Experiment – 6 (Hard)

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Subject Name: PBLJ **Subject Code: 22CSH-359**

1. **Aim**: Create a program to collect and store all the cards to assist the users in finding all the cards in a given symbol using Collection interface.

2. **Code:**

```
import java.io.*;
import java.util.ArrayList;
import java.util.List;
import java.util.Scanner;

class Employee implements Serializable {
    private static final long serialVersionUID = 1L;
    private int id;
    private String name;
    private String designation;
    private double salary;

    public Employee(int id, String name, String designation, double salary) {
        this.id = id;
        this.name = name;
        this.designation = designation;
        this.salary = salary;
    }
```

```
    public int getId() {
        return id;
    }

    public String getName() {
        return name;
    }

    public String getDesignation() {
        return designation;
    }

    public double getSalary() {
        return salary;
    }
}

public class Hard {

    private static final String FILE_NAME = "employees.ser";
    private static List<Employee> employees = new ArrayList<>();

    public static void main(String[] args) {
        loadEmployees();
        Scanner scanner = new Scanner(System.in);
        while (true) {
            System.out.println("1. Add an Employee");
            System.out.println("2. Display All");
            System.out.println("3. Exit");
```

```
            System.out.print("Enter your choice: ");
            int choice = scanner.nextInt();
            scanner.nextLine();
            switch (choice) {
                case 1:
                    addEmployee(scanner);
                    break;
                case 2:
                    displayAllEmployees();
                    break;
                case 3:
                    saveEmployees();
                    System.exit(0);
                    break;
                default:
                    System.out.println("Invalid choice. Please try again.");
            }
        }
    }

    private static void addEmployee(Scanner scanner) {
        System.out.print("Enter Employee ID: ");
        int id = scanner.nextInt();
        scanner.nextLine();
        System.out.print("Enter Employee Name: ");
        String name = scanner.nextLine();
        System.out.print("Enter Employee Designation: ");
        String designation = scanner.nextLine();
        System.out.print("Enter Employee Salary: ");
        double salary = scanner.nextDouble();
```

```
        scanner.nextLine();
        employees.add(new Employee(id, name, designation, salary));
    }

    private static void displayAllEmployees() {
        for (Employee emp : employees) {
            System.out.println("ID: " + emp.getId() + ", Name: " + emp.getName() + ", Designation:
" + emp.getDesignation() + ", Salary: " + emp.getSalary());
        }
    }

    private static void saveEmployees() {
        try (ObjectOutputStream oos = new ObjectOutputStream(new
FileOutputStream(FILE_NAME))) {
            oos.writeObject(employees);
        } catch (IOException e) {
            System.err.println("IO Exception: " + e.getMessage());
        }
    }

    @SuppressWarnings("unchecked")
    private static void loadEmployees() {
        try (ObjectInputStream ois = new ObjectInputStream(new
FileInputStream(FILE_NAME))) {
            employees = (List<Employee>) ois.readObject();
        } catch (FileNotFoundException e) {
            // File not found, no employees to load
        } catch (IOException | ClassNotFoundException e) {
            System.err.println("Exception: " + e.getMessage());
        }
    }
```

}

3. Output:

```
PS D:\Semester 6> cd "D:\Semester 6\Java (Github)\Expt 5"
PS D:\Semester 6\Java (Github)\Expt 5> java Hard
 1. Add an Employee
 2. Display All
 3. Exit
 Enter your choice: 1
 Enter Employee ID: 22
 Enter Employee Name: Shivam Sharma
 Enter Employee Designation: Jr. Engineer
 Enter Employee Salary: 60000
 1. Add an Employee
 2. Display All
 3. Exit
 Enter your choice: 2
 ID: 22, Name: Shivam Sharma, Designation: Jr. Engineer, Salary: 60000.0
 1. Add an Employee
 2. Display All
 3. Exit
 Enter your choice:
```

(Output 1)