OBJECT ORIENTED PROGRAMMING LAB

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Roll No: 35

Batch: B

Date: 24-04-2022

Lab Cycle No.: 2

Aim

1. Program to Sort strings
2. Search an element in an array.
3. Perform string manipulations
4. Program to create a class for Employee having attributes eNo, eName eSalary. Read n employ information and Search for an employee given eNo, using the concept of Array of Objects.

Procedure & Outputs

1. SortStrings.java

```
import java.util.*;

public class SortStrings {
   public static void main(String[] args){

      String names[] = {
"Avil","Sharon","Vishnu","Vijay","Sammy","Nebin","Tejas","Aakash","Besanio" };

      System.out.println("The names' order before sorting : ");
      for (int i = 0; i < names.length; i++)
         System.out.println(names[i]);

      Arrays.sort(names);

      System.out.println("\nThe names in alphabetical order : ");
      for (int i = 0; i < names.length; i++)
         System.out.println(names[i]);
   }
}
```

```
C:\Users\SanioLuke\Documents\Amal Jyothi College\Practicals\Sem 02\OOPs - Java Lab\Extra Questions>javac SortStrings.java

C:\Users\SanioLuke\Documents\Amal Jyothi College\Practicals\Sem 02\OOPs - Java Lab\Extra Questions>java SortStrings
The names' order before sorting :
Avil
Sharon
Vishnu
Vijay
Sammy
Nebin
Tejas
Aakash
Besanio

The names in alphabetical order :
Aakash
Avil
Besanio
Nebin
Sammy
Sharon
Tejas
Vijay
Vishnu

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```

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2. ArraySearch.java

```
import java.util.*;

class ArraySearch{

   private boolean search(int[] arr, int item){
      boolean isfound=false;
      for(int i=0;i<arr.length;i++){
         if(item==arr[i]){
            isfound=true;
            break;
         }
      }
      return isfound;
   }

   public static void main(String[] args){

      Scanner sc= new Scanner(System.in);
      ArraySearch inst= new ArraySearch();

      int size, search_item;

      System.out.print("Enter the size for the array : ");
      size= sc.nextInt();

      int[] arr= new int[size];
      System.out.println("\nPlease enter the elements for the array : ");
      for(int i=0;i<size;i++)
         arr[i]= sc.nextInt();
```

```
        System.out.print("Please the item that you want to search : ");
        search_item= sc.nextInt();

        String res= inst.search(arr, search_item) ? "is found / available." : "is not found / not available";
        System.out.println("The searched item i.e. "+search_item+" "+ res);

        sc.close();
    }
}
```

```
C:\Users\SanioLuke\Documents\Amal Jyothi College\Practicals\Sem 02\OOPs - Java Lab\Extra Questions>java ArraySearch
Enter the size for the array : 4

Please enter the elements for the array :
2
54
2
6
Please the item that you want to search : 4
The searched item i.e. 4 is not found / not available

C:\Users\SanioLuke\Documents\Amal Jyothi College\Practicals\Sem 02\OOPs - Java Lab\Extra Questions>java ArraySearch
Enter the size for the array : 4

Please enter the elements for the array :
2
76
6
12
Please the item that you want to search : 6
The searched item i.e. 6 is found / available.

