**Study Assignment 1**

**Comparative Analysis of Recursive and Iterative Binary Search Algorithms**

**Roll No:**

**Name:**

**Date:**

**Objective:**

To implement both recursive and iterative versions of the Binary Search algorithm and compare their execution time over various input sizes to evaluate efficiency and performance.

**Problem Statement:**

* Write two functions: one for binary search using recursion, and the other using iteration.
* Measure and compare the execution time of both approaches over input arrays of varying sizes.

**Code:**

**Screenshots of execution**

**Comparison Table**

**Conclusion : (Which approach performs better?** **Does recursion introduce any overhead in practice?** **Under what circumstances would you prefer one approach over the other?)**