Java Programming Assignments

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1. Java Program to Implement ArrayList for Employee Details

```
import java.util.ArrayList;
import java.util.Scanner;

class Employee {
    int id;
    String name;
    double salary;

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

public class EmployeeDetails {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        ArrayList<Employee> employees = new ArrayList<>();
        int choice;
```

```
        do {
            System.out.println("\n1. Add Employee\n2. Update Employee\n3. Remove Employee\n4. Search Employee\n5. Exit");
            System.out.print("Enter your choice: ");
            choice = scanner.nextInt();

            switch (choice) {
                case 1:
                    System.out.print("Enter ID: ");
                    int id = scanner.nextInt();
                    scanner.nextLine();  // Consume newline
                    System.out.print("Enter Name: ");
                    String name = scanner.nextLine();
                    System.out.print("Enter Salary: ");
                    double salary = scanner.nextDouble();
                    employees.add(new Employee(id, name, salary));
                    System.out.println("Employee added successfully.");
                    break;

                case 2:
                    System.out.print("Enter ID to update: ");
                    int updateId = scanner.nextInt();
                    boolean found = false;
                    for (Employee emp : employees) {
                        if (emp.id == updateId) {
                            scanner.nextLine();  // Consume newline
```

```
            System.out.print("Enter new Name: ");
            emp.name = scanner.nextLine();
            System.out.print("Enter new Salary: ");
            emp.salary = scanner.nextDouble();
            found = true;
            System.out.println("Employee updated successfully.");
            break;
        }
    }
    if (!found) {
        System.out.println("Employee not found.");
    }
    break;

case 3:
    System.out.print("Enter ID to remove: ");
    int removeId = scanner.nextInt();
    employees.removeIf(emp -> emp.id == removeId);
    System.out.println("Employee removed successfully.");
    break;

case 4:
    System.out.print("Enter ID to search: ");
    int searchId = scanner.nextInt();
    found = false;
    for (Employee emp : employees) {
        if (emp.id == searchId) {
```

```
                    System.out.println("Employee ID: " + emp.id);
                    System.out.println("Name: " + emp.name);
                    System.out.println("Salary: " + emp.salary);
                    found = true;
                    break;
                }
            }
            if (!found) {
                System.out.println("Employee not found.");
            }
            break;

        case 5:
            System.out.println("Exiting...");
            break;

        default:
            System.out.println("Invalid choice.");
      }
    } while (choice != 5);
  }
}
```

2. Program to Collect and Store Cards Using Collection Interface

import java.util.*;

```
class Card {
    String rank;
    String suit;

    Card(String rank, String suit) {
        this.rank = rank;
        this.suit = suit;
    }

    @Override
    public String toString() {
        return rank + " of " + suit;
    }
}

public class CardCollection {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        ArrayList<Card> cards = new ArrayList<>();
        cards.add(new Card("Ace", "Hearts"));
        cards.add(new Card("King", "Spades"));
        cards.add(new Card("Queen", "Diamonds"));
        cards.add(new Card("Jack", "Clubs"));
        cards.add(new Card("10", "Hearts"));
        cards.add(new Card("9", "Spades"));

          System.out.print("Enter the symbol to search (e.g., Hearts, Spades, etc.):
```

```
");
        String symbol = scanner.nextLine();

        System.out.println("\nCards of " + symbol + ":");
        for (Card card : cards) {
            if (card.suit.equalsIgnoreCase(symbol)) {
                System.out.println(card);
            }
        }
    }
}
```