



Green University of Bangladesh
Department of Computer Science and Engineering (CSE)
Faculty of Sciences and Engineering
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LAB REPORT NO 01
Course Title: Data Structure Lab
Course Code: CSE 106 Section: DA

Lab Experiment Name:

Binary Search Using Recursive Function.

Student Details

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Submission Date : 28-06-2022
Course Teacher's Name : Farhana Akter Sunny

Lab Report Status

Marks:
Comments:

Signature:
Date:.....

1. TITLE OF THE LAB EXPERIMENT

Binary Search Using Recursive Function.

2. AIM

Search an element in an array using recursive binary search function.

3. DESIGN

Search a sorted array by repeatedly dividing the search interval in half. Begin with an interval covering the whole array. If the value of the search key is less than the item in the middle of the interval, narrow the interval to the lower half. Otherwise, narrow it to the upper half. Repeatedly check until the value is found or the interval is empty.

4. TEST RESULT / OUTPUT

```
opu@opu:/mnt/z/university/cse-106$ ./lab2
Enter the size of the array: 4
Enter the values of the array: 1 2 3 4
Enter the value to search: 3
Value found at index 2
opu@opu:/mnt/z/university/cse-106$
```

5. ANALYSIS AND DISCUSSION

Binary search runs in logarithmic time in the worst case, making $O(\log n)$ comparisons, where n is the number of elements in the array. Binary search is faster than linear search except for small arrays. However, the array must be sorted first to be able to apply binary search.