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random = [D, X, A, B, Y, C, Z]
sorted = [A, B, C, D, X, Y, Z]
reversed = [Z, Y, X, D, C, B, A]

Insertion sort

random

Iteration 0 : [D, X, A, B, Y, C, Z]
Iteration 1 : [D, X, A, B, Y, C, Z]
Iteration 2: [A, D, X, B, Y, C, Z]
Iteration 3: [A, B, D, X, Y, C, Z]
Iteration 4: [A, B, D, X, Y, C, Z]
Iteration 5: [A, B, C, D, X, Y, Z]
Iteration 6: [A, B, C, D, X, Y, Z]

sorted

Iteration 0 : [A, B, C, D, X, Y, Z]
Iteration 1: [A, B, C, D, X, Y, Z]
Iteration 2: [A, B, C, D, X, Y, Z]
Iteration 3: [A, B, C, D, X, Y, Z]
Iteration 4: [A, B, C, D, X, Y, Z]
Iteration 5: [A, B, C, D, X, Y, Z]
Iteration 6: [A, B, C, D, X, Y, Z]

reversed

Iteration 0: [Z, Y, X, D, C, B, A]
Iteration 1: [Y, Z, X, D, C, B, A]
Iteration 2: [X, Y, Z, D, C, B, A]
Iteration 3: [D, X, Y, Z, C, B, A]
Iteration 4: [C, D, X, Y, Z, B, A]
Iteration 5: [B, C, D, X, Y, Z, A]
Iteration 6: [A, B, C, D, X, Y, Z]

Quicksort

Iteration 0: [D, X, A, B, Y, C, Z]
Iteration 1: [A, B, C, D, X, Y, Z]
Iteration 2: [A, B, C, D, X, Y, Z]
Iteration 3: [A, B, C, D, X, Y, Z]
Iteration 4: [A, B, C, D, X, Y, Z]

Iteration 0: [A, B, C, D, X, Y, Z]
Iteration 1: [A, B, C, D, X, Y, Z]
Iteration 2: [A, B, C, D, X, Y, Z]
Iteration 3: [A, B, C, D, X, Y, Z]
Iteration 4: [A, B, C, D, X, Y, Z]
Iteration 5: [A, B, C, D, X, Y, Z]
Iteration 6: [A, B, C, D, X, Y, Z]
Iteration 7: [A, B, C, D, X, Y, Z]

Iteration 0: [Z, Y, X, D, C, B, A]
Iteration 1: [Y, X, D, C, B, A, Z]
Iteration 2: [X, D, C, B, A, Y, Z]
Iteration 3: [D, C, B, A, X, Y, Z]
Iteration 4: [C, B, A, D, X, Y, Z]
Iteration 5: [B, A, C, D, X, Y, Z]
Iteration 6: [A, B, C, D, X, Y, Z]
Iteration 7: [A, B, C, D, X, Y, Z]

Cocktail sort

random

Iteration 0: [D, X, A, B, Y, C, Z] ||| 3

Iteration 1: [D, A, B, X, C, Y, Z] → 3

Iteration 2: [A, D, B, C, X, Y, Z] ← 2   —||

Iteration 3: [A, B, C, D, X, Y, Z] → 2 |/   /

sorted

Iteration 0: [A, B, C, D, X, Y, Z]

Iteration 1: [A, B, C, D, X, Y, Z] → 0

reversed

Iteration 0: [Z, Y, X, D, C, B, A]

Iteration 1: [Y, X, D, C, B, A, Z] → 6   ₮₭ |

Iteration 2: [A, Y, X, D, C, B, Z] ← 5   ₮₭

Iteration 3: [A, X, D, C, B, Y, Z] → 4 ||||

Iteration 4: [A, B, X, D, C, Y, Z] ← 3 |||

Iteration 5: [A, B, D, C, X, Y, Z] → 2 ||

Iteration 6: [A, B, C, D, X, Y, Z] ← 1 |

Iteration 7: [A, B, C, D, X, Y, Z] → 0