

1 Merge Sort Visualization

Introduction

Merge sort is one of the most efficient sorting algorithms. It works on the principle of Divide and Conquer based on the idea of breaking down a list into several sub-lists until each sublist consists of a single element and merging those sublists in a manner that results into a sorted list.

2 Division Steps

Split [0, 5]

0	1	2	3	4	5
7	6	5	1	2	8

Split [0, 2]

0	1	2	3	4	5
7	6	5	1	2	8

Split [3, 5]

0	1	2	3	4	5
7	6	5	1	2	8

Split [0, 1]

0	1	2	3	4	5
7	6	5	1	2	8

Split [3, 4]

0	1	2	3	4	5
7	6	5	1	2	8

3 Merge Steps

Merge [0, 1]

0	1	2	3	4	5
6	7	5	1	2	8

Merge [3, 4]

0	1	2	3	4	5
5	6	7	1	2	8

Merge [0, 2]

0	1	2	3	4	5
5	6	7	1	2	8

Merge [3, 5]

0	1	2	3	4	5
5	6	7	1	2	8

Merge [0, 5]

0	1	2	3	4	5
1	2	5	6	7	8