Experiment1.1

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Semester: 5th **Date of Performance: 9/08/23**
Subject Name: Advance Programming Lab **Subject Code: 21CSP - 314**

1. Aim: To implement the concept of Dynamic Array.

2. Objective:

1. Given an array of integers, print 's elements in reverse order as a single line of space-separated numbers.
2. Given an array of integers, find the sum of its elements.
3. Alice and Bob each created one problem for HackerRank. A reviewer rates the two challenges, awarding points on a scale from 1 to 100 for three categories: problem clarity, originality, and difficulty. The rating for Alice's challenge is the triplet a = (a[0], a[1], a[2]), and the rating for Bob's challenge is the triplet b = (b[0], b[1], b[2]).

3. Program and output:

1.

```
import java.util.*;

public class one {

    public static void reverseArray(int arr[]){

        int start = 0, end = arr.length-1;

        while(start < end ){

        int temp = arr[end];

        arr[end] = arr[start];

        arr[start] = temp;

        start++;
```

```
            end--;
            }
        }
        public static void main(String[] args) {
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter the size");
            int n =sc.nextInt();
            int arr[] = new int[n];
            System.out.println("Enter the elements: ");
            for(int i=0; i<n; i++){
                arr[i] = sc.nextInt();
            }
            reverseArray(arr);
            System.out.println("Reversed array is: ");
            for(int i=0; i<n; i++){
                System.out.print(arr[i] + " ");
            }
        }
    }
```

```
Enter the size
4
Enter the elements:
1 2 3 4
Reversed array is:
4 3 2 1
PS C:\Users\NI$HANT>
```

2.

```
import java.util.*;
public class two {
    public static int sumArr(int arr[]){
        int sum = 0;
        for(int i=0; i<arr.length; i++){
            sum = sum+arr[i];
        }
        return sum;
    }
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the size");
        int n =sc.nextInt();
        int arr[] = new int[n];
        System.out.println("Enter the elements: ");
        for(int i=0; i<n; i++){
            arr[i] = sc.nextInt();
        }
        int add =sumArr(arr);
        System.out.println("Sum of element is: " + add);
    }
}
```

```
Enter the size
4
Enter the elements:
 1 2 3 5
Sum of element is: 11
PS C:\Users\NI$HANT>
```

3.

```
import java.util.*;
public class three{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the size of array");
        int n =sc.nextInt();
        int arrA[] = new int[n];
        System.out.println("Enter the elements of Alice: ");
        for(int i=0; i<n; i++){
            arrA[i] = sc.nextInt();
        }
        int arrB[] = new int[n];
        System.out.println("Enter the elements of Bob: ");
        for(int i=0; i<n; i++){
            arrB[i] = sc.nextInt();
        }
        int Ascore = 0;
        int Bscore = 0;
        for(int i=0; i<n; i++){
                if(arrA[i] > arrB[i]){
                    Ascore = Ascore+1;
                }
                if(arrA[i] < arrB[i]){
                    Bscore = Bscore+1;
```

```
            }
            if(arrA[i] == arrB[i]){
                Ascore = Ascore;
                Bscore = Bscore;
            }
        }
        System.out.println("Alice score: " + Ascore);
        System.out.println("Bob Score: " + Bscore);
        if(Ascore > Bscore){
            System.out.println("Alice won");
        } else if(Ascore < Bscore){
            System.out.println("Bob won");
        } else {
            System.out.println("Draw");
        }
    }
}
```