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# **Fundamentals of Programming**

Lab task 6

# Task 1

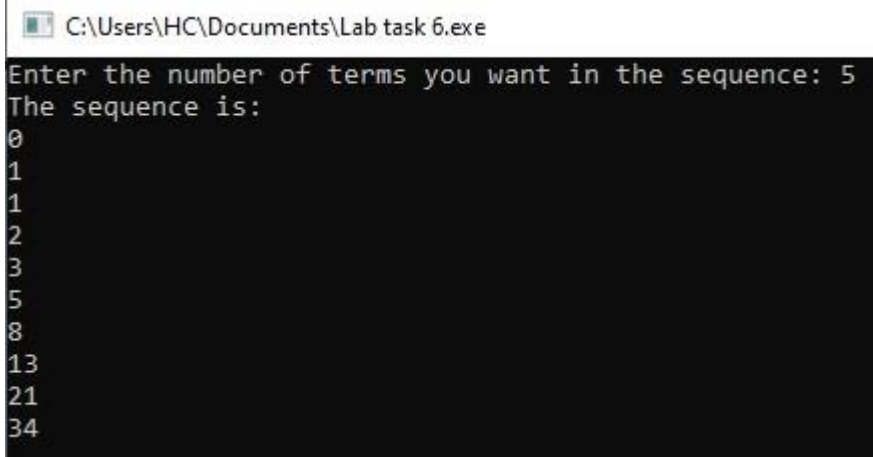
```
#include <iostream>

using namespace std;

int main () {

    int terms, first=0, second=1,next;

    cout<<"Enter the number of terms you want in the sequence: "; //Determines the amount of
    values displayed
    cin>>terms;
    cout<<"The sequence is: "<<endl;
    for (int i=1; i<terms; i++) { //Outer loop that prints total number of
    terms
        for (int j=1; j<=i; j++) { //Inner loop that prints the terms using i
            cout<<first<<endl;
            next=first+second; //Adding the terms for appropriate
            fibonacci values
            first=second; //Assigns the value of the first to
            second term
            second=next; //Swaps the value of the second term
            with the next term
        }
        cout;
    }
    return 0;
}
```



```
C:\Users\HC\Documents\Lab task 6.exe
Enter the number of terms you want in the sequence: 5
The sequence is:
0
1
1
2
3
```

## Task 2

```
#include <iostream>

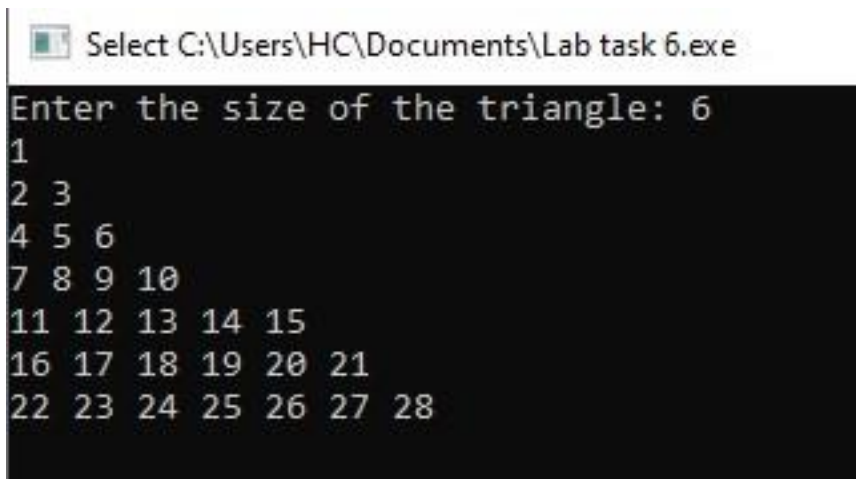
using namespace std;

int main () {

    int size,number=1;

    cout<<"Enter the size of the triangle: "; cin>>size; //Determines the number of rows

    for (int i = 0; i<=size; ++i){                //Outer loop for number of values to be printed
    for (int j=0; j<=i; ++j) {                    //Inner loop to print the next value in each row
        cout<<number<<" ";                      //Prints the spaces in front of each number
        ++number;
    }
    cout<<endl;                                //Prints the numbers
}
return 0;
}
```



```
Select C:\Users\HC\Documents\Lab task 6.exe

Enter the size of the triangle: 6
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
16 17 18 19 20 21
22 23 24 25 26 27 28
```