

Insertion Sort for random array

Iteration 0	[101, 0, -1, 20, 3, 37, 21, 10, 4]
Iteration 1	[101, 0, -1, 20, 3, 37, 21, 10, 4]
Iteration 2	[0, 101, -1, 20, 3, 37, 21, 10, 4]
Iteration 3	[-1, 0, 101, 20, 3, 37, 21, 10, 4]
Iteration 4	[-1, 0, 20, 101, 3, 37, 21, 10, 4]
Iteration 5	[-1, 0, 3, 20, 101, 37, 21, 10, 4]
Iteration 6	[-1, 0, 3, 20, 37, 101, 21, 10, 4]
Iteration 7	[-1, 0, 3, 20, 21, 37, 101, 10, 4]
Iteration 8	[-1, 0, 3, 10, 20, 21, 37, 101, 4]
Iteration 9	[-1, 0, 3, 4, 10, 20, 21, 37, 101]

Insertion Sort for sorted array

Iteration 0	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 1	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 2	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 3	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 4	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 5	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 6	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 7	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 8	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 9	[-1, 0, 3, 4, 10, 20, 21, 37, 101]

Insertion Sort for reversed array

Iteration 0	[101, 37, 21, 20, 10, 4, 3, 0, -1]
Iteration 1	[101, 37, 21, 20, 10, 4, 3, 0, -1]
Iteration 2	[37, 101, 21, 20, 10, 4, 3, 0, -1]
Iteration 3	[21, 37, 101, 20, 10, 4, 3, 0, -1]
Iteration 4	[20, 21, 37, 101, 10, 4, 3, 0, -1]
Iteration 5	[10, 20, 21, 37, 101, 4, 3, 0, -1]
Iteration 6	[4, 10, 20, 21, 37, 101, 3, 0, -1]
Iteration 7	[3, 4, 10, 20, 21, 37, 101, 0, -1]
Iteration 8	[0, 3, 4, 10, 20, 21, 37, 101, -1]
Iteration 9	[-1, 0, 3, 4, 10, 20, 21, 37, 101]

Quicksort for random array

Iteration 0	[101, 0, -1, 20, 3, 37, 21, 10, 4]
Iteration 1	[0, -1, 20, 3, 37, 21, 10, 4, 101]
Iteration 2	[-1, 0, 20, 3, 37, 21, 10, 4, 101]
Iteration 3	[-1, 0, 3, 10, 4, 20, 37, 21, 101]
Iteration 4	[-1, 0, 3, 10, 4, 20, 21, 37, 101]
Iteration 5	[-1, 0, 3, 4, 10, 20, 21, 37, 101]

Iteration 6	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 7	[-1, 0, 3, 4, 10, 20, 21, 37, 101]

Quicksort for sorted array

Iteration 0	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 1	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 2	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 3	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 4	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 5	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 6	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 7	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 8	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 9	[-1, 0, 3, 4, 10, 20, 21, 37, 101]

Quicksort for reversed array

Iteration 0	[101, 37, 21, 20, 10, 4, 3, 0, -1]
Iteration 1	[37, 21, 20, 10, 4, 3, 0, -1, 101]
Iteration 2	[21, 20, 10, 4, 3, 0, -1, 37, 101]
Iteration 3	[20, 10, 4, 3, 0, -1, 21, 37, 101]
Iteration 4	[10, 4, 3, 0, -1, 20, 21, 37, 101]
Iteration 5	[4, 3, 0, -1, 10, 20, 21, 37, 101]
Iteration 6	[3, 0, -1, 4, 10, 20, 21, 37, 101]
Iteration 7	[0, -1, 3, 4, 10, 20, 21, 37, 101]
Iteration 8	[-1, 0, 3, 4, 10, 20, 21, 37, 101]
Iteration 9	[-1, 0, 3, 4, 10, 20, 21, 37, 101]

Cocktail Sort for random array

Iteration 0	[101, 0, -1, 20, 3, 37, 21, 10, 4]	
Iteration 1	[0, -1, 20, 3, 37, 21, 10, 4, 101]	8 swaps
Iteration 2	[-1, 0, 3, 20, 4, 37, 21, 10, 101]	5 swaps
Iteration 3	[-1, 0, 3, 4, 20, 21, 10, 37, 101]	3 swaps
Iteration 4	[-1, 0, 3, 4, 10, 20, 21, 37, 101]	2 swaps
Iteration 5	[-1, 0, 3, 4, 10, 20, 21, 37, 101]	No swap

Cocktail Sort for sorted array

Iteration 0	[-1, 0, 3, 4, 10, 20, 21, 37, 101]	
Iteration 1	[-1, 0, 3, 4, 10, 20, 21, 37, 101]	No swap

Cocktail Sort for reversed array

Iteration 0	[101, 37, 21, 20, 10, 4, 3, 0, -1]	
Iteration 1	[37, 21, 20, 10, 4, 3, 0, -1, 101]	8 swaps
Iteration 2	[-1, 37, 21, 20, 10, 4, 3, 0, 101]	7 swaps

Iteration 3	[-1, 21, 20, 10, 4, 3, 0, 37, 101]	6 swaps
Iteration 4	[-1, 0, 21, 20, 10, 4, 3, 37, 101]	5 swaps
Iteration 5	[-1, 0, 20, 10, 4, 3, 21, 37, 101]	4 swaps
Iteration 6	[-1, 0, 3, 20, 10, 4, 21, 37, 101]	3 swaps
Iteration 7	[-1, 0, 3, 10, 4, 20, 21, 37, 101]	2 swaps
Iteration 8	[-1, 0, 3, 4, 10, 20, 21, 37, 101]	1 swap
Iteration 9	[-1, 0, 3, 4, 10, 20, 21, 37, 101]	No swap