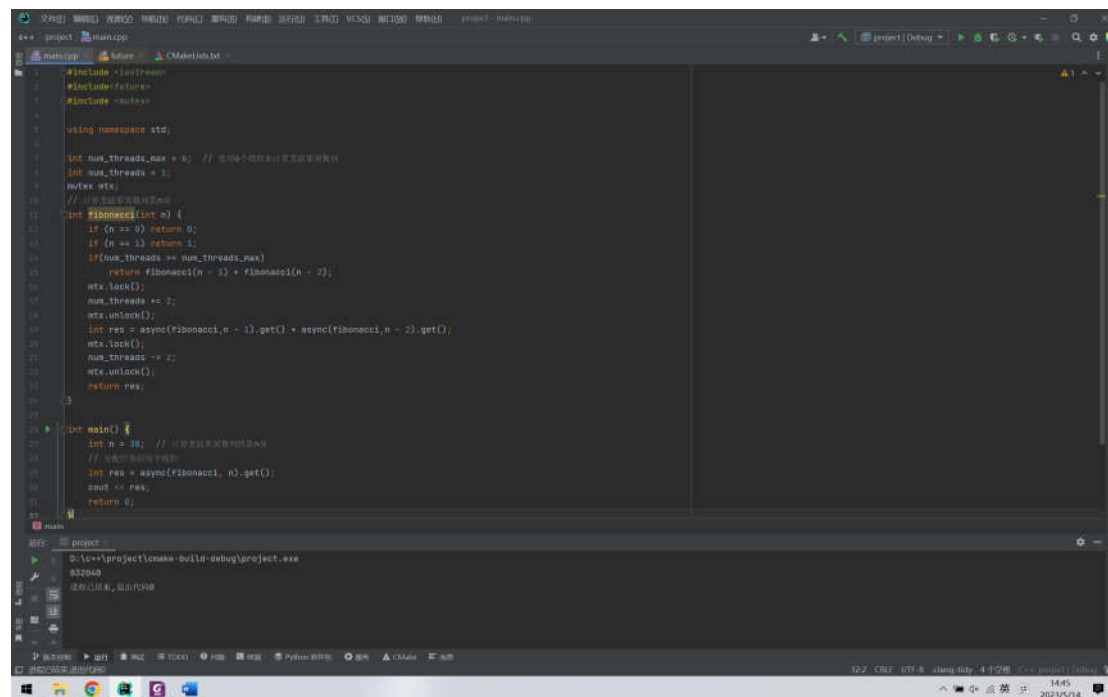


Hw10
521021910522 郭俊甫

Part1

Next[13] = {-1, 0, 0, 0, 0, 1, 1, 2, 3, 4, 5, 2, 3}

Part2



```
1 #include <iostream>
2 #include <future>
3 #include <mutex>
4
5 using namespace std;
6
7 int num_threads_max = 6; // 使用多少个线程来计算斐波那契数列
8 int num_threads = 1;
9 mutex mtx;
10 // 计算斐波那契数列的第n项
11 int fibonacci(int n) {
12     if (n == 0) return 0;
13     if (n == 1) return 1;
14     if (num_threads == num_threads_max)
15         return fibonacci(n - 1) + fibonacci(n - 2);
16     mtx.lock();
17     num_threads += 1;
18     mtx.unlock();
19     int res = async(fibonacci, n - 1).get() + async(fibonacci, n - 2).get();
20     mtx.lock();
21     num_threads -= 1;
22     mtx.unlock();
23     return res;
24 }
25
26 int main() {
27     int n = 38; // 计算斐波那契数列的第n项
28     // 计算斐波那契数列的第n项
29     int res = async(fibonacci, n).get();
30     cout << res;
31     return 0;
32 }
```

运行: project

D:\code\project\main.cpp - build-debug\project.exe

832040

2023/5/14

832040