**National University of Computer and Emerging Sciences**



Laboratory Manual

for

Data Structures Lab

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| Course Instructor |  |
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| Section | 4N1 – 4N2 |
| Semester | Spring 2023 |

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**Objectives:**

In this lab, students will practice:

1. Revision of Templates
2. Revision of Pointers
3. Searching and Sorting

**Question 1:**

You need to implement all the examples that is written in the Template File.

**Question 2:**

Write a C++ Program to find largest among two numbers using function template.

Output Example:  
Enter two integers:

8 3

8 is larger.

Enter two floating-point numbers:

1.2

5.6

5.6 is larger.

Enter two characters:

f

i

i has larger ASCII value.

**Question 3:** Write a C++ Program to swap data using function template.

Output Sample:

Before passing data to function template.

i1 = 6

i2 = 3

f1 = 7.2

f2 = 4.5

c1 = p

c2 = x

After passing data to function template.

i1 = 3

i2 = 6

f1 = 4.5

f2 = 7.2

c1 = x

c2 = p

Exit code: 0 (normal program termination)

**Question 4:** Write a Function in C++ to sort an array using INSERTION SORT.