COLLEGE OF ENGINERING AND COMPUTER STUDIES

OUTCOMES EVALUATION 4

[Postcard from Giza]

Submitted By
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Course & Section
BSCS 1-1

Date

10/12/21

OUTCOMES OUTLINE

I. DESCRIPTION

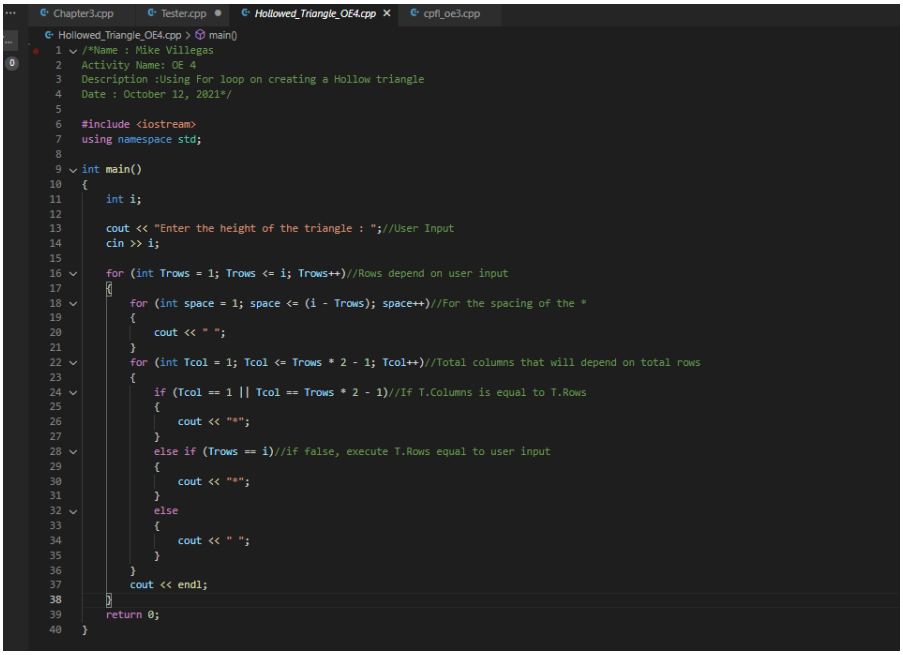
Implementation of For loop in creating a hollow triangle

II. THEORETICAL FRAMEWORK

INPUT	PROCESS	OUTPUT
Trows	for (int Trows = 1; Trows <= i; Trows++)	Trows
space	for (int space = 1; space <= (i - Trows); space++) { cout << " "; }	space
Tcol	for (int Tcol = 1; Tcol <= Trows * 2 - 1; Tcol++)	Tcol
i	int i;	i

