JA111 Day 15 Assignment

Q1) Explain the difference between ArrayList and LinkedList

Q2) Create a class Song with the following members:

    a. following 2 fields with private visibility:
```
movieName: String
songName: String
```
    b. Override the hashCode and equals method to very the uniqueness of the Song
    (If movieName and songName is same for two Song object then they should be treated as duplicate object).
    c. public parameterized constructor to initialise the songName and movieName Variables.
    d. A non-static method with public visibility:
```
play():void
```
    This play method should print:
```
songName+" of "+movieName+" is playing...!"
```

2. Create a class PlayList with the following members:
    a. `public List<Song> songs = new ArrayList<>();`

    b. `public void addSong(Song song);`
    This addSong method will take a Song object and add the Song object to the above List (songs) and print: "Song added to the playlist successfully."

    If the user tries to add any duplicate song in this list of songs then it should print:
    "Song is already added in the playlist"

3. Create a Main class with the main method and do the following task inside the main method.
    a. Create 4 song objects by taking details from the user.
    b. Create an object of the Playlist class and add all the 4 Song objects into the list of PlayList object by calling addSong method.

Get all the songs one by one from the list of PlayList object and call the play() method on each Song object

Q3) Explain the difference between equals() and HashCode() Method.

Q4) Employee Management System :

Create java bean class Employee with following members:

```
employeeId: Integer
employeeName: String
employeeSalary: double
department Department
```

Create java bean class Department with following members:
```
departmentId: Integer
departmentName: String
```

Create Main class, inside this class create one Collection of Employee to store the employee object. And you have to implement the following functionality.

CASE 1:
...Welcome to Employee Management System....
Do you want to Enter the detail of Employee: ? (Y/N)
y
Enter the Employee Details: 1

Enter the Employee Id:
12
Enter the Employee Name:
anand
Enter the Employee Salary:
1000
Enter the Department Id:
1
Enter the Department Name:
A
Employee Details added successfully..
Do you want to Enter the detail of Employee: ? (Y/N)
y
Enter the Employee Details: 2

Enter the Employee Id:
12
Enter the Employee Name:
anand
Enter the Employee Salary:
1000
Enter the Department Id:
1
Enter the Department Name:
A
Employee Details added successfully..
Do you want to Enter the detail of Employee: ? (Y/N)
n
Thank you---
Enter the your choice
1: Find Employee in Particular Department
2: Remove Particular Employee
3: Print Employees in All Departments
3

Employee [id=12, name=anand, salary=1000.0, department=Department [departmentId=1,

departmentName=A]]

Do you want to Exit: ? (Y/N)
y
Thank you---

CASE 2:

...Welcome to Employee Management System....
Do you want to Enter the detail of Employee: ? (Y/N)
Y
Enter the Employee Details: 1

Enter the Employee Id:
10
Enter the Employee Name:
anand
Enter the Employee Salary:
20000
Enter the Department Id:
1
Enter the Department Name:
A
Employee Details added successfully..
Do you want to Enter the detail of Employee: ? (Y/N)
y
Enter the Employee Details: 2

Enter the Employee Id:
23
Enter the Employee Name:
shivam
Enter the Employee Salary:
90000
Enter the Department Id:
1
Enter the Department Name:
B
Employee Details added successfully..
Do you want to Enter the detail of Employee: ? (Y/N)
y
Enter the Employee Details: 3

Enter the Employee Id:
13
Enter the Employee Name:
krutika
Enter the Employee Salary:
35000
Enter the Department Id:
1
Enter the Department Name:
A
Employee Details added successfully..
Do you want to Enter the detail of Employee: ? (Y/N)
y
Enter the Employee Details: 4

Enter the Employee Id:
45

Enter the Employee Name:
mohit
Enter the Employee Salary:
31000
Enter the Department Id:
5
Enter the Department Name:
D
Employee Details added successfully..
Do you want to Enter the detail of Employee: ? (Y/N)
n
Thank you---
Enter the your choice
1: Find Employee in Particular Department
2: Remove Particular Employee
3: Print Employees in All Departments
3

Employee [id=45, name=mohit, salary=31000.0, department=Department [departmentId=5,

departmentName=D]]

Employee [id=23, name=shivam, salary=90000.0, department=Department [departmentId=1,

departmentName=B]]

Employee [id=10, name=anand, salary=20000.0, department=Department [departmentId=1,

departmentName=A]]

Employee [id=13, name=krutika, salary=35000.0, department=Department [departmentId=1,

departmentName=A]]

Do you want to Exit: ? (Y/N)
n
Enter the your choice
1: Find Employee in Particular Department
2: Remove Particular Employee
3: Print Employees in All Departments
1
Enter the Department Id:
1
Employee in Department: 1
Employee Name: shivam
Employee Id: 23
Employee Salary: 90000.0
===============================
Employee Name: anand
Employee Id: 10
Employee Salary: 20000.0
===============================

Employee Name: krutika
Employee Id: 13
Employee Salary: 35000.0
===============================
Do you want to Exit: ? (Y/N)
y
Thank you---

CASE: 3
...Welcome to Employee Management System....
Do you want to Enter the detail of Employee: ? (Y/N)
y
Enter the Employee Details: 1

Enter the Employee Id:
1
Enter the Employee Name:
shivam arora
Enter the Employee Salary:
34000
Enter the Department Id:
1
Enter the Department Name:
B
Employee Details added successfully..
Do you want to Enter the detail of Employee: ? (Y/N)
y
Enter the Employee Details: 2

Enter the Employee Id:
23
Enter the Employee Name:
anand
Enter the Employee Salary:
23000
Enter the Department Id:
3
Enter the Department Name:
B
Employee Details added successfully..
Do you want to Enter the detail of Employee: ? (Y/N)
n
Thank you---
Enter the your choice
1: Find Employee in Particular Department
2: Remove Particular Employee
3: Print Employees in All Departments
3

Employee [id=23, name=anand, salary=23000.0, department=Department [departmentId=3,

departmentName=B]]

Employee [id=1, name=shivam, salary=34000.0, department=Department [departmentId=1,

departmentName=B]]

Do you want to Exit: ? (Y/N)
n
Enter the your choice
1: Find Employee in Particular Department
2: Remove Particular Employee
3: Print Employees in All Departments
2
Enter Department Id:
1
Enter the Employee Id:
1
shivam Employee is removed from the department 1 successfully.
Do you want to Exit: ? (Y/N)
n
Enter the your choice
1: Find Employee in Particular Department
2: Remove Particular Employee
3: Print Employees in All Departments

3

Employee [id=23, name=anand, salary=23000.0, department=Department [departmentId=3,

departmentName=B]]

Do you want to Exit: ? (Y/N)
n
Enter the your choice
1: Find Employee in Particular Department
2: Remove Particular Employee
3: Print Employees in All Departments
2
Enter Department Id:
3
Enter the Employee Id:
23
anand Employee is removed from the department 3 successfully.
Do you want to Exit: ? (Y/N)
n
Enter the your choice
1: Find Employee in Particular Department
2: Remove Particular Employee
3: Print Employees in All Departments
3
Employee doesn't exists..
Do you want to Exit: ? (Y/N)
y
Thank you---