Princess Nora Bint Abdulrahman University
Faculty of Computer and Information Science
CS 411 : Algorithms Design and Analysis

First Semester 1433/1434H
Tutorial # 5
Quick sort

Example:

- ### *Sort the following array items using quick sort algorithm: A={5,3,1,9,8,2,4,7}.*

algorithm:

- *For quick sort, we have to pick a pivot element, which is random…*

- *Now, the rule is that:*

- *Keep incrementing i until A[i] >= Pivot; and*

- *Keep decrementing j until A[j] <= Pivot;*

- *Then swap these two numbers*

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| 5 | 3 | 1 | 9 | 8 | 2 | 4 | 7 |

P i   j

| 5 | 3 | 1 | 9 | 8 | 2 | 4 | 7 |

P   i   j

Stop

| 5 | 3 | 1 | 9 | 8 | 2 | 4 | 7 |

P   i   j

| 5 | 3 | 1 | 9 | 8 | 2 | 4 | 7 |

P   i   j

Stop

| 5 | 3 | 1 | 4 | 8 | 2 | 9 | 7 |

P   i   j

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