

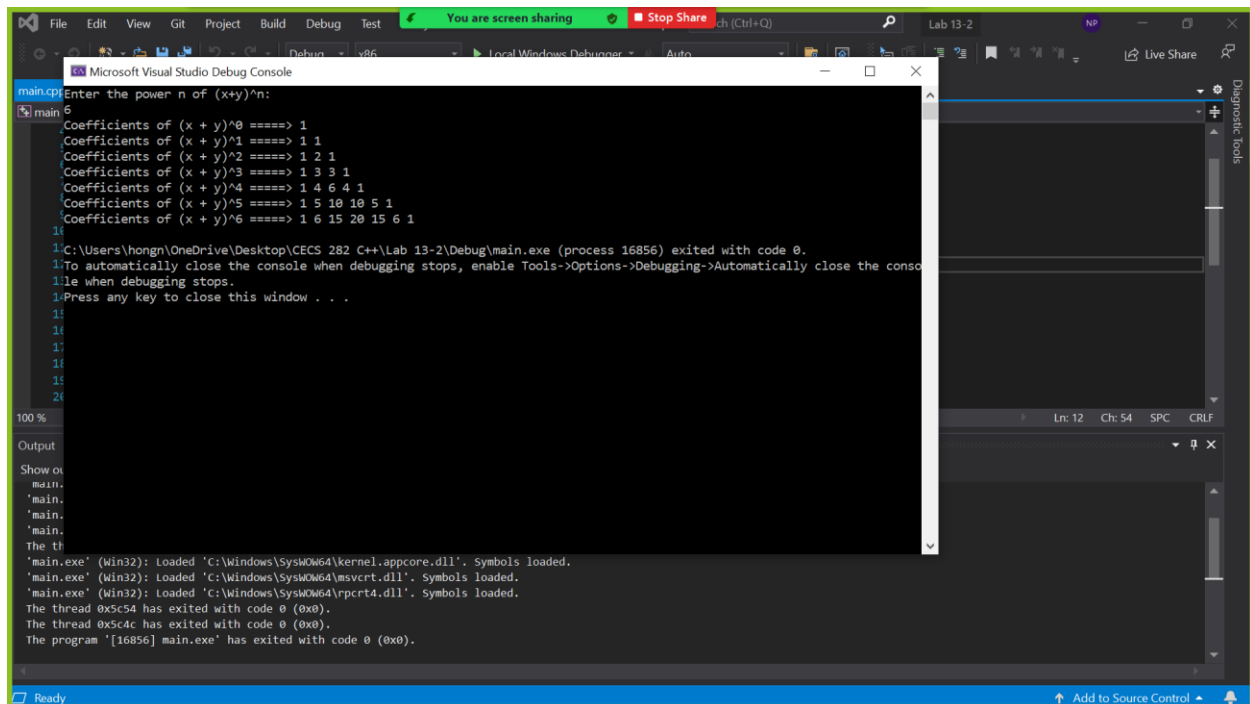
Lab 13-2

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main.cpp

```
#include <vector>
#include <iostream>
using namespace std;

int main()
{
    int n = 0;
    cout << "Enter the power n of (x+y)^n: " << endl;
    cin >> n;
    vector<vector<int>> pascal_tria(n+1, vector<int>(n+1));
    for (int i = 0; i < n+1; i++) {
        cout << "Coefficients of (x + y)^" << i << " =====> ";
        for (int j = 0; j < i+1; j++) {
            if (i == j or j==0) { pascal_tria[i][j] = 1; }
            else {
                pascal_tria[i][j] = pascal_tria[i - 1][j - 1] + pascal_tria[i - 1][j];
            }
            cout << pascal_tria[i][j] << " ";
        }
        cout << endl;
    }
}
```



The screenshot shows the Microsoft Visual Studio IDE with the program running. The Debug Console window displays the following output:

```
main.cpp Enter the power n of (x+y)^n:
6
Coefficients of (x + y)^0 =====> 1
Coefficients of (x + y)^1 =====> 1 1
Coefficients of (x + y)^2 =====> 1 2 1
Coefficients of (x + y)^3 =====> 1 3 3 1
Coefficients of (x + y)^4 =====> 1 4 6 4 1
Coefficients of (x + y)^5 =====> 1 5 10 10 5 1
Coefficients of (x + y)^6 =====> 1 6 15 20 15 6 1
11
1: C:\Users\hongn\OneDrive\Desktop\CECS 282 C++\Lab 13-2\Debug\main.exe (process 16856) exited with code 0.
1: To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
1: Press any key to close this window . . .
11
11
11
11
11
11
21
```

The Output window shows the following messages:

```
'main.exe' (Win32): Loaded 'C:\Windows\System64\kernel.appcore.dll'. Symbols loaded.
'main.exe' (Win32): Loaded 'C:\Windows\System64\msvcrt.dll'. Symbols loaded.
'main.exe' (Win32): Loaded 'C:\Windows\System64\rpcrt4.dll'. Symbols loaded.
The thread 0x5c54 has exited with code 0 (0x0).
The thread 0x5c4c has exited with code 0 (0x0).
The program '[16856] main.exe' has exited with code 0 (0x0).
```

Demonstrated at 8:59 am on 11/4/2021