

Section 7 Slides 32-34

Selection Sort

indices	0	1	2	3	4	5	6
values	8	6	7	5	3	0	9
	$\uparrow$ i					$\uparrow$ smallest	

swap 8 and 0.

0	6	7	5	3	8	9
$\uparrow$ i				$\uparrow$ smallest		

swap 6 and 3.

0	3	7	5	6	8	9
$\uparrow$ i	$\uparrow$ i					
			smallest			

swap 7 and 5.

0	3	5	7	6	8	9
			$\uparrow$ i	$\uparrow$ smallest		

swap 7 and 6.

0	3	5	6	7	8	9
				$\uparrow$ i	$\uparrow$ smallest	

swap 7 and 7.

0	3	5	6	7	8	9
					$\uparrow$ i	$\uparrow$ smallest

swap 8 and 8

0	3	5	6	7	8	9
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Sec 7 Slides 35-38 Quicksort Partition

indices 0 1 2 3 4 5 6 7 8

values 5 6 1 9 3 7 8 2 4
 ↑ pivot ↑ pos

5 6 1 9 3 7 8 2 4
 ↑ pivot ↑ pos

5 6 1 9 3 7 8 2 4
 ↑ pivot ↑ pos

swap 8 and 4.

5 6 1 9 3 7 4 2 8
 ↑ pivot ↑ pos

swap 7 and 2.

5 6 1 9 3 2 4 7 8
 ↑ pivot ↑ pos

5 6 1 9 3 2 4 7 8
 ↑ pivot ↑ pos

swap 9 and 4.

5 6 1 4 3 2 9 7 8
 ↑ pivot ↑ pos

5 6 1 4 3 2 9 7 8
 ↑ pivot ↑ pos

swap 6 and 2.

5 2 1 4 3 6 9 7 8
 ↑ pivot ↑ pos

swap pivot and pos

3 2 1 4 5 6 9 7 8