6. Program to Sort strings.

Code :

```
import java.util.Scanner;
import java.util.Arrays;

public class StringSorting{
   public static void main(String arg[]){
      Scanner scan = new Scanner(System.in);
      System.out.println("Name : Sreyas Satheesh\nRoll.no : 53\nTitle : String
sorting\nDate : 13/02/2024\n");

      System.out.print("Enter the no.of Strings : ");
      int n = scan.nextInt();
      System.out.println("Enter the strings");
      String[] str = new String[n];
      scan.nextLine();
      for(int i=0; i<n; i++){
         str[i] = scan.nextLine();
      }
      System.out.println("Array before sorting : " + Arrays.toString(str));
      // sorting method 1

      // Arrays.sort(str);
      // System.out.println(Arrays.toString(str));
      // End of method 1

      // sorting method 2
      for(int i=0; i<n-1; i++){
         for(int j=0; j<n-i-1; j++){
            if(str[j].compareTo(str[j+1]) > 0){
               String temp = str[j];
               str[j] = str[j+1];
               str[j+1] = temp;
            }
         }
      }
      System.out.println("Array after sorting : " + Arrays.toString(str));
      // end of method 2

      scan.close();
   }
}
```

Output :

```
mca@mca-HP-Z238-Microtower-Workstation:~/sreyas/sem2/oop/cycle2$ javac StringSorting.java
mca@mca-HP-Z238-Microtower-Workstation:~/sreyas/sem2/oop/cycle2$ java StringSorting
Name : Sreyas Satheesh
Roll.no : 53
Title : String sorting
Date : 13/02/2024

Enter the no.of Strings : 4
Enter the strings
sreyas
amal
indrajith
mathews
Array before sorting : [sreyas, amal, indrajith, mathews]
Array after sorting : [amal, indrajith, mathews, sreyas]
```

7. Search an element in an array.

Code :

```
import java.util.Scanner;
import java.util.Arrays;

class Search{
   public static void main(String arg[]){
      System.out.println("Name : Sreyas Satheesh\nRoll.no : 53\nTitle : Search
element in array\nDate : 13/02/2024\n");

      Scanner scanner = new Scanner(System.in);
      System.out.print("Enter the size of the array : ");
      int n = scanner.nextInt();
      int arr[] = new int[n];
      System.out.println("Enter the array elements : ");
      for(int i=0; i<arr.length; i++){
         arr[i] = scanner.nextInt();
      }
      System.out.println("Array is : " + Arrays.toString(arr));
      System.out.print("Enter the value to search : ");
      int value = scanner.nextInt();
      int flag = 0;
      for(int i=0; i<n; i++){
         if(value == arr[i]){
            flag = 1;
            break;
         }
      }
      System.out.println("Element " + value + (flag == 0 ? " not found in the array" : "
found in the array"));

      scanner.close();
   }
}
```

Output :

```
mca@mca-HP-Z238-Microtower-Workstation:~/sreyas/sem2/oop/cycle2$ javac SearchElement.java
mca@mca-HP-Z238-Microtower-Workstation:~/sreyas/sem2/oop/cycle2$ java Search
Name : Sreyas Satheesh
Roll.no : 53
Title : Search element in array
Date : 13/02/2024

Enter the size of the array : 6
Enter the array elements :
1 2 3 4 5 6
Array is : [1, 2, 3, 4, 5, 6]
Enter the value to search : 5
Element 5 found in the array
```

8. Perform string manipulations.

Code :

```
import java.util.Scanner;

class Manipulation{
   public static void main(String arg[]){
      System.out.println("Name : Sreyas Satheesh\nRoll.no : 53\nTitle : String manipulation\nDate : 13/02/2024\n");

      Scanner scanner = new Scanner(System.in);
      System.out.print("Enter a String : ");
      String str = scanner.nextLine();

      System.out.println("\nString is : " + str);
      System.out.println("Length of the string is : " + str.length());
      System.out.println("Character at the position is : " + str.charAt(0));
      System.out.println("Lower case : " + str.toLowerCase());
      System.out.println("Upper case : " + str.toUpperCase());

      System.out.print("Enter a substring to check : ");
      String subStr = scanner.nextLine();
      if(str.contains(subStr)) System.out.println("String '" + str + "' contains the substring '" + subStr + "'");
      else System.out.println("String '" + str + "' not contains the substring '" + subStr + "'");

      scanner.close();
   }
}
```

Output :

```
mca@mca-HP-Z238-Microtower-Workstation:~/sreyas/sem2/oop/cycle2$ javac StringManipulation.java
mca@mca-HP-Z238-Microtower-Workstation:~/sreyas/sem2/oop/cycle2$ java Manipulation
Name : Sreyas Satheesh
Roll.no : 53
Title : String manipulation
Date : 13/02/2024

Enter a String : sreyas

String is : sreyas
Length of the string is : 6
Character at the position is : s
Lower case : sreyas
Upper case : SREYAS
Enter a substring to check : ey
String 'sreyas' contains the substring 'ey'
```

9. 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.

Code :

```
import java.util.Scanner;

class Employee{
   int eNo, eSalary;
   String eName;

   public Employee(int no, String name, int salary) {
      this.eNo = no;
      this.eName = name;
      this.eSalary = salary;
   }
}
class Main{
   public static void main(String arg[]){
      Scanner scanner = new Scanner(System.in);
      System.out.print("Enter the no of Employees : ");
      int n = scanner.nextInt();
      Employee arr[] = new Employee[n];
      for(int i=0; i<n; i++){
         System.out.println("Enter the details of employee " + Integer.toString(i+1));
         System.out.print("Enter the employee id : ");
         int no = scanner.nextInt();
         System.out.print("Enter the employee name : ");
         scanner.nextLine();
         String name = scanner.nextLine();
         System.out.print("Enter the salary : ");
         int salary = scanner.nextInt();
         arr[i] = new Employee(no, name, salary);
      }
      System.out.print("\nEnter the employee id to search : ");
      int id = scanner.nextInt();
      int flag = 0;
      for(int i=0; i<n; i++){
         if(arr[i].eNo == id){
            System.out.println("Employee found.\nid : " + Integer.toString(id) +
"\nname : " + arr[i].eName + "\nsalary : " + Integer.toString(arr[i].eSalary));
            flag = 1;
            break;
```

```
            }
        }
        if(flag == 0) System.out.println("Employee not found");

        scanner.close();
    }
}
```

Output :

```
mca@mca-HP-Z238-Microtower-Workstation:~/sreyas/sem2/oop/cycle2$ javac Employee.java
mca@mca-HP-Z238-Microtower-Workstation:~/sreyas/sem2/oop/cycle2$ java Main
Enter the no of Employees : 3
Enter the details of employee 1
Enter the employee id : 101
Enter the employee name : sreyas
Enter the salary : 50000
Enter the details of employee 2
Enter the employee id : 102
Enter the employee name : amal
Enter the salary : 55000
Enter the details of employee 3
Enter the employee id : 103
Enter the employee name : mathews
Enter the salary : 52000

Enter the employee id to search : 101
Employee found.
id : 101
name : sreyas
salary : 50000
```