

Name: Ali Zeeshan

Roll no: 467537

Class: ME-15 C

Q1. Write a program in C++ to find the sum of first 10 natural numbers.

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

```
The sum of first ten natural numbers is: 55
-----
Process exited after 0.05824 seconds with return value 0
Press any key to continue . . .
```

Q2. Write a C++ program to Print a Table of any Number.

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

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

```
Enter any number: 4
4 x 1 = 4
4 x 2 = 8
4 x 3 = 12
4 x 4 = 16
4 x 5 = 20
4 x 6 = 24
4 x 7 = 28
4 x 8 = 32
4 x 9 = 36
4 x 10 = 40
```

Q3. Write a program to generate factorial for any number.

```
1  #include <iostream>
2  using namespace std;
3  int main(){
4      int x, fact;
5      cout<<"Enter the number you want factorial of: "; cin>>x;
6      if (x==0) {
7          cout<<" 0! = 1 " <<endl;
8      } else {
9          for(int i=x-1;i>0;i--)
10             { fact = x*i;
11               x=fact;
12             }
13          cout<<" FACTORIAL IS " <<fact;
14          return 0;
15      }
16  }
```

```
Enter the number you want factorial of: 9
FACTORIAL IS 362880
-----
Process exited after 2.726 seconds with return value 0
Press any key to continue . . .
```

Q4. 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 x,y,z,result;
5      cout<<"Enter your two numbers for the sequence: "; cin>>x;cin>>y;
6      cout<<"How many integers you want in the sequence: "; cin>>z;
7      cout<<"Your sequence is "<<endl;
8      for(int i=0;i<z;i++){
9          result=x+y;
10         x=y;
11         y=result;
12         cout<<result<<endl;
13     }
14     return 0;
15 }
```

```
Enter your two numbers for the sequence: 1
2
How many integers you want in the sequence: 5
Your sequence is
3
5
8
13
21
-----
Process exited after 4.789 seconds with return value 0
Press any key to continue . . .
```