G copilot_test.cpp

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```cpp
1   // write a function that returns the fibonacci sequence up to n
2   #include <iostream>
3   #include <vector>
4   #include <stdexcept>
5   #include <gtest/gtest.h>
6   #include <gmock/gmock.h>
7   using namespace std;
8   using namespace testing;
9   // Function to return the Fibonacci sequence up to n
10  vector<int> fibonacci(int n) {
11      if (n < 0) {
12          throw invalid_argument("Input must be a non-negative integer");
13      }
14      vector<int> fib;
15      if (n == 0) return fib;
16      fib.push_back(0);
17      if (n == 1) return fib;
18      fib.push_back(1);
19      for (int i = 2; i < n; i++) {
20          fib.push_back(fib[i-1] + fib[i-2]);
21      }
22      return fib;
23  }
```

EXTENSIONS

copilot_test.cpp

Extension: C/C++

copilot_test.cpp

```cpp
21      }
22
23      int main()
24      {
25          int n;
26          cout << "Enter a non-negative integer: ";
27          cin >> n;
28          try {
29              vector<int> fib_sequence = fibonacci(n);
30              cout << "Fibonacci sequence up to " << n << ": ";
31              for (int num : fib_sequence) {
32                  cout << num << " ";
33              }
34              cout << endl;
35          } catch (const invalid_argument& e) {
```

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PROBLEMS   OUTPUT   **TERMINAL**   PORTS   DEBUG CONSOLE   bash

```
          [-Wc++11-extensions]
              for (int num : fib_sequence) {
                                     ^
      1 warning generated.
    ● hewwo:vscode mathieuneel$ ls
      copilot_test              copilot_test.cpp
    ● hewwo:vscode mathieuneel$ ./copilot_test
      Enter a non-negative integer: 1
      Fibonacci sequence up to 1: 0
    ● hewwo:vscode mathieuneel$ ./copilot_test
      Enter a non-negative integer: 50
      Fibonacci sequence up to 50: 0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6
      765 10946 17711 28657 46368 75025 121393 196418 317811 514229 832040 1346269 2178309 3524578 5
      702887 9227465 14930352 24157817 39088169 63245986 102334155 165580141 267914296 433494437 701
      408733 1134903170 1836311903 -1323752223 512559680 -811192543
    ○ hewwo:vscode mathieuneel$
```

```cpp
    using namespace std;

    // Function to return the Fibonacci sequence up to n
    vector<int> fibonacci(int n) {
        vector<int> fib;

        if (n == 0) return fib;

        fib.push_back(0);

        if (n == 1) return fib;

        fib.push_back(1);

        for (int i = 2; i < n; i++) fib.push_back(fib[i-1] + fib[i-2]);

