Experiment 8

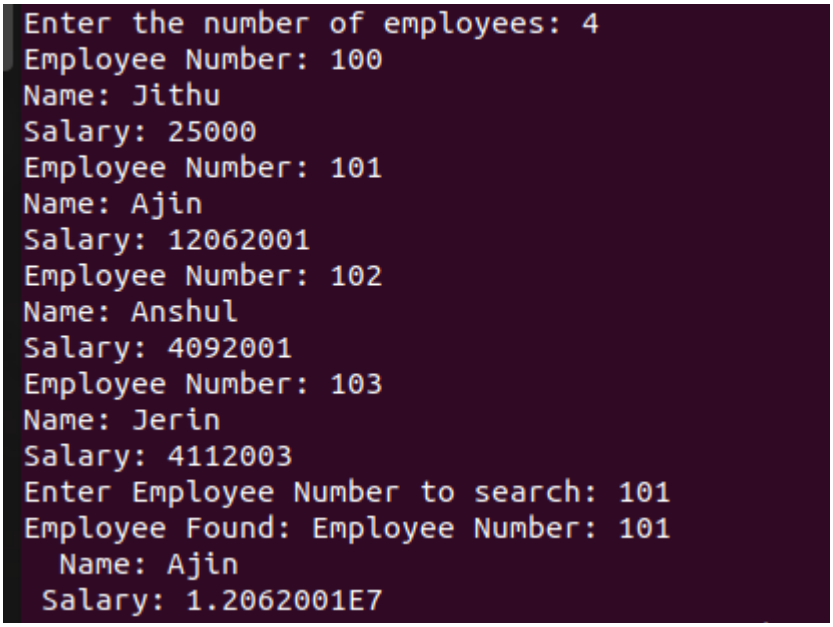
Aim: Write a Java program to store employee details including employee number, name, and salary, and search for an employee by employee number.

Source code

```
import java.util.ArrayList;
import java.util.Scanner;
public class EmployeeSearch {
 private int empNumber;
 private String name;
 private double salary;
 public EmployeeSearch(int empNumber, String name, double salary) {
 this.empNumber = empNumber;
 this.name = name;
 this.salary = salary;
 }
 @Override
 public String toString() {
 return "Employee Number: " + empNumber + "\n Name: " + name + "\n
Salary: " + salary;
 }
 public static void main(String[] args) {
 ArrayList<EmployeeSearch> employees = new ArrayList<>();
 Scanner scanner = new Scanner(System.in);

 System.out.print("Enter the number of employees: ");
 int numExperiment 9
String Search in an Array
Problem Statement
Write a Java program to store ‘n‘ strings in an array. Search for a given
string. If
found,
print its index; otherwise, display ”String not foundEmployees =
scanner.nextInt();

 for (int i = 0; i < numEmployees; i++) {
 System.out.print("Employee Number: ");
```

```
 int empNumber = scanner.nextInt(); scanner.nextLine(); //
Consume newline
 System.out.print("Name: ");
 String name = scanner.nextLine();
 System.out.print("Salary: ");
 double salary = scanner.nextDouble();

 employees.add(new EmployeeSearch(empNumber, name, salary));
 }

 System.out.print("Enter Employee Number to search: ");
 int searchEmpNumber = scanner.nextInt();

 boolean found = false;
 for (EmployeeSearch emp : employees) {
 if (emp.empNumber == searchEmpNumber) {
 System.out.println("Employee Found: " + emp);
 found = true;
 break;
 }
 }

 if (!found) {
 System.out.println("Employee with number " + searchEmpNumber
+ "
not found.");
 }

 scanner.close();
 }
}
```

Output



Experiment 9

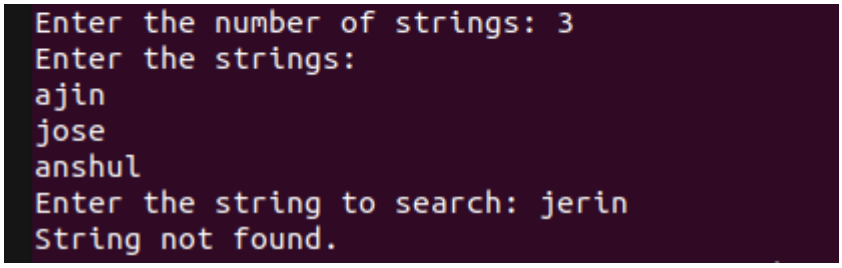
Aim : Write a Java program to store ‘n‘ strings in an array. Search for a given string. If found, print its index; otherwise, display ”String not found

