Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

AY: 2024-25

Class:	SE	**Semester:**	III
Course Code:	CSL304	**Course Name:**	OOPJ

Name of Student:	Aman Mehtar
Roll No. :	32
Assignment No.:	03
Title of Assignment:	
Date of Submission:	
Date of Correction:	

Evaluation

Performance Indicator	Max. Marks	Marks Obtained
Completeness	5	5
Demonstrated Knowledge	3	3
Legibility	2	2
Total	10	10

Performance Indicator	Exceed Expectations (EE)	Meet Expectations (ME)	Below Expectations (BE)
Completeness	5	3-4	1-2
Demonstrated Knowledge Legibility	3	2	1
Legibility	2	1	0

Checked by

Name of Faculty : Ms. Neha Raut.

Signature :

Date :

Q1) Implement a sequential Search algorithm to find a specific element in an array. If the element is found, display its index; otherwise, indicate that the element is not present.

Sol:

```
import java.util.Scanner;
public class SequentialSearch {
    // Method to perform sequential search.
    public static int sequentialSearch(int[] array, int target) {
        for(int i=0; i < array.length; i++) {
            if(array[i] == target) {
                return i;
            }
            return -1; // If not found
        }
    }

    // main
    public static void main(String args[]) {
        Scanner s = new Scanner(System.in);

        int[] array = {23, 45, 12, 67, 89, 2, 5, 90};
        int length; int target;
        Syste
        // Array Input
        System.out.println("Enter the length of Array :");
        int[] array = new int[s.nextInt()];

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

```
        System.out.print("Enter element : ");
        array[i] = s.nextInt();
    } // for

    System.out.print("Enter target : ");
    target = s.nextInt();

    int index = sequentialSearch(array, target);

    if(index == -1) System.out.print("Not found");
    else System.out.print("Found at index : " + index);
  }
}
```

* Output Example.

```
Enter the length of the array :
4
Enter element : 83
Enter element : 52
Enter element : 5
Enter element : 36
Enter target : 5
Found at index : 1
```

Q2) Develop a Java program that determines the number of days in a given semester. Input to the program year, month, and day Information of the first and last days of the semester. The program should accept the date information as a single string instead of accepting year, month and day information seperately. The input string must be in the MM/DD/YYYY (Assuming the semester starts and ends in the same year and assume each month has 30 days.

Sol:

```
import java.util.Scanner;

public class SemesterdaysCalculator {
    // Method to parse date from mm/dd/yyyy string
    public static int parseDate(String date) {

        int month = Integer.parseInt(date.substring(0,2));
        int day = Integer.parseInt(date.substring(3,5));

        ~~return (month * 30 + day~~
        return ((month-1) * 30 + day);
    }

    public static void main(String args[]) {
        Scanner s = new Scanner(System.in);

        System.out.print("Enter start date of the semester:");
        String start = s.nextLine();

        System.out.print("End end date of the semester:");
        String end = s.nextLine();
```

```
        int startInt = parseDate(start);
        int endInt = parseDate(end);

        int days = endInt - startInt;

        System.out.print("Days in semester: " + days);
    }
}
```

Output Example

```
Enter start date of semester: 07/15/2024
Enter end date of semester: 11/12/2024
Days in semester: 120
```