        return fib;
    }
```

PROBLEMS   OUTPUT   TERMINAL   PORTS   DEBUG CONSOLE   bash

bash: no job control in this shell
hewwo:~ mathieuneel$ cd vscode/
hewwo:vscode mathieuneel$ ls
copilot_test.cpp
hewwo:vscode mathieuneel$ g++ copilot_test.cpp -o copilot_test
hewwo:vscode mathieuneel$ ./copilot_test
Enter a non-negative integer: 4
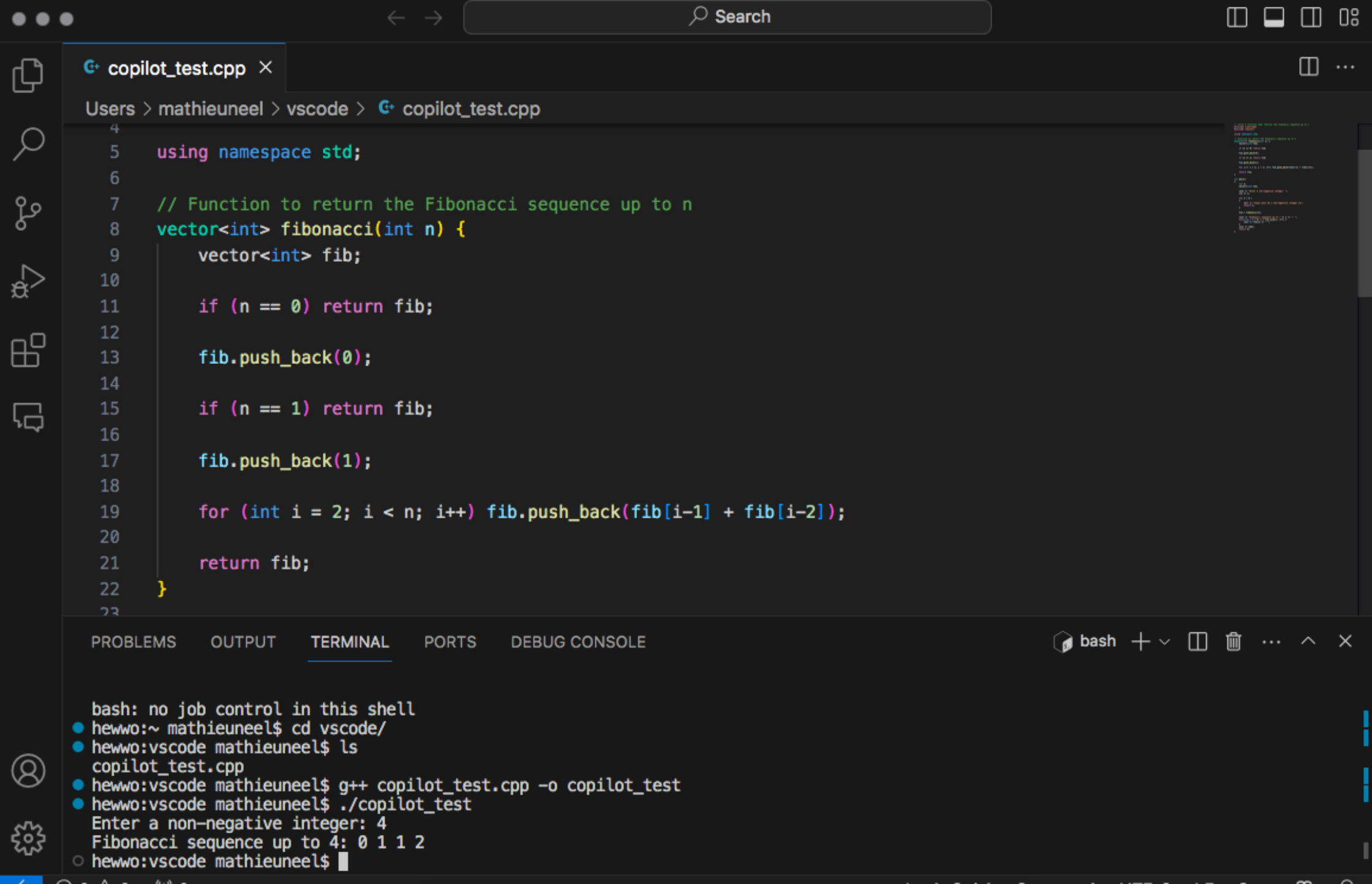Fibonacci sequence up to 4: 0 1 1 2
hewwo:vscode mathieuneel$

```cpp
23
24    int main()
25    {
26        int n;
27        vector<int> fib;
28
29        cout << "Enter a non-negative integer: ";
30        cin >> n;
31
32        if( n < 0 )
33        {
34            cerr << "Input must be a non-negative integer.\n";
35            return 1;
36        }
37
38        fib = fibonacci(n);
39
40        cout << "Fibonacci sequence up to " << n << ": ";
41        for(size_t i = 0; i < fib.size(); i++) {
42            cout << fib[i] << " ";
43        }
44        cout << endl;
45        return 0;
46    }
```

PROBLEMS   OUTPUT   TERMINAL   PORTS   DEBUG CONSOLE

```
bash: no job control in this shell
hewwo:~ mathieuneel$ cd vscode/
hewwo:vscode mathieuneel$ ls
copilot_test.cpp
hewwo:vscode mathieuneel$ g++ copilot_test.cpp -o copilot_test
hewwo:vscode mathieuneel$ ./copilot_test
Enter a non-negative integer: 4
Fibonacci sequence up to 4: 0 1 1 2
hewwo:vscode mathieuneel$
```