

National University of Computer and Emerging Sciences



Laboratory Manual 07

for

Data Structures Lab

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Section	BCS-3H
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[Objectives:

In this lab, students will practice:

1. Recursion
1. Write the Recursive
 - I. [BinarySearch](#) and test it on huge Data.
2. Write a Program in which you compute A/B and $A\%B$ and the only operations allowed are subtraction and addition.
3. Write the recursive and iterative code for Fibonacci number computation.
 - I. Analyze why Iteration is working so fast as compared to the recursive implementation of Fibonacci Numbers.
4. Write the recursive and iterative code for computing the Tri-Sum sequence: 1, 2, 3, 6, 11, 20, 37...
 - I. Write the recursive mathematical formulation.
 - II. Write the recursive code for the Sequence generator
 - III. Analyze what will be its time complexity (the approximate number of times the recursive call will be called).