In this lab, we will implement Dictionary using sorted array. Then, we will use our implemented Dictionary to implement directory of phone numbers.

Steps:

1. Start a new project named Lab08 Dictionary
2. Download the following four files from the Canvas:
   1. DictionaryInterface.java
   2. Driver.java
   3. Name.java
   4. Phonedata.txt

and copy the java files to the src folder of your project and txt file to the main project directory.

1. In Eclipse, right click on your project folder and choose Refresh. The four files you downloaded should show up in the project.

**We will complete the rest of this by the end of class:**

1. Create a new class SortedArrayDictionary which implements DictionaryInterface. Implements all the required methods.
2. In class Name:
   1. Implement equals method.
   2. Implement compareTo method.
3. In class Driver:
   1. Test your equals and compareTo methods.
   2. Test your add, replace, remove, etc of your Dictionary implementation.
   3. Read the phonedata.txt file which contains 100 lines of phone data and add all of them to the phonebook dictionary.
   4. Use KeyIterator and ValueIterator to print the phonebook dictionary, the entries should be sorted.

**Grading Rubric:**

SortedArrayDictionary 50 points

2 constructors 5 points

9 methods each worth 5 points 45 points

Name

equals 5 points

compareTo 10 points

Driver

Answer the questions 16 points

Read and print phonebook dictionary 34 points

Total 100 points.

**What to do when you are done:**

**Submit** SortedArrayDictionary.java, Name.java and Driver.javato the appropriate submission folder on Canvas.