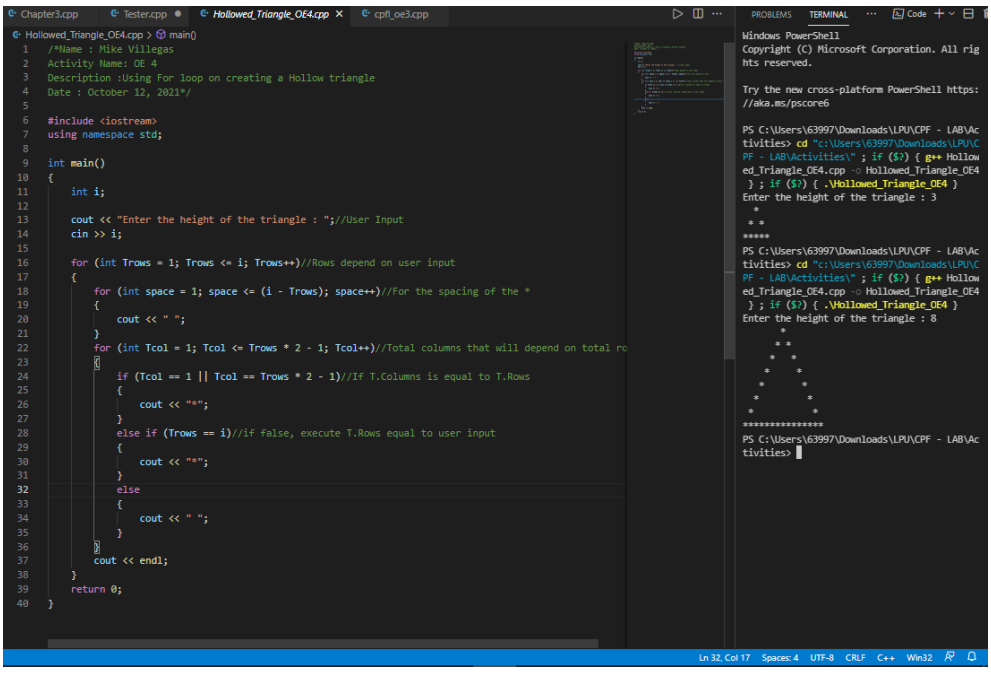
III. SCREEN SHOTS

A. Visual Studio Code



```cpp
/*Name : Mike Villegas
  Activity Name: OE 4
  Description :Using For loop on creating a Hollow triangle
  Date : October 12, 2021*/

  #include <iostream>
  using namespace std;

int main()
  {
      int i;

      cout << "Enter the height of the triangle : ";//User Input
      cin >> i;

      for (int Trows = 1; Trows <= i; Trows++)//Rows depend on user input
      {
          for (int space = 1; space <= (i - Trows); space++)//For the spacing of the *
          {
              cout << " ";
          }
          for (int Tcol = 1; Tcol <= Trows * 2 - 1; Tcol++)//Total columns that will depend on total rows
          {
              if (Tcol == 1 || Tcol == Trows * 2 - 1)//If T.Columns is equal to T.Rows
              {
                  cout << "*";
              }
              else if (Trows == i)//if false, execute T.Rows equal to user input
              {
                  cout << "*";
              }
              else
              {
                  cout << " ";
              }
          }
          cout << endl;
      }
      return 0;
  }
```

B. Sample Input/Output



```cpp
/*Name : Mike Villegas
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#include <iostream>
using namespace std;

int main()
{
    int i;

    cout << "Enter the height of the triangle : ";//User Input
    cin >> i;

    for (int Trows = 1; Trows <= i; Trows++)//Rows depend on user input
    {
        for (int space = 1; space <= (i - Trows); space++)//For the spacing of the *
        {
            cout << " ";
        }
        for (int Tcol = 1; Tcol <= Trows * 2 - 1; Tcol++)//Total columns that will depend on total ro
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            if (Tcol == 1 || Tcol == Trows * 2 - 1)//If T.Columns is equal to T.Rows
            {
                cout << "*";
            }
            else if (Trows == i)//if false, execute T.Rows equal to user input
            {
                cout << "*";
            }
            else
            {
                cout << " ";
            }
        }
        cout << endl;
    }
    return 0;
}
```

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\63997\Downloads\LPU\CPF - LAB\Activities> cd "c:\Users\63997\Downloads\LPU\CPF - LAB\Activities\" ; if ($?) { g++ Hollowed_Triangle_OE4.cpp -o Hollowed_Triangle_OE4 } ; if ($?) { .\Hollowed_Triangle_OE4 }
Enter the height of the triangle : 3
  *
 * *
*****
PS C:\Users\63997\Downloads\LPU\CPF - LAB\Activities> cd "c:\Users\63997\Downloads\LPU\CPF - LAB\Activities\" ; if ($?) { g++ Hollowed_Triangle_OE4.cpp -o Hollowed_Triangle_OE4 } ; if ($?) { .\Hollowed_Triangle_OE4 }
Enter the height of the triangle : 8
       *
      * *
     *   *
    *     *
   *       *
  *         *
 *           *
***************
PS C:\Users\63997\Downloads\LPU\CPF - LAB\Activities>
```

IV. PROGRAM SOURCE CODE

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

int main()
{
    int i;

    cout << "Enter the height of the triangle : ";//User Input
    cin >> i;

    for (int Trows = 1; Trows <= i; Trows++)//Rows depend on user input
    {
        for (int space = 1; space <= (i - Trows); space++)//For the
spacing of the *
        {
            cout << " ";
        }
        for (int Tcol = 1; Tcol <= Trows * 2 - 1; Tcol++)//Total columns
that will depend on total rows
        {
            if (Tcol == 1 || Tcol == Trows * 2 - 1)//If T.Columns is equal
to T.Rows
            {
                cout << "*";
            }
            else if (Trows == i)//if false, execute T.Rows equal to user
input
            {
                cout << "*";
            }
            else
            {
                cout << " ";
            }
        }
        cout << endl;
    }
    return 0;
}
```

V. GITHUB LINK

https://github.com/MikeVillegas00/Activities/blob/master/Hollowed_Triangle_OE4.cpp

VI. LEARNING OUTCOMES

I understand on how I can apply for loops and nested if else statement.

VII. REFERENCES (If any…)

https://www.youtube.com/watch?v=gEqPnHvzkTU