ICE recursion multiplication with static var.cpp

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1 //============================================================================
2 // Name        : ICE recursion multipication with static variable.cpp
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4 // Version     :
5 // Copyright   : Your copyright notice
6 // Description : Hello World in C++, Ansi-style
7 //============================================================================
8
9 #include <iostream>
10 using namespace std;
11 int rmult(int, int);
12 int main() {
13     int answer;
14     answer = rmult(5,11);
15     cout << answer;
16     cout << endl;
17     answer = rmult(3,15);
18     cout << answer;
19     return 0;
20 }
21 int rmult(int x, int y)
22 {
23     static int numAdditions = 0;
24     if (numAdditions < y)
25     {
26 //      cout << "calling rmult time number " << numAdditions << endl;
27         numAdditions++;
28         return x + rmult(x, y);
29     }
30     else
31     {
32 //      cout << "base case" << endl;
33         numAdditions = 0;       // reinitialize counter for next call by end user
34         return 0;
35     }
36 }
37
```