

MFG Assignment No: 04

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Batch : C

/*A school has selected a group of 20 students for a debate competition. The task is to determine the number of different teams of 3 students that can be formed from this group. This involves calculating combinations, where the order of selection does not matter.*/

```
#include <iostream>
using namespace std;
long long factorial(int n) {
    long long fact = 1;    //Initializing the fact 1
    for(int i = 2; i <= n; i++) {    //Staring the fact from 2
        fact *= i;
    }
    return fact;
}

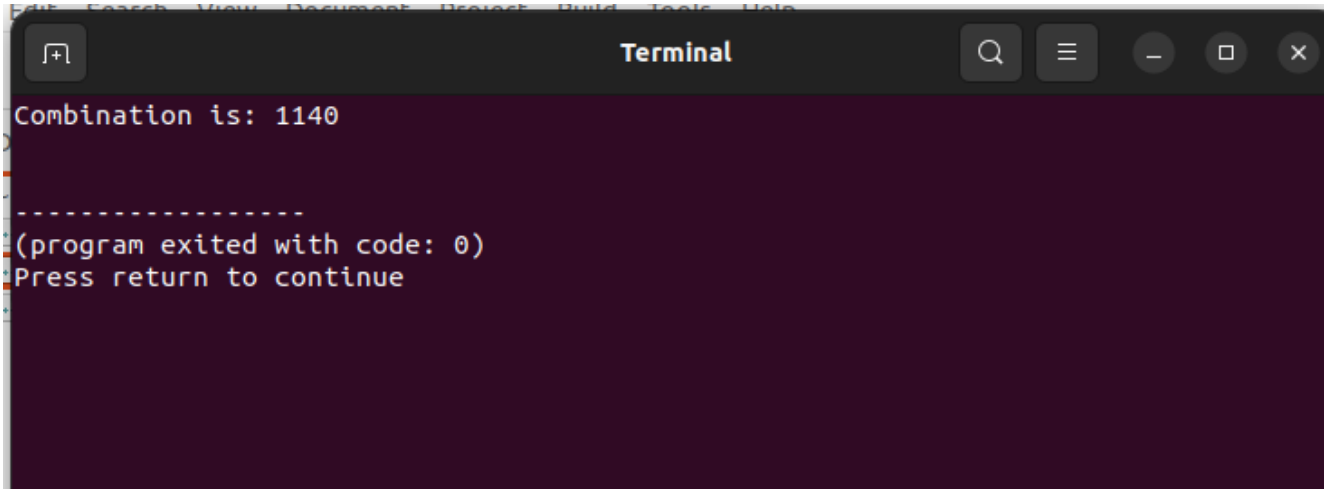
int main() {
    int n = 20, r = 3;

    long long c = factorial(n) / (factorial(r) * factorial(n - r)); //formula for combination

    cout << "Combination is: " << c << endl; //output

    return 0;
}
```

OUTPUT:

A screenshot of a terminal window titled "Terminal". The window has a dark background and a light-colored title bar with standard macOS window controls (red, yellow, green buttons) and a search icon. The terminal output is as follows:

```
Combination is: 1140  
  
-----  
(program exited with code: 0)  
Press return to continue
```