Lab Task-4

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Question 1:

Write a program in C++ to find the sum of first 10 natural numbers.

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

int main()
{
        int result;
        for (int i = 1; i < 11; i++)
        {
                result += i;
        }
    cout << "The result is "<< result;
}
```

Output

```
/tmp/H27J69axKX.o
The result is 55
```

Question 2:

Write a C++ program to Print a Table of any Number.

The output should look like this:
$$2 \times 1 = 2$$
$$2 \times 2 = 4$$

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

int main()
{
        int table = 0;
        cout << "Enter any number you want a table for"<<endl;
        cin >> table;
        for (int i = 1; i < 11; i++)
        {
                int result = 0;
                result = table * i;
                cout << table << "*" << i << "= " << result<<"\n";
        }
}
```
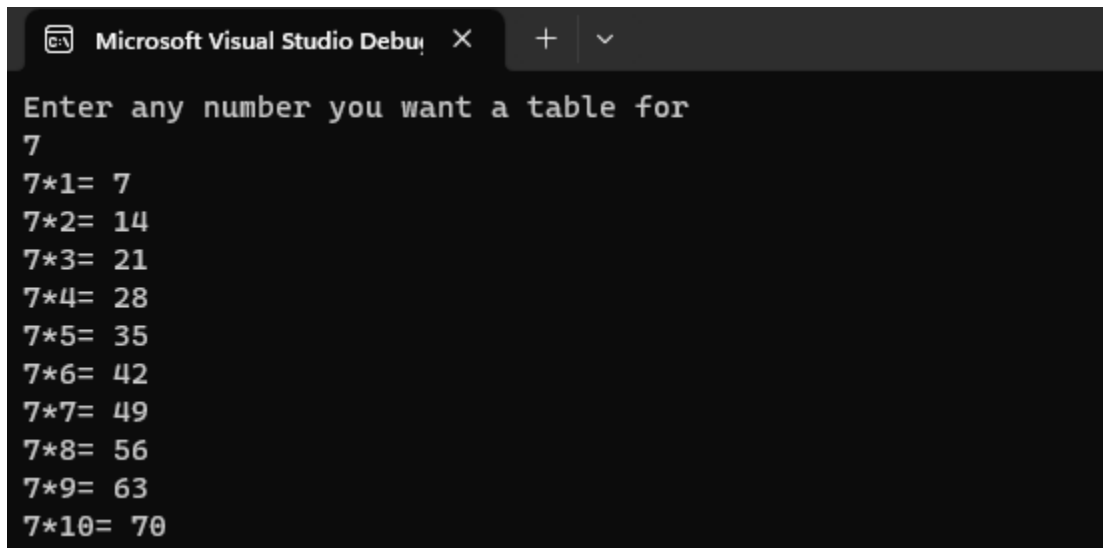
```
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Enter any number you want a table for
7
7*1= 7
7*2= 14
7*3= 21
7*4= 28
7*5= 35
7*6= 42
7*7= 49
7*8= 56
7*9= 63
7*10= 70
```
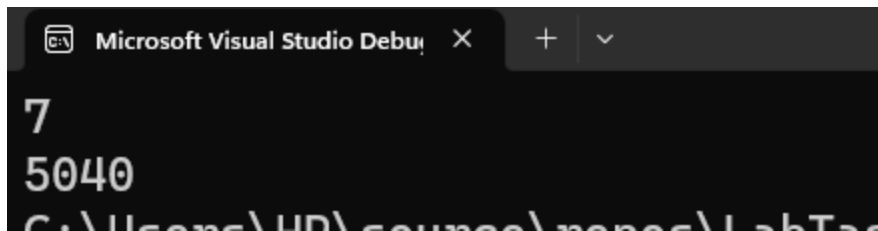
Question 3: Write a Program to Generate Factorial. A Certain Number Factorial of any number is the product of an integer and all the integers below it for example factorial of 4 is: 4! = 4 * 3 * 2 * 1 = 24

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

int main()
{
        int num = 0;
        int result = 1;
        cin >> num;
        for (int i = 1; i < num+1; i++)
        {
                result = result * i;
        }
        cout << result;
}
```
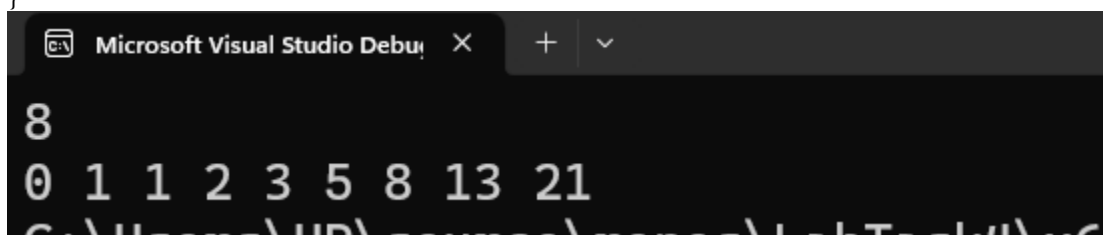
7
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Question 4: Write a C++ program to generate a Fibonacci sequence up to a certain number input by the user.

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

int main()
{
        int iteration = 0;
        cin >> iteration;
        int num = 0;
        int temp = 0;
        int nextNum = 1;
        cout << num <<" ";
        for (int i = 0;i < iteration;i++)
        {
                temp = num;
                num = nextNum;
                nextNum = (temp + nextNum);
                cout << num << " ";
        }
}
```

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0 1 1 2 3 5 8 13 21