

Unit 6 Test Project

Write a Java project (applet) that will sort an array of Strings in two ways. First, it will sort the Strings alphabetically. Second, it will sort the Strings in ascending order by the length of the Strings. The results of these sorts must be stored in two different arrays. {Remember, Strings are compared differently than integers or doubles.}

The array should be filled at the time it is declared as an instance variable of the class. The array should contain the following names...

```
private String a[] = {"Barr", "Chamberlain", "Fullam",  
"Gertler", "Jones", "Krantzler", "Ferguson", "Litchfield",  
"Johnson", "Sundeen", "Baker", "Celebucki", "Dunagan",  
"Eckert", "Framke", "Hoekstra", "Jackson", "Klupchak",  
"Kurtz", "Mahler", "Maxwell", "Rothermel", "Tarjan",  
"Tiller", "Turek"};
```

After the array has been sorted both ways, you must search each of the result arrays for the String, "Jones". To search the alphabetized array use the Binary Search algorithm. To search the array sorted by String size, use the Sequential Search. Your applet should look like the applet included with this assignment. Notice in the second array, within each string length, alphabetical order has been maintained!

Paste your output into a Word document and turn it in with your code.

Sorted Alphabetically Sorted by Length

```
-----  
-----  
Baker                      Barr  
Barr                        Baker  
Celebucki                  Jones  
Chamberlain                Kurtz  
Dunagan                    Turek  
Eckert                     Eckert  
Ferguson                   Framke  
Framke                     Fullam  
Fullam                     Mahler  
Gertler                    Tarjan  
Hoekstra                   Tiller  
Jackson                    Dunagan  
Johnson                   Gertler  
Jones                      Jackson  
Klupchak                   Johnson  
Krantzler                   Maxwell  
Kurtz                      Sundeen  
Litchfield                 Ferguson  
Mahler                     Hoekstra  
Maxwell                    Klupchak  
Rothermel                   Celebucki  
Sundeen                    Krantzler  
Tarjan                     Rothermel  
Tiller                     Litchfield  
Turek                      Chamberlain
```

Jones at index 13

Jones at index 2

Applet started.
