

LAB MANUAL 4

LAB TASK

Q1. Program to find sum of first 10 natural numbers

```
1  #include <iostream>
2  using namespace std;
3  int main () {
4      int num = 0;
5      for ( int i=0; i<=10 ; i++) {
6          num += i;
7      } cout<<"The sum of 10 natural numbers is:"<< num << endl;
8      return 0;
9  }
```

The sum of 10 natural numbers is:55

Process exited after 0.03158 seconds with return value 0
Press any key to continue . . .

Q2. Table of a Number input by a user

```
1  #include <iostream>
2  using namespace std;
3  int main () {
4      int num;
5      cout << "Enter a Number: " << endl;
6      cin >> num;
7      cout << "Table of:" << endl;
8      for (int i = 1; i<=20; i++) {
9          cout<<num<<"x"<<i<<"="<<(num*i)<<endl;
10     } return 0;
11 }
```

Enter a Number:

23

Table of:

23x1=23

23x2=46

23x3=69

23x4=92

23x5=115

23x6=138

23x7=161

23x8=184

23x9=207

23x10=230

23x11=253

23x12=276

23x13=299

23x14=322

23x15=345

23x16=368

23x17=391

23x18=414

23x19=437

23x20=460

Q3. Write a c++ Program to print a factorial of a number input by the user.

```
1 #include <iostream>
2 using namespace std;
3 int main () {
4     int a;
5     int fact;
6     cout<<"Enter a Positive Number:"<<endl;
7     cin >> a ;
8     if (a==0) {
9         cout<<"Factorial is 1."<<endl;
10    } else {
11        for (int i=a-1;i>0;i--) {
12            fact = a*i;
13            a = fact;
14        } cout<<"The factorial is "<<a<<endl;}
15    return 0;
16 }
```

Enter a Positive Number:

0

Factorial is 1.

Process exited after 1.46 seconds with return value 0

Press any key to continue . . .

Q4. Write a C++ program to generate Fibonacci Sequence upto a certain number input given by the user.

```
45.cpp 1 77.cpp
1  #include <iostream>
2  using namespace std;
3  int main () {
4      int num;
5      cout<<"Enter a Number: "<<endl;
6      cin>> num;
7      int a=0;
8      int b=1;
9      int c;
10     cout<<"0, 1";
11     for (int i=0; i<=num; i++) {
12         c = a+b;
13         cout<<","<<c;
14         a=b;
15         b=c;
16     }
17     return 0;
18 }
```

```
Enter a Number:
9
0, 1,1,2,3,5,8,13,21,34,55,89
-----
Process exited after 2.57 seconds with return value 0
Press any key to continue . . .
```