**Searching Algorithms: Linear Search**

A Searching Algorithm will allow you to identify if a specific value exists within a given array of information. The Linear Sort is the simpler of the 2 we will be looking at. Either build your own array for these searches, consisting of 20 elements or use the following.**int** OriginalArray[] = {4,10,6,1,8,10,9,12,14,6,15,6,7,10,8,2,7,3,9,1};

1. Please develop a Linear Search Method in your eclipse file, and then copy and paste it into the box below. Identify the amount of instances of the selected value which exist within the array.

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1. Please add developer comments to the various elements of your search. These comments should briefly outline what each line of code is for, and what it accomplishes.
2. In the box below, please provide a written description of how this search moves through an array identifying the selected values. This Description should highlight the process, it does not need to outline every single adjustment that is made.

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1. Can you think of a situation when this searching method would be the most logical method to use, please explain why?

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**Searching Algorithms: Binary Search**

The Binary Search is slightly more complicated, as it will not work unless it has a fully sorted array. Either build your own array for this search, consisting of 20 elements or use the following.**int** OriginalArray[] = {4,10,6,1,8,10,9,12,14,6,15,6,7,10,8,2,7,3,9,1};

1. Please develop a Binary Search Method in your eclipse file, and then copy and paste it into the box below. Identify the amount of instances of the selected value which exist within the array.

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1. Please add developer comments to the various elements of your search. These comments should briefly outline what each line of code is for, and what it accomplishes.
2. In the box below, please provide a written description of how this search moves through an array sorting it.   
     
   In order to identify multiple instances of the selected value, what did you need to add to the binary search?

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1. Can you think of a situation when this searching method would be the most logical method to use, please explain why?

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