

# Lab 4 Lab Tasks

Name : Mohammad Moeez Zafar

CMS Id : 456063

## Question 1:

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

```
#include <iostream>
using namespace std;
int main()
{
    int a;
    cin>>a;
    for (int i=1;i<11;i++)
    {
        cout<<a<<"x"<<i<<"="<<a*i<<endl;
    }
}
```

Select C:\Users\mmzafar.ug23smme\Documents\lab4task1.exe

```
the sum is 1
the sum is 3
the sum is 6
the sum is 10
the sum is 15
the sum is 21
the sum is 28
the sum is 36
the sum is 45
the sum is 55
```

## Question 2:

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

```
#include <iostream>
using namespace std;
int main()
{
    int a;
    cin>>a;
    for (int i=1;i<11;i++)
    {
        cout<<a<<"x"<<i<<"="<<a*i<<endl;
    }
}
```

```
C:\Users\mmzafar.ug23smme\Documents\lab4task2.exe
4
4x1=4
4x2=8
4x3=12
4x4=16
4x5=20
4x6=24
4x7=28
4x8=32
4x9=36

-----
Process exited after 5.994 seconds with return value 0
Press any key to continue . . .
```

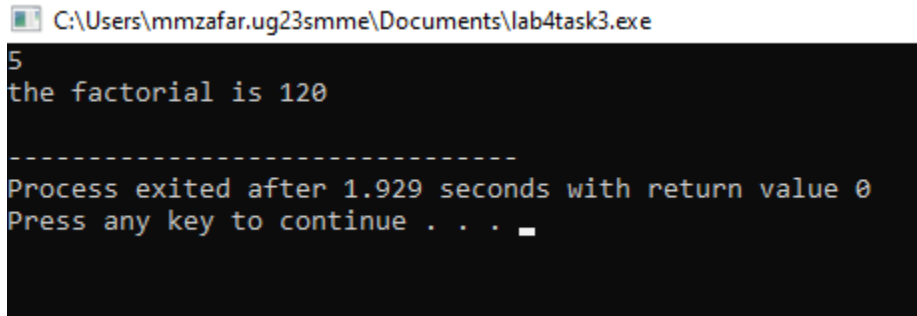
### Question 3

Write a program to generate factorial.

```
#include <iostream>
using namespace std;
int main()
{
    int a=0;
    cin>>a;
    int result=1;

    for(int i=1;i<a+1;i++)
    {
        result*=i;
    }
}
```

```
    cout<<"the factorial is "<<result<<endl;
}
```



```
C:\Users\mmzafar.ug23smme\Documents\lab4task3.exe
5
the factorial is 120
-----
Process exited after 1.929 seconds with return value 0
Press any key to continue . . .
```

## Question 4

Write a C++ program to generate the Fibonacci sequence up to a certain number input by user.

```
#include <iostream>
using namespace std;
int main()
{
    int first_number=0;
    int second_number=1;
    int range;
    cout<<"enter the sequence limit"<<endl;
    cin>>range;
    int result;
    cout<<"the fibonacci seequence is"<<endl;
```

```
cout<<first_number<< " "<<endl;
cout<<second_number<< " "<<endl;
for(int i=0;i<range;i++)
{
    result=first_number+second_number;
    first_number=second_number;
    second_number=result;
    cout<<result<<endl;
}
}
```

```
enter the sequence limit
6
the fibonacci seequence is
0
1
1
2
3
5
8
13
-----
Process exited after 9.526 seconds with return value 0
Press any key to continue . . .
```