 100);
63     int n;
64     cin >> n;    //输入想要查看的成绩组
65     cout << "The number of score started with " << n << " is " << obj[n] << endl;    //输出想要查看的成绩组
66     return 0;
67 }

```

运行结果：

```

C:\Users\Hayes\CLionProjects\practice\cmake-build-debug\test.exe
5
The number of score started with 5 is 9
Process finished with exit code 0

C:\Users\Hayes\CLionProjects\practice\cmake-build-debug\test.exe
9
The number of score started with 9 is 11
Process finished with exit code 0

```

IDE: Clion