Source code

```
import java.util.Scanner;
public class StringSearch {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);
 System.out.print("Enter the number of strings: ");
 String[] strings = new String[scanner.nextInt()];
 scanner.nextLine(); // Consume newline
 System.out.println("Enter the strings:");
 for (int i = 0; i < strings.length; i++) {
 strings[i] = scanner.nextLine();
 }
 System.out.print("Enter the string to search: ");
 String searchString = scanner.nextLine();
 for (int i = 0; i < strings.length; i++) {
 if (strings[i].equals(searchString)) {
 System.out.println("String found at index: " + i);
```

```
Scanner scanner = new Scanner(System.in);
 System.out.print("Enter the number of strings: ");
 String[] strings = new String[scanner.nextInt()];
 scanner.nextLine(); // Consume newline
 System.out.println("Enter the strings:");
 for (int i = 0; i < strings.length; i++) {
 strings[i] = scanner.nextLine();
 }
 System.out.print("Enter the string to search: ");
 String searchString = scanner.nextLine();
 for (int i = 0; i < strings.length; i++) {
 if (strings[i].equals(searchString)) {
 System.out.println("String found at index: " + i);
```

output



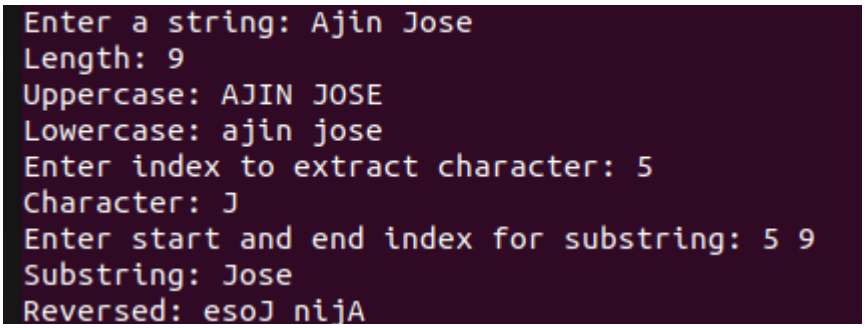
Experiment 10

Aim: Write a Java program to perform various string manipulations, including finding the length, converting to uppercase and lowercase, extracting characters and substrings, and reversing the string.

Source code

```
import java.util.Scanner; public class StringFun{ public static
void main(String[] args) {
Scanner scanner = new Scanner(System.in);
System.out.print("Enter a string: ");
String input = scanner.nextLine();
System.out.println("Length: " + input.length());
System.out.println("Uppercase: " + input.toUpperCase());
System.out.println("Lowercase: " + input.toLowerCase());
System.out.print("Enter index to extract character: ");
System.out.println("Character: " + input.charAt(scanner.nextInt()));
scanner.nextLine();
System.out.print("Enter start and end index for substring: ");
int start = scanner.nextInt(), end = scanner.nextInt();

System.out.println("Substring: " + input.substring(start, end));
System.out.println("Reversed: " + new

StringBuilder(input).reverse());
        scanner.close();
    }

    }
```

Output



Experiment 11

Aim: Write a Java program to implement hierarchical inheritance for a book management system. Define a base class ‘Publisher‘, a derived class ‘Book‘, and two subclasses ‘Literature‘ and ‘Fiction‘. Include methods to read and display book details and demonstrate the functionality using user input.

Source code

```
import java.util.Scanner;
class Publisher {
String name;
Publisher(String name) { this.name = name; }
void display() { System.out.println("Publisher: " + name); }
}
class Book extends Publisher {
 String title, author;
 Book(String name, String title, String author) {
 super(name);
 this.title = title;
 this.author = author; }
 void display() {
 super.display();
 System.out.println("Title: " + title + "\nAuthor: " + author);
 }
}
class Literature extends Book {
 Literature(String name, String title, String author) { super(name, title,
author); }
}
 class Fiction extends Book {
 Fiction(String name, String title, String author) { super(name, title,
author); }
}
public class BookManagement {
 public static void main(String[] args) {
 Scanner sc = new Scanner(System.in);

 System.out.print("Enter Publisher: ");
 String publisher = sc.nextLine();
```

```
 System.out.print("Enter Title: ");
 String title = sc.nextLine();

 System.out.print("Enter Author: ");
 String author = sc.nextLine();

 System.out.print("Enter Category (Literature/Fiction): ");
 String category = sc.nextLine();

 Book book = category.equalsIgnoreCase("Literature") ? new
Literature(publisher, title, author) : new Fiction(publisher, title,
author);

 System.out.println("\nBook Details:");
 book.display();
 sc.close();
 }
}
```

Output