FOP LAB MANUAL 04

LAB TASKS

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TASK 01:

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

CODE:

#include<iostream>

using namespace std;

```cpp
int main() {
        int sum;
        for(int n=1;n<=10;n++){
                int x;
                cout<<"ENTER THE "<<n<<" NUMBER: "<<endl;
                cin>>x;
                sum+=x;
        }
        cout<<"The sum of the number: "<<sum;
        return 0;
}
```

RESULT:

```
ENTER THE 1 NUMBER:
1
ENTER THE 2 NUMBER:
2
ENTER THE 3 NUMBER:
3
ENTER THE 4 NUMBER:
4
ENTER THE 5 NUMBER:
5
ENTER THE 6 NUMBER:
6
ENTER THE 7 NUMBER:
7
ENTER THE 8 NUMBER:
8
ENTER THE 9 NUMBER:
9
ENTER THE 10 NUMBER:
10
The sum of the number: 55
--------------------------------
Process exited after 11.55 seconds with return value 0
Press any key to continue . . .
```

Q 02 Write a C++ program to Print a Table of any Number.

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

CODE:

#include<iostream>

using namespace std;

int main() {

        int num1;

        cout<<"Enter the number for the table: "<<endl;

        cin>>num1;

        for(int n=1;n<=10;n++){

                int y;

                y=num1*n;

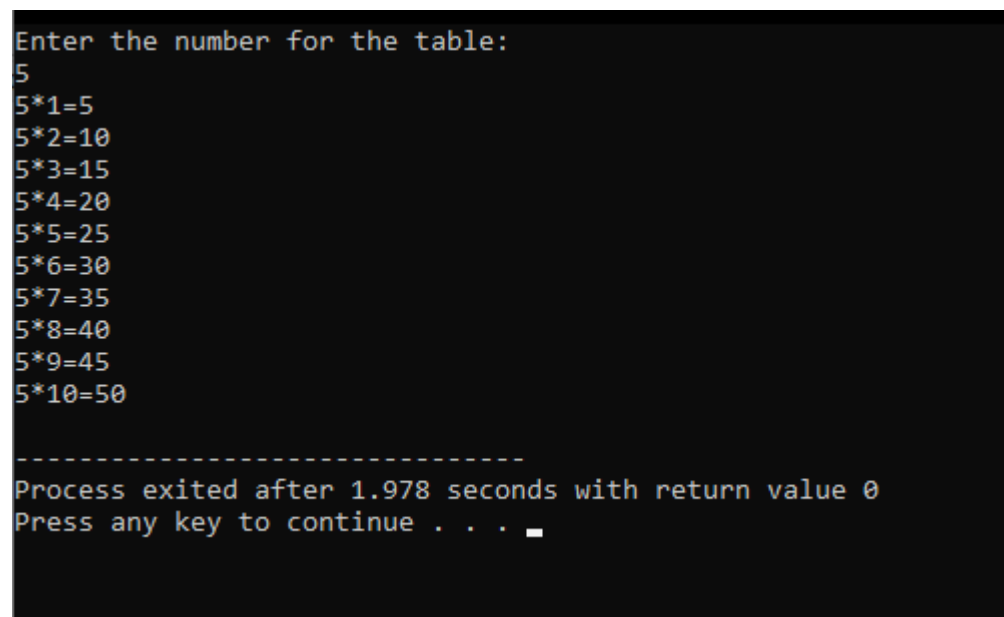   cout<<num1<<"*"<<n<<"="<<y<<endl;
```

```
        }


        return 0;

}
```

RESULT:

```
Enter the number for the table:
5
5*1=5
5*2=10
5*3=15
5*4=20
5*5=25
5*6=30
5*7=35
5*8=40
5*9=45
5*10=50

-------------------------------
Process exited after 1.978 seconds with return value 0
Press any key to continue . . . _
```

Q 03 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

CODE:

```
#include<iostream>

using namespace std;

int main(){

        int num,res=1;

        cout<<"Enter the number: "<<endl;

        cin>>num;

        if(num==0){

                cout<<res<<"=1";
```

```cpp
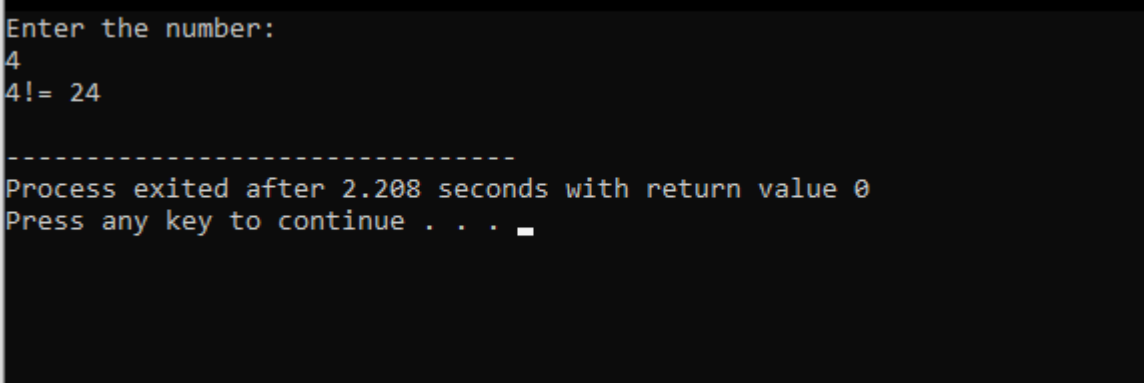        }else if(num<0){
                cout<<"Invalid number!"<<endl;
                }
        for(int n=1;n<=num;n++){
                res=res*n;
        }
        cout<<num<<"!= "<<res<<endl;
        return 0;
}
```

```
Enter the number:
4
4!= 24

------------------------------
Process exited after 2.208 seconds with return value 0
Press any key to continue . . . _
```

Q 04 Write a C++ program to generate a Fibonacci sequence up to a certain number input by the user.

CODE:

```cpp
#include<iostream>

using namespace std;


int main() {
        int a;
        int b;
        int c;
        int n;
```

```cpp
        cout<<"Enter the number of fibocanni numbers: ";

        cin>>n;

        cout<<"Enter the 1st number: ";

        cin>>a;

        cout<<"Enter the 2nd number: ";

        cin>>b;

        cout<<"The fibocanni sequence is: ";

        for(int i=0;i<n;i++){

                c=a+b;

                a=b;

                b=c;

                cout<<c<<",";

        }

        return 0;

}
```

```
Enter the number of fibocanni numbers: 7
Enter the 1st number: 2
Enter the 2nd number: 3
The fibocanni sequence is: 5,8,13,21,34,55,89,
-------------------------------
Process exited after 5.656 seconds with return value 0
Press any key to continue . . . _
```