

## Question03.cpp

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1 // DSA LAB 7
2 // <---Q3--->
3
4 // Write a recursive function which will take input from the user until a special character
5 // (also selected by the user) is not entered. Then print all the input in reverse.
6 // Sample Input:
7 // Enter Special Character: !
8 // Enter Character: A
9 // Enter Character: B
10 // Enter Character: C
11 // Enter Character: !
12 // Sample Output: C B A
13
14
15 #include <iostream>
16 #include <string>
17
18 using namespace std;
19
20 // Recursive function to read input until a special character is encountered
21 void readInputAndReverse(char specialCharacter)
22 {
23     char ch;
24     cout << "Enter Character: ";
25     cin >> ch;
26
27     // Check if the entered character is the special character
28     if (ch == specialCharacter)
29     {
30         // Base case: Stop recursion
31         return;
32     }
33
34     // Recursive call for the next character
35     readInputAndReverse(specialCharacter);
36
37     // Print the entered character after the recursive call (post-order)
38     cout << ch << " ";
39 }
40
41 int main()
42 {
43     char specialCharacter;
44
45     // Input the special character
46     cout << "Enter Special Character: ";
47     cin >> specialCharacter;
48     cout << endl;
49
50     // Read input until the special character is encountered and print in reverse
51     readInputAndReverse(specialCharacter);
52     cout << "Sample Output ";
53     cout << endl;
```

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54  
55     return 0;  
56 }  
57
```