INSTITUTE OF INFORMATION TECHNOLOGY

JAHANGIRNAGAR UNIVERSITY

Number of Assignment : 01

Submission Date   **:** 18/08/2020

Course Tittle   **:** Numerical Analysis

Course Code   **:** ICT - 2105

Submitted To	Submitted By
Dr M Shamim Kaiser	MD. Shakil Hossain
Professor	Roll – 2023
IIT – JU	2nd year 1st Semester
	IIT - JU

Hand Writing Code

Assignment - 01 : Write a Program to simulate $\int_{3}^{9} x^r \, dx$

Find the area under curve for function.

$$[a = 3, \ b = 9, \ n = 3]$$

C++ Code :

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

int main()
{
    float a, b, c, Sum = 0.0;
    int n;

    cin >> a >> b >> n;
    c = (b-a)/n;

    while (n--)
    {
        b = a+c;
        Sum += ((a*a)*c);
        a = b;
    }
    cout << Sum << " " << endl;
    return 0;
}
```
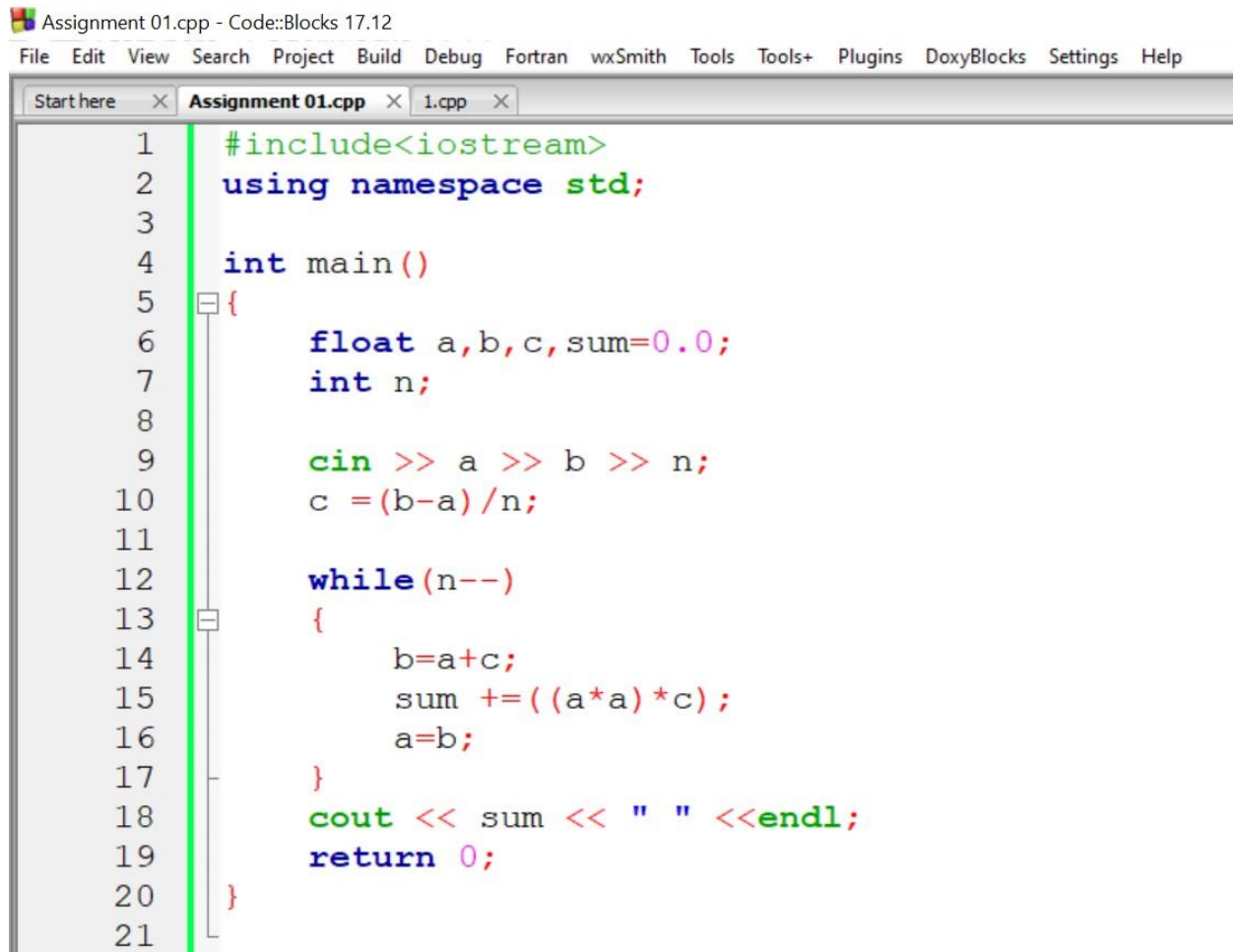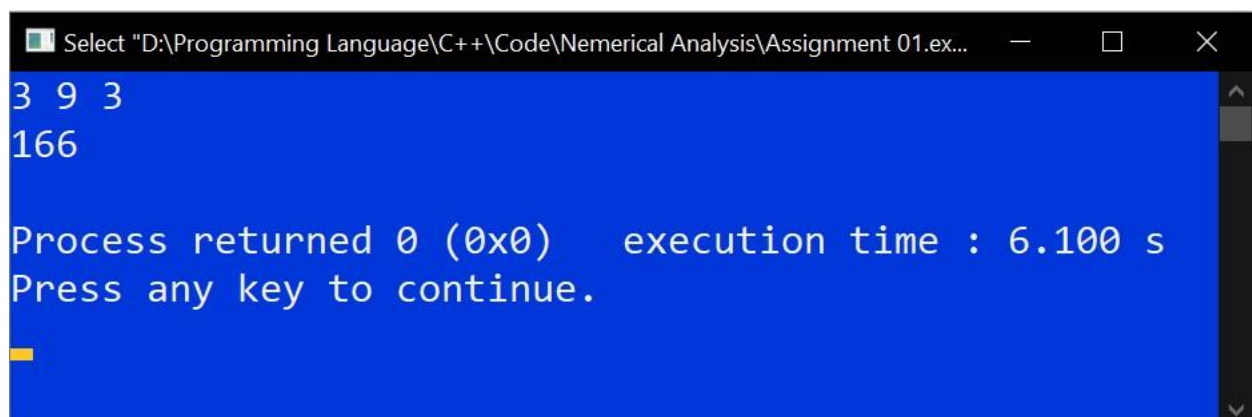
Code Blocks Code

File   Edit   View   Search   Project   Build   Debug   Fortran   wxSmith   Tools   Tools+   Plugins   DoxyBlocks   Settings   Help

Start here   ✕   **Assignment 01.cpp**   ✕   1.cpp   ✕

```cpp
1    #include<iostream>
2    using namespace std;
3
4    int main()
5    {
6        float a,b,c,sum=0.0;
7        int n;
8
9        cin >> a >> b >> n;
10       c =(b-a)/n;
11
12       while(n--)
13       {
14           b=a+c;
15           sum +=((a*a)*c);
16           a=b;
17       }
18       cout << sum << " " <<endl;
19       return 0;
20   }
21
```

Output

Select "D:\Programming Language\C++\Code\Nemerical Analysis\Assignment 01.ex...   —   ☐   ✕

```
3 9 3
166


Process returned 0 (0x0)    execution time : 6.100 s
Press any key to continue.

```