

Question01.cpp

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1 // DSA LAB 7
2 // <---Q1--->
3 // Write a program and recurrence relation to find the Fibonacci series of n where n>2.
4
5 #include <iostream>
6 using namespace std;
7
8 // Function to find the nth Fibonacci number using recursion
9 int fibonacciRecursive(int n) {
10     if (n <= 1) {
11         return n;
12     } else {
13         return fibonacciRecursive(n - 1) + fibonacciRecursive(n - 2);
14     }
15 };
16
17 int main() {
18     int n;
19
20     // Input the value of n
21     cout << "Enter the value of n (n > 2): ";
22     cin >> n;
23
24     // Check if n is greater than 2
25     if (n <= 2) {
26         cout << "Invalid input. Please enter n > 2." << endl;
27         return 1; // Return an error code
28     }
29
30     // Using recursion to find the nth Fibonacci number
31     cout << "Fibonacci series using recursion:" << endl;
32     for (int i = 0; i < n; ++i) {
33         cout << fibonacciRecursive(i) << " ";
34     }
35     cout << endl;
36
37     return 0;
38 }
39
```