Quicksort Functional Specification

Write a program that uses a quicksort.
Use the heapsort program that you wrote earlier.

Compare the sort programs with the following criteria:
>   Number of transfers (a transfer is when an item is shifted from one
>   location to another)
>   Total time to sort a small dataset (less than 200 items)
>   Total time to sort a large dataset (more than 10,000 items)
>   Compare the source code between the programs using simple source
>   code metrics (lines of code, number of conditional statements)

Things to consider:
>   Does the type of 'item' that you are sorting matter? Will it make a
>   difference if the item is an integer, or a string, or a complex data type?
>   What happens if the dataset is already sorted? Does this change the
>   speed of the program?
>   What happens if the dataset is sorted in the opposite order? (ascending
>   rather than descending)