

Bubble Sort $O(n^2)$

{4, 1, 3, 2, 8, 5, 7, 6};



{1, 4, 3, 2, 8, 5, 7, 6};



{1, 3, 4, 2, 8, 5, 7, 6};



{1, 3, 2, 4, 8, 5, 7, 6};



{1, 3, 2, 4, 8, 5, 7, 6};



{1, 3, 2, 4, 5, 8, 7, 6};



{1, 3, 2, 4, 5, 7, 8, 6};



{1, 3, 2, 4, 5, 7, 6, 8};



...

Merge Sort $O(n \log n)$

{4, 1, 3, 2, 8, 5, 7, 6};

{1, 4, 2, 3, 5, 8, 6, 7};

{1, 2, 3, 4, 5, 6, 7, 8};

{1, 2, 3, 4, 5, 6, 7, 8};