COLLEGE OF ENGINERING AND COMPUTER STUDIES

OUTCOMES EVALUATION #1
DSA – Data Structure and Algorithm

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Course & Section
BSCS 2-1

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OUTCOMES OUTLINE

I. INTRODUCTION

A. Description

Array implementation in Java programming language.

Implement array operations traverse, delete, search, and update with integer array using Java programming language.

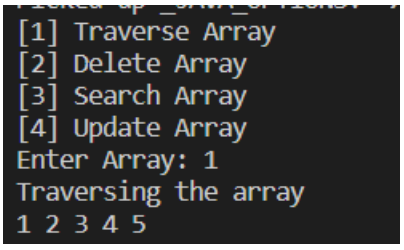
B. Objectives

To be able to understand the different concepts of implementing the array operations and learn the process.

II. CONCEPTUAL FRAMEWORK

INPUT	PROCESS	OUTPUT
The user will input a selection of lists for the array.	All data input asserts variables and makes them usable in the output.	The program will show the lists of the output given by the user.

III. RESULTS AND DISCUSSION (Screenshots-I/O and brief discussions)



```
[1] Traverse Array
[2] Delete Array
[3] Search Array
[4] Update Array
Enter Array: 2
Delete the Index Array
Input Index:4
Array after deleting element at index 4:
1 2 3 5
```

```
[1] Traverse Array
[2] Delete Array
[3] Search Array
[4] Update Array
Enter Array: 3
Search the Index Array
Input Index:4
Element 4 found at index 4 in the array.
```

```
[1] Traverse Array
[2] Delete Array
[3] Search Array
[4] Update Array
Enter Array: 4
Update the Index Array
Input Index:2
Update the Index:99
Array after updating element at index 2 with value 99:
1 99 3 4 5
```

The Traverse array gives an array of 5 selected numbers which are 1 2 3 4 5. The delete array deletes an element that the user will input which is 4. The search array searches the number that the user inputs and sends an output for the position of that element. The Update array updates the users' element for the position the user will input does 99 in the 2nd position.

IV. PROGRAM SOURCE CODE

```
import java.util.Scanner;

public class OE1{

   public static void main(String[] args){
      int lol;
      Scanner array = new Scanner(System.in);
      System.out.println("[1] Traverse Array");
      System.out.println("[2] Delete Array");
      System.out.println("[3] Search Array");
      System.out.println("[4] Update Array");
      System.out.print("Enter Array: ");
```

```
        lol=array.nextInt();

        switch(lol){
           case 1:
           Traverse();

           break;
           case 2:

           Delete();

           break;
           case 3:

           Search();

           break;
           case 4:
           Update();
           break;

           default:
           System.out.print("Incorrect Choice");
        }
    }
public static void Traverse(){
        int arr[] = {1,2,3,4,5};
        System.out.println("Traversing the array");
        for (int i = 0; i < arr.length; i++) {
           System.out.print(arr[i] + " ");
        }
        System.out.println();
    }

    public static void Delete(){
        int arr[] = {1,2,3,4,5};
        int a, index;
        int b = 5;

        System.out.println("Delete the Index Array");
        System.out.print("Input Index:");
        Scanner del = new Scanner(System.in);
        a=del.nextInt();
        index = a;
```

```
        while( a < b) {
            arr[a-1] = arr[a];
            a = a + 1;
         }

         b = b -1;


         System.out.println("Array after deleting element at index " + index +
":");
        for (int c = 0; c < arr.length - 1; c++) {
            System.out.print(arr[c] + " ");
        }

    }


    public static void Search(){
    // item for 1-5
    // a is use for scanner
    // b is the length of array which is 5
    int arr[] = {1,2,3,4,5};
    int a,index,c;
    int b = 5;

    // main line for scanner
    System.out.println("Search the Index Array");
    System.out.print("Input Index:");
    Scanner sear = new Scanner(System.in);
    a=sear.nextInt();
    index = a;
    c = arr[a-1];


    // main line for search

    while( a < b){
        if( arr[a] == b ) {
        break;
        }
        a = b;


     }
```

```
    System.out.println("Element " + index + " found at index " + c + " in the
array.");



   }


   public static void Update(){

    // main line for scanner
   int arr[] = {1,2,3,4,5};
   int a,b,index,index2;

    System.out.println("Update the Index Array");
    System.out.print("Input Index:");
    Scanner upd = new Scanner(System.in);
    a=upd.nextInt();
    System.out.print("Update the Index:");
    Scanner upd2 = new Scanner(System.in);
    b=upd2.nextInt();
    index = a;
    index2 = b;

    arr[a-1] = b;
    System.out.println("Array after updating element at index " + index + "
with value " + index2 + ":");
    for (int c = 0; c < arr.length ; c++) {
      System.out.print(arr[c] + " ");
      }
   }

   }
```

V. LEARNING OUTCOMES

As every lesson is the learning outcome. Many errors but managed to conquer them. Learning programming takes time, you wouldn't master it in a single day but it will when the time comes.

a

VI. GITHUB ACTIVITY LINK

https://github.com/Jusephz/Data-Structures.git

VII. REFERENCES

Module 1: Array and Operations