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```

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3. StringManipulation.java

```
public class StringManipulation {

    public static void main(String[] args){
        String str1= "This is my first job ", str2="and I like it.";

        System.out.println("The string 01 is : "+str1+"\nString 02 is : "+str2);
        String strconcat= str1+str2;
        System.out.println("\nThe concatenation of two strings is : "+strconcat);

        String strUppercase= str1.toUpperCase();
        System.out.println("\nNormal String to uppercase string is : "+strUppercase);

        String strLowercase= str2.toLowerCase();
        System.out.println("\nNormal String to lowercase string is : "+strLowercase);

        String strsubString= str1.substring(5);
        System.out.println("\nSubstring of the string is : "+strsubString);

        String strtrim= str1.trim();
        System.out.println("\nString trim is given by : "+strtrim);

        boolean strcontains= str1.contains("my");
```

```
        System.out.println("\nCheck if the string 01 contains -'my' : "+strcontains);

        int strlength= str2.length();
        System.out.println("\nThe length of the string 02 is : "+strlength);

    }
}
```

```
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C:\Users\SanioLuke\Documents\Amal Jyothi College\Practicals\Sem 02\OOPs - Java Lab\Extra Questions>java StringManipulation
The string 01 is : This is my first job
String 02 is : and I like it.

The concatenation of two strings is : This is my first job and I like it.

Normal String to uppercase string is : THIS IS MY FIRST JOB

Normal String to lowercase string is : and i like it.

Substring of the string is : is my first job

String trim is given by : This is my first job

Check if the string 01 contains -'my' : true

The length of the string 02 is : 14

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```

---

4. ArrayObjects.java

```
import java.util.*;

class Employee{

    int eno, esalary;
    String ename;

    Employee(){  }

    Employee(int eno, String ename, int esalary){
        this.eno= eno;
        this.ename= ename;
        this.esalary= esalary;
    }
}

public class ArrayObjects {

    private boolean searchEmp(Employee[] arr, int sempno){
        boolean isfound= false;

        for(int i=0;i<arr.length;i++){
            if(sempno==arr[i].eno){
                isfound=true;
                break;
```

```
            }
        }
        return isfound;
    }
    public static void main(String[] args){

        int size, search_emp;
        Scanner sc= new Scanner(System.in);

        System.out.print("Enter the number of employees that you want to list : ");
        size= sc.nextInt();

        Employee[] emps= new Employee[size];
        for(int i=0;i<size;i++){
            Employee emp= new Employee();

            System.out.print("Enter the number for the employee "+(i+1)+": ");
            emp.eno= sc.nextInt();

            System.out.print("Enter the name for the employee "+(i+1)+": ");
            emp.ename= sc.next();

            System.out.print("Enter the salary for the employee "+(i+1)+": ");
            emp.esalary= sc.nextInt();

            emps[i]= emp;

            System.out.println("\n");
        }

        System.out.print("Enter the emp no of the employee that you want to search : ");
        search_emp= sc.nextInt();


        ArrayObjects inst= new ArrayObjects();
        String res= inst.searchEmp(emps, search_emp) ? " is found / available." : " is not found / not
available";
        System.out.println("The searched employee with the emp no "+search_emp+res);

        sc.close();
    }
}
```

```
C:\Users\SanioLuke\Documents\Amal Jyothi College\Practicals\Sem 02\OOPs - Java Lab\Extra Questions>javac ArrayObjects.java

C:\Users\SanioLuke\Documents\Amal Jyothi College\Practicals\Sem 02\OOPs - Java Lab\Extra Questions>java ArrayObjects
Enter the number of employees that you want to list : 3
Enter the number for the employee 1: 100
Enter the name for the employee 1: Eren
Enter the salary for the employee 1: 40000


Enter the number for the employee 2: 1020
Enter the name for the employee 2: Ravi
Enter the salary for the employee 2: 35000


Enter the number for the employee 3: 45
Enter the name for the employee 3: Denvin
Enter the salary for the employee 3: 46000


Enter the emp no of the employee that you want to search : 1020
The searched employee with the emp no 1020 is found / available.

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```

```
C:\Users\SanioLuke\Documents\Amal Jyothi College\Practicals\Sem 02\OOPs - Java Lab\Extra Questions>java ArrayObjects
Enter the number of employees that you want to list : 3
Enter the number for the employee 1: 1020
Enter the name for the employee 1: Sanio
Enter the salary for the employee 1: 30000


Enter the number for the employee 2: 456
Enter the name for the employee 2: Finny
Enter the salary for the employee 2: 67000


Enter the number for the employee 3: 23
Enter the name for the employee 3: Torus
Enter the salary for the employee 3: 23000


Enter the emp no of the employee that you want to search : 34
The searched employee with the emp no 34 is not found / not available
```