|  |  |
| --- | --- |
| **Pre-AP® Computer Science** | **Lab 14B**  **Practice/Perform Major Java Assignment** |
| **Text Files of Names** | **70, 80 & 100 Point Versions** |
| **Assignment Purpose:**  The purpose of this program is to demonstrate knowledge of reading in from a text file and writing out to a text file. | |

For this assignment you need to take the existing **Names1.txt** text file and manipulate the file in a variety of ways. The student starting version is listed below.

|  |  |
| --- | --- |
| **Lab 14B Student Version** | **Do not copy this file, which is provided.** |
| // Lab14Bst.java  // The "**Text Files of Names**" Program  // This is the student, starting version of Lab 14B.  import java.io.\*;  public class Lab14Bst  {  private static String names[];  private static int fileSize;    public static void main (String args[]) throws IOException  {  System.out.println("\nLab14B\n");  names = new String[100];  readFile("Names1.txt");  displayArray();  sortArray();  // displayArray(); // Uncomment this line for 100 point version only.  writeFile("Names2.txt");  }    public static void readFile(String fileName) throws IOException  {    }    public static void displayArray()  {  System.out.println("Names Array Contents\n");  System.out.println();  }    public static void sortArray()  {  }    public static void writeFile(String fileName) throws IOException  {    }  } | |

**70 Point Version Specifics**

For the 70-point version it is only required to complete methods **readFile** and **displayArray**. Method **readFile** opens a file object for input and stores the contents in the **names** array. Method **displayArray** then displays the contents of the **names** array. The names in the external text file and then the **names** array are randomly arranged.

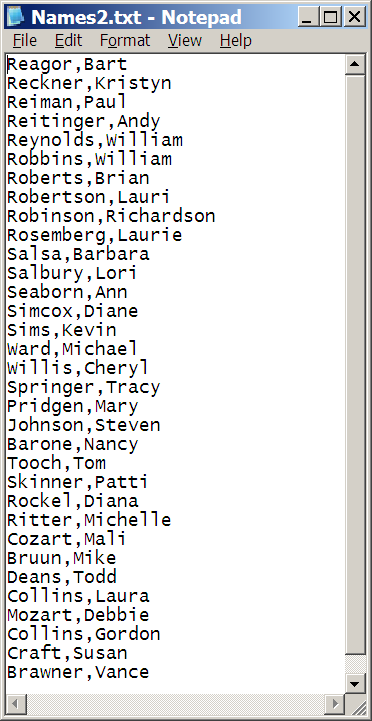
**70 and 80 Point Version *Monitor* Output**

ÏÏ«Ï ----jGRASP exec: java Lab14Bv70  
ÏÏ§Ï  
ÏÏ§Ï  
ÏÏ§ÏLab 14B  
ÏÏ§Ï  
ÏÏ§ÏNames Array Contents  
ÏÏ§Ï  
ÏÏ§ÏReagor,Bart  
ÏÏ§ÏReckner,Kristyn  
ÏÏ§ÏReiman,Paul  
ÏÏ§ÏReitinger,Andy  
ÏÏ§ÏReynolds,William  
ÏÏ§ÏRobbins,William  
ÏÏ§ÏRoberts,Brian  
ÏÏ§ÏRobertson,Lauri  
ÏÏ§ÏRobinson,Richardson  
ÏÏ§ÏRosemberg,Laurie  
ÏÏ§ÏSalsa,Barbara  
ÏÏ§ÏSalbury,Lori  
ÏÏ§ÏSeaborn,Ann  
ÏÏ§ÏSimcox,Diane  
ÏÏ§ÏSims,Kevin  
ÏÏ§ÏWard,Michael  
ÏÏ§ÏWillis,Cheryl  
ÏÏ§ÏSpringer,Tracy  
ÏÏ§ÏPridgen,Mary  
ÏÏ§ÏJohnson,Steven  
ÏÏ§ÏBarone,Nancy  
ÏÏ§ÏTooch,Tom  
ÏÏ§ÏSkinner,Patti  
ÏÏ§ÏRockel,Diana  
ÏÏ§ÏRitter,Michelle   
ÏÏ§ÏCozart,Mali  
ÏÏ§ÏBruun,Mike  
ÏÏ§ÏDeans,Todd  
ÏÏ§ÏCollins,Laura  
ÏÏ§ÏMozart,Debbie  
ÏÏ§ÏCollins,Gordon  
ÏÏ§ÏCraft,Susan  
ÏÏ§ÏBrawner,Vance  
ÏÏ§Ï  
ÏÏ§Ï  
ÏÏ©Ï ----jGRASP: operation complete.

