LAB CYCLE 2

1. Program to Sort strings

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

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

           System.out.println("Name: Ashish P S");
        System.out.println("Reg. No: SJC22MCA-2015");
        System.out.println("Date: 28/03/2023");
        System.out.println("Course code: 20MCA132");
        System.out.println();

      Scanner input = new Scanner(System.in);

      // Ask the user for the number of strings to be sorted
System.out.print("How many strings do you want to sort? ");
int n = input.nextInt();
      input.nextLine(); // consume the newline character

      // Create an array of strings and fill it with user input
      String[] strings = new String[n];
for (int i = 0; i < n; i++) {
          System.out.print("Enter string " + (i + 1) + ": ");
strings[i] = input.nextLine();
      }

      // Sort the array of strings
      Arrays.sort(strings);

      // Print the sorted array
      System.out.println("Sorted Strings:");
for (String string : strings) {
System.out.println(string);
      }

      input.close();
   }
}
```

```
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How many strings do you want to sort? 5
Enter string 1: Biby
Enter string 2: Justin
Enter string 3: Khalid
Enter string 4: Sean
Enter string 5: Aurora
Sorted Strings:
Aurora
Biby
Justin
Khalid
Sean
```

2. Search an element in an array.

```
import java.util.Scanner;

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

          System.out.println("Name: Ashish P S");
       System.out.println("Reg. No: SJC22MCA-2015");
       System.out.println("Date: 28/03/2023");
       System.out.println("Course code: 20MCA132");
       System.out.println();

      int[] numbers = {2, 7, 4, 1, 8, 5, 9, 3, 6};
      Scanner input = new Scanner(System.in);

      // Ask the user for the number to search for
```

```
        System.out.print("Enter a number to search for: ");
        int searchNumber = input.nextInt();

        boolean found = false;
int index = -1;

        // Search for the number in the array
for (int i = 0; i < numbers.length; i++) {
if (numbers[i] == searchNumber) {
                found = true;
index = i;                  break;
            }
        }

        // Print the result
if (found) {
            System.out.println(searchNumber + " found at index " + index);
        } else {
            System.out.println(searchNumber + " not found in the array");
        }

        input.close();
    }
}
```

```
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Enter a number to search for: 10
10 not found in the array
```

```
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Enter a number to search for: 6
6 found at index 8
```

3. Perform string manipulations

```
import java.util.Scanner;

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

            System.out.println("Name: Ashish P S");
         System.out.println("Reg. No: SJC22MCA-2015");
         System.out.println("Date: 28/03/2023");
         System.out.println("Course code: 20MCA132");
         System.out.println();

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

        // Find the length of the string
int length = str.length();
        System.out.println("Length: " + length);

        // Convert the string to uppercase
        String uppercase = str.toUpperCase();
        System.out.println("Uppercase: " + uppercase);

        // Convert the string to lowercase
        String lowercase = str.toLowerCase();
```

```
        System.out.println("Lowercase: " + lowercase);

        // Replace a character in the string
        System.out.print("Enter a character to replace: ");
char oldChar = scanner.next().charAt(0);
        System.out.print("Enter a character to replace it with: ");
char newChar = scanner.next().charAt(0);        String
replaced = str.replace(oldChar, newChar);
        System.out.println("Replaced: " + replaced);

        // Get a substring of the string
        System.out.print("Enter the start index for the substring: ");
int startIndex = scanner.nextInt();
        System.out.print("Enter the end index for the substring: ");
int endIndex = scanner.nextInt();
        String substring = str.substring(startIndex, endIndex);
        System.out.println("Substring: " + substring);

        // Split the string into an array of substrings
        System.out.print("Enter a delimiter to split the string: ");
        String delimiter = scanner.next();
        String[] parts = str.split(delimiter);
System.out.println("Parts:");        for
(String part : parts) {
System.out.println(part.trim());
        }


        scanner.close();
    }
}
```

```
Name: Ashish P S
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Course code: 20MCA132

Enter a string: Ashish PS
Length: 9
Uppercase: ASHISH PS
Lowercase: ashish ps
Enter a character to replace: s
Enter a character to replace it with: z
Replaced: Azhizh PS
Enter the start index for the substring: 1
Enter the end index for the substring: 6
Substring: shish
Enter a delimiter to split the string: h
Parts:
As
is
PS
```

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.

```
import java.util.Scanner;

public class Employee {
   int eNo;
   String eName;
   double eSalary;

   public Employee(int eNo, String eName, double eSalary) {
this.eNo = eNo;        this.eName = eName;
      this.eSalary = eSalary;
   }

   public static void main(String[] args) {

         System.out.println("Name: Ashish P S");
      System.out.println("Reg. No: SJC22MCA-2015");
```

```
        System.out.println("Date: 28/03/2023");
        System.out.println("Course code: 20MCA132");
        System.out.println();

       Scanner scanner = new Scanner(System.in);
System.out.print("Enter the number of employees: ");
       int n = scanner.nextInt();

       Employee[] employees = new Employee[n];
       for (int i = 0; i < n; i++) {
           System.out.println("Enter details for employee " + (i+1) + ":");
System.out.print("eNo: ");
 int eNo = scanner.nextInt();
 System.out.print("eName: ");
  String eName = scanner.next();
System.out.print("eSalary: ");
 double eSalary = scanner.nextDouble();
   employees[i] = new Employee(eNo, eName, eSalary);
       }

 System.out.print("Enter the employee number to search: ");
  int searchNo = scanner.nextInt();
 boolean found = false;
 for (Employee employee : employees)
 {
   if (employee.eNo == searchNo)
 {
   System.out.println("Employee found: eNo=" + employee.eNo + ", eName=" +
employee.eName + ", eSalary=" + employee.eSalary);
found = true;
  break;
          }
}
       if (!found) {
           System.out.println("Employee not found.");
       }

       scanner.close();
   }
}
```

```
Name: Ashish P S
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Enter the number of employees: 3
Enter details for employee 1:
eNo: 1
eName: Aswathy
eSalary: 2000
Enter details for employee 2:
eNo: 2
eName: Athul
eSalary: 3000
Enter details for employee 3:
eNo: 3
eName: Gokul
eSalary: 2500
Enter the employee number to search: 2
Employee found: eNo=2, eName=Athul, eSalary=3000.0
```