

Experiment – 5 (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)



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