

第十一次作业

第一题

```
1  #include <vector>
2  #include <iostream>
3  #include <random>
4  using namespace std;
5  int get_fib(int n);
6  int main(int argc, char* argv[]) {
7      vector<int> a(100);
8      random_device rd;
9      const uniform_int_distribution<> dis(-10000, 10000);
10     for (auto it = a.begin(); it != a.end(); ++it) {
11         *it = dis(rd);
12     }
13     for (int i = 1; ; ++i) {
14         const int fib = get_fib(i);
15         if (fib > 100) break;
16         a.erase(a.begin() + fib - i);
17     }
18     sort(a.begin(), a.begin() + a.size()/2);
19     sort(a.begin() + a.size()/2, a.end(), greater<>());
20     for (const int a1 : a) {
21         cout << a1 << endl;
22     }
23 }
24
25 int get_fib(const int n) {
26     static int fib[100];
27     if(n <= 2) {
28         fib[0] = -1;
29         fib[1] = 1;
30         fib[2] = 2;
```

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31     }else fib[n] = fib[n - 1] + fib[n - 2];
32     return fib[n];
33 }
34
```

第二题

```
1  #include <set>
2  #include <iostream>
3  #include <random>
4  using namespace std;
5  int main(int argc, char* argv[]) {
6      set<int> a,b,c,d,e;
7      random_device rd;
8      const uniform_int_distribution<> dis(-10000, 10000);
9      for (int i = 0; i < 10; ++i) {
10         a.insert(dis(rd));
11     }
12     for (int i = 0; i < 5; ++i) {
13         b.insert(dis(rd));
14     }
15     for (int i = 0; i < 15; ++i) {
16         c.insert(dis(rd));
17     }
18     set_intersection(a.begin(), a.end(), c.begin(), c.end(),
19         inserter(d,d.begin()));
20     set_union(b.begin(), b.end(), d.begin(), d.end(),
21         inserter(e,e.begin()));
22     for (const int e1 : e) {
23         cout << e1 << endl;
24     }
25 }
```

-9124

-5898

-4388

-1288

506