

**LAB-01**

**Title: Algorithm to search an element using Linear Search.**

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**Source Code:**

**BinearySearchAlgorithm.java:**

package Lab01;

public class LinearSearchAlgorithm {

    // member variable

    int[] data;

    // constructor

    public LinearSearchAlgorithm(int[] data) {

        this.data = data;

    }

    public void linearSearch(int item) {

        boolean found = false;

        int location = -1;

        for (int i = 0; i < data.length; i++) {

            if (item == data[i]) {

                found = true;

                location = i;

                break;

            }

        }

        if (found == true) {

            System.out.println(item + " found in location: " + location);

        } else {

            System.out.println("Not found");

        }

    }

}

**Main.java:**

package Lab01;

import java.util.Scanner;

public class Main {

    public static void main(String[] args) {

        int[] data = new int[10];

        int n = data.length;

        Scanner input = new Scanner(System.in);

        System.out.println(" Enter " + n + " Values: ");

        for (int k = 0; k < n; k++) {

            data[k] = input.nextInt();

        }

        LinearSearchAlgorithm search = new LinearSearchAlgorithm(data);

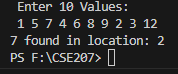
        search.linearSearch(7);

        input.close();

    }

}

**Output:**

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