Removing Duplicates Employees from the ArrayList and Return a List without duplicates

Problem 3. **[Data Structures]** For this problem, you have been given two classes in the prob1 package: Employee and EmployeeInfo. The Employee class has data fields name and salary, with getters and setters. EmployeeInfo is a partially implemented class, which has two parts.

- The first part of EmployeeInfo is the removeDuplicates method – this is the method you will implement. This method accepts a List of Employees and should produce a new list of the same Employees, but without duplicates.
- The second part is the main method which tests your removeDuplicates method. The main method passes in a List of Employees from the TestData class (called originalList) and then compares the output of your method with the list dupsRemoved in TestData. The dupsRemoved list is the list of Employees contained in originalList with all duplicates removed, so it is the correct output for the removeDuplicates method. The main method then tests whether the return list of your removeDuplicates method is the same as the dupsRemoved list; it checks this by calling the utility method listsAreEqual, located in prob1.util.Util.

For this problem, you must implement the removeDuplicates method. You may asssume that the input list for removeDuplicates is not null (so you do not need to test for null in your code).

In your implementation of removeDuplicates, you *are not allowed to* use any implementation of Java's Set interface.

Your removeDuplicates method will, at each step, need to determine whether two given Employee objects are equal. To perform this comparison, you *must* override Java's equals in the Employee class. *Note*: Two Employee objects are considered to be equal if and only if they have the same name and salary.

To get full credit for this problem, there are two requirements:

1. The output of your removeDuplicates method must be a list that is identical to the dupsRemoved list in TestData

2. The utility method Util.listsAreEqual must return true when TestData.dupsRemoved and the list obtained from calling your removeDuplicates method are both passed in as arguments to Util.listsAreEqual.

In developing a solution, you are not allowed to modify the TestData or Util classes in any way, and you are not allowed to modify the main method in EmployeeInfo. You are allowed to *add* code to Employee, but *not modify* existing code in that class.

Important! To clarify any possible confusion: The only code you need to write is to implement the method removeDuplicates in the EmployeeInfo class and to override equals in the Employee class. You do *not* need to write any additional code to test whether lists are equal (this has already been done for you).