**80 Point Version Specifics**

The 80 point version requires you to write method **writeFile**, which opens a file for output and stores the elements of the **names** array in an external **Names2.txt** file. The *monitor* output of the 80 point program is identical to the output of the 70 point program. The 80 point version also requires *file* output to be displayed. You will need to load the **Names2.txt** file in a text editor like *jGRASP* or *Notepad* to demonstrate this part.

**80 Point Version *File* Output**



**100 Point Version Specifics**

The 100 point version adds method **sortArray**, which sorts the **names** array alphabetically in ascending order after they are read in and displayed. The sorted array is then displayed again and it will be that sorted array that is sent to the **Names2.txt** file.

**100 Point Version *Monitor* Output**

ÏÏ«Ï ----jGRASP exec: java Lab14Bv100  
ÏÏ§Ï  
ÏÏ§Ï  
ÏÏ§ÏLab 14B  
ÏÏ§Ï  
ÏÏ§ÏNames Array Contents  
ÏÏ§Ï  
ÏÏ§ÏReagor,Bart  
ÏÏ§ÏReckner,Kristyn  
ÏÏ§ÏReiman,Paul  
ÏÏ§ÏReitinger,Andy  
ÏÏ§ÏReynolds,William  
ÏÏ§ÏRobbins,William  
ÏÏ§ÏRoberts,Brian  
ÏÏ§ÏRobertson,Lauri  
ÏÏ§ÏRobinson,Richardson  
ÏÏ§ÏRosemberg,Laurie  
ÏÏ§ÏSalsa,Barbara  
ÏÏ§ÏSalbury,Lori  
ÏÏ§ÏSeaborn,Ann  
ÏÏ§ÏSimcox,Diane  
ÏÏ§ÏSims,Kevin  
ÏÏ§ÏWard,Michael  
ÏÏ§ÏWillis,Cheryl  
ÏÏ§ÏSpringer,Tracy  
ÏÏ§ÏPridgen,Mary  
ÏÏ§ÏJohnson,Steven  
ÏÏ§ÏBarone,Nancy  
ÏÏ§ÏTooch,Tom  
ÏÏ§ÏSkinner,Patti  
ÏÏ§ÏRockel,Diana  
ÏÏ§ÏRitter,Michelle   
ÏÏ§ÏCozart,Mali  
ÏÏ§ÏBruun,Mike  
ÏÏ§ÏDeans,Todd  
ÏÏ§ÏCollins,Laura  
ÏÏ§ÏMozart,Debbie  
ÏÏ§ÏCollins,Gordon  
ÏÏ§ÏCraft,Susan  
ÏÏ§ÏBrawner,Vance  
ÏÏ§Ï

Continued on the next page…

**100 Point Version *Monitor* Output Continued**

ÏÏ§ÏNames Array Contents  
ÏÏ§Ï  
ÏÏ§ÏBarone,Nancy  
ÏÏ§ÏBrawner,Vance  
ÏÏ§ÏBruun,Mike  
ÏÏ§ÏCollins,Gordon  
ÏÏ§ÏCollins,Laura  
ÏÏ§ÏCozart,Mali  
ÏÏ§ÏCraft,Susan  
ÏÏ§ÏDeans,Todd  
ÏÏ§ÏJohnson,Steven  
ÏÏ§ÏMozart,Debbie  
ÏÏ§ÏPridgen,Mary  
ÏÏ§ÏReagor,Bart  
ÏÏ§ÏReckner,Kristyn  
ÏÏ§ÏReiman,Paul  
ÏÏ§ÏReitinger,Andy  
ÏÏ§ÏReynolds,William  
ÏÏ§ÏRitter,Michelle   
ÏÏ§ÏRobbins,William  
ÏÏ§ÏRoberts,Brian  
ÏÏ§ÏRobertson,Lauri  
ÏÏ§ÏRobinson,Richardson  
ÏÏ§ÏRockel,Diana  
ÏÏ§ÏRosemberg,Laurie  
ÏÏ§ÏSalbury,Lori  
ÏÏ§ÏSalsa,Barbara  
ÏÏ§ÏSeaborn,Ann  
ÏÏ§ÏSimcox,Diane  
ÏÏ§ÏSims,Kevin  
ÏÏ§ÏSkinner,Patti  
ÏÏ§ÏSpringer,Tracy  
ÏÏ§ÏTooch,Tom  
ÏÏ§ÏWard,Michael  
ÏÏ§ÏWillis,Cheryl  
ÏÏ§Ï  
ÏÏ§Ï  
ÏÏ©Ï ----jGRASP: operation complete.

As with the 80 point version, the 100 point version will require demonstrating BOTH the *monitor* and the *file output*.

**100 Point Version *File* Output**

