Name: Owen Monus
Student ID: 200482797
Date: Oct 9th

	Sequential	Binary
Is the data sorted? (yes or no)	No	Yes
How many comparisons are made to find the first item (index 0)?	1	6
How many comparisons are made to find the middle item (index 49)?	50	1
How many comparisons are made to find the last item (index 99)?	100	7

Step 3-Challenge Questions

Save these questions and your answers to the same file as above.

Suppose your array contained 1,000,000 elements:

1. For a Sequential Search, how many comparisons would the program need to find the last value in the array?

   1,000,000

2. For a Binary Search, how many comparisons would the program need to find the last value?

   $\log_2(1000000) + 1 = (19.931568569324) + 1$

   20 comparisons

3. In this case, which do you think will be faster?

   I think binary search will be faster because the time it takes to do 20 comparisons is much less than 1,000,000 comparisons.