National University of Computer and Emerging Sciences

Lab Manual # 04
Programming Fundamental
(CS118)

Course Instructor	Dr. Asma Naseer
Lab Instructor(s)	Ms. Fareeha Ashfaq Ms. Eisha Khan
Section	BCS-1F
Semester	Fall 2023

Department of Computer Science
FAST-NU, Lahore, Pakistan

Problems

Note: **Must use Loops in all problems and handle invalid conditions very carefully.**

Problem 1: Sum of +ve Numbers

Write C++ program that find the sum of only +ve numbers. Remember numbers are input by user.

OUTPUT:

```
Enter num = 6
Enter num = -2
Enter num = 8
Enter num = 16
Enter num = -5


Sum of +ve numbers is: 30
```

Problem 2: Factors of Number

Write a program in C++ which takes a number input from user and find the factors of that number.

OUTPUT:

```
Enter num: 12
Factors of 12 are 1, 2, 3, 4, 6, 12
```

Problem 3: Sum of Digits

Write a program that takes 4 digit number as user input and print the sum of the digits of given number.

OUTPUT:

```
Enter value of num: 4835
Sum of the digits of 4835 is 20
```

Problem 4: Prime Number

Write a program which takes two numbers as user input and print all prime numbers between the input numbers.

OUTPUT:

```
Enter 1st num: 4
Enter 2nd num: 30

The Prime numbers between 4 and 30 are:
5, 7, 11, 13, 17, 19, 23, 29
```

Problem 5: Pattern

Write a program in C++ that takes a number from user as input and print the following pattern.

OUTPUT:

```
Enter num: 5

    *
   **
  ***
 ****
*****
```