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package myjava.exp5;
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;
    int id;
    String name, designation;
    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 void display() {
        System.out.println("ID: " + id + ", Name: " + name + ", Designation: " + designation +
    }
}

public class EmployeeManagement {
    private static final String FILENAME = "employees";
    private static Scanner scanner = new Scanner(System.in);

    public static void addEmployee() {
        System.out.print("Enter Employee ID: ");
        while (!scanner.hasNextInt()) {
            System.out.println("Invalid input. Please enter an integer.");
            scanner.next();
        }
        int id = scanner.nextInt();
        scanner.nextLine();

        System.out.print("Enter Employee Name: ");
        String name = scanner.nextLine();
        System.out.print("Enter Designation: ");
        String designation = scanner.nextLine();
        System.out.print("Enter Salary: ");

        while (!scanner.hasNextDouble()) {
            System.out.println("Invalid salary. Please enter a valid number.");
            scanner.next();
        }
        double salary = scanner.nextDouble();
        scanner.nextLine();

        Employee emp = new Employee(id, name, designation, salary);
        List<Employee> employees = loadEmployees();
        employees.add(emp);
        saveEmployees(employees);
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    System.out.println("Employee added successfully.");
}

public static void displayEmployees() {
    List<Employee> employees = loadEmployees();
    if (employees.isEmpty()) {
        System.out.println("No employees found.");
        return;
    }
    System.out.println("\nEmployee Records:");
    for (Employee emp : employees) {
        emp.display();
    }
}

private static List<Employee> loadEmployees() {
    List<Employee> employees = new ArrayList<>();
    try (ObjectInputStream in = new ObjectInputStream(new FileInputStream(FILENAME))) {
        employees = (List<Employee>) in.readObject();
    } catch (EOFException e) {
    } catch (IOException | ClassNotFoundException e) {
        System.out.println("Error reading employees: " + e.getMessage());
    }
    return employees;
}

private static void saveEmployees(List<Employee> employees) {
    try (ObjectOutputStream out = new ObjectOutputStream(new FileOutputStream(FILENAME)))
        out.writeObject(employees);
    } catch (IOException e) {
        System.out.println("Error saving employees: " + e.getMessage());
    }
}

public static void main(String[] args) {
    while (true) {
        System.out.println("\n1. Add Employee");
        System.out.println("2. Display All Employees");
        System.out.println("3. Exit");
        System.out.print("Choose an option: ");

        if (!scanner.hasNextInt()) {
            System.out.println("Invalid choice. Please enter a number.");
            scanner.next();
            continue;
        }

        int choice = scanner.nextInt();
        scanner.nextLine();

        switch (choice) {
            case 1:
                addEmployee();
                break;
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                case 2:
                    displayEmployees();
                    break;
                case 3:
                    System.out.println("Exiting application.");
                    scanner.close();
                    return;
                default:
                    System.out.println("Invalid choice. Try again.");
            }
        }
    }
}
```