

# National University of Computer and Emerging Sciences



## Lab Manual # 12

### Programming Fundamentals

Course Instructor	Ms. Arooj Khalil
Lab Instructor(s)	Nimra Abbas Saleha Batool
Section	BCS-IH1 and IH2
Semester	Fall 2022

Department of Computer Science

FAST-NU, Lahore, Pakistan

**Q1.** Implement a function `sumOfN` that takes as input parameters an integer array `data`, an index number `Ind`, an integer `N` and size of the array and calculates the sum of `N` elements in the array starting from index `Ind`.

Sample:

data: 3 4 1 5 7 11 3 5 4

Ind = 4

N=3

Return:21

How:  $\text{sum} = 7 + 11 + 3 = 21$

data: 3 4 1 5 7 11 3 5 4

Ind = 7

N=3

Return:9

How:  $\text{sum} = 5 + 4 + \text{end of array} = 9$

**Q2.** Write a C++ Program to Enter or Insert Data into File using File Handling. Here's simple Program to Enter or Insert Data into File using File Handling in C++ Programming Language.

**Q3.** A local zoo wants to keep track of how many pounds of food each of its three monkeys eats. Each day during a typical week. Write a program that stores this information in a Two-Dimensional 3x5 array, where each row represents a different monkey and each column represents a different day of the week. The program should first have the user input the data for each monkey. Then it should create a report that includes the following information:

- Average amount of food eaten per day by the whole family of monkeys.
- The least amount of food eaten during the week by any one monkey.
- The greatest amount of food eaten during the week by any one monkey.

Input Validation: Do not accept negative numbers for pounds of food eaten.

**Q4.** Write a C++ Program to retrieve information from file using File Handling

