Quicksort

The hard deadline for this quiz is Sat 28 Nov 2015 8:59 PM PST (UTC -0800).

To specify an array or sequence of values in an answer, you must separate the values by a single space character (with no punctuation and with no leading or trailing whitespace). For example, if the question asks for the first ten powers of two (starting at 1), the only accepted answer is:

1 2 4 8 16 32 64 128 256 512

If you wish to discuss a particular question and answer in the forums, please post the entire question and answer, including the seed (which is used by the course staff to uniquely identify the question) and the explanation (which contains the correct answer).

In accordance with the Coursera Honor Code, I (Atul Gupta) certify that the answers here are my own work.

Question 1
(seed = 425820)
Give the array that results after applying quicksort partitioning to the following array:
40 83 55 14 89 80 15 63 47 27 21 91
Use the standard partitioning algorithm, in which the leftmost entry is the partitioning item.

Question 2

(seed = 388830)
Give the array that results after applying quicksort partitioning to the following array:

 $\mathsf{B}\ \mathsf{B}\ \mathsf{B}\ \mathsf{B}\ \mathsf{B}\ \mathsf{B}\ \mathsf{B}\ \mathsf{B}\ \mathsf{A}\ \mathsf{A}\ \mathsf{A}\ \mathsf{A}\ \mathsf{A}$

Use the standard partitioning algorithm, in which the leftmost entry is the partitioning item.

Question 3

(seed = 741548)

Give the array that results after applying 3-way quicksort partitioning to the following array: $\frac{1}{2}$

41 49 74 82 30 41 66 76 38 41

Use Dijkstra's 3-way partitioning algorithm.

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You cannot submit your work until you agree to the Honor Code. Thanks!