

LAB MANUAL 04

LAB TASK

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SECTION: ME15C

Q#1. Write a c++ program to find the sum of first 10 natural numbers.

```
1  #include <iostream>
2  using namespace std;
3  int main(){
4      int sum ;
5      sum=0;
6      cout<<"the sum of first 10 natural numbers is " <<endl;
7      for (int num=0; num<11;num=num+1){
8          sum=sum+num;
9      }
10
11     cout<<sum<< endl;
12     return 0;
13
```

```
the sum of first 10 natural numbers is
55
```

```
-----
Process exited after 0.0784 seconds with return value 0
Press any key to continue . . .
```

Q#2 Write a c++ program to print a table of any number.

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int number;
6
7      cout << "Enter a number: " << endl;
8      cin >> number;
9
10     if (number >= 1 && number <= 10) {
11         for (int i = 1; i <= 10; i++) {
12             cout << number << " x " << i << " = " << number * i << endl;
13         }
14     } else {
15         cout << "Please enter a number between 1 and 10." << endl;
16     }
17
18     return 0;
19 }
```

Enter a number:

```
9
9 x 1 = 9
9 x 2 = 18
9 x 3 = 27
9 x 4 = 36
9 x 5 = 45
9 x 6 = 54
9 x 7 = 63
9 x 8 = 72
9 x 9 = 81
9 x 10 = 90
```

Process exited after 1.655 seconds with return value 0
Press any key to continue . . . _

Q#3. Write a program to generate a factorial of any number.

```
1  #include <iostream>
2  using namespace std;
3  int main(){
4      int num;
5      int f;
6
7      cout<<"Enter the number you want factorial of" << endl;
8      cin>> num;
9      for (int i=num-1;i>0;i--) {
10         f = num*i;
11         num= f;
12
13     }
14
15     cout<<" The factorial of your number is | "<< num <<" is " << f << endl;
16     return 0;
17 }
```

```
Enter the number you want factorial of
10
The factorial of your number is  3628800 is 3628800

-----
Process exited after 4.783 seconds with return value 0
Press any key to continue . . .
```

1. **Q#4. Write a C++ program to generate a Fibonacci sequence up to a certain number input by the user.**

```
1  #include<iostream>
2  using namespace std;
3  int main() {
4      int a;
5      int b;
6      int c;
7      int res;
8      cout<<"Enter the first two numbers of your sequence" <<endl;
9      cin>> a;
10     cin>> b;
11     cout<<"How many integers you want in your sequence"<<endl;
12     cin>>c;
13     cout<< "Your sequence is" << endl;
14     for (int i=1;i<=c;i++) {
15         res=a+b;
16         a=b;
17         b=res;
18         cout<<res<<endl;
19     }
20     return 0;
21 }
```

```
Enter the first two numbers of your sequence
7 8
How many integers you want in your sequence
13
Your sequence is
15
23
38
61
99
160
259
419
678
1097
1775
2872
4647

-----
Process exited after 8.164 seconds with return value 0
Press any key to continue . . .
```

