

# TVJ\_Sort

It provides many kinds of sort functions for STL library containers and arrays.

## Functions

The table below provides the table of parameters functions support.

Functions	Normal Array Pointers	STL Containers	STL Containers iterators	STL Containers and their iterators
<code>bubble_sort</code>	●	○	○	×
<code>insertion_sort</code>	●	○	○	×
<code>quick_sort</code>	●	○	×	○
<code>quick_sort_pro</code>	●	○	○	×
<code>quick_sort_pro_safe</code>	●	○	○	×
<code>heap_sort</code>	●	●	●	×
<code>LSD_sort</code>	×	○	×	×
<code>LSD_sort_pro</code>	×	○	×	×
<code>LSD_sort_pro_heap1</code>	×	○	×	×
<code>LSD_sort_pro_heap2</code>	×	○	×	×
<code>MSD_sort</code>	×	○	×	×
<code>MSD_sort_pro</code>	×	○	×	×
(STL sort)	●	×	○	×

Note: ● means support, × means no support, ○ means support some.

The following table gives the STL container that functions support.

Functions	vector	deque	list	forward_list	array
<code>bubble_sort</code>	●	●	×	×	●
<code>insertion_sort</code>	●	●	×	×	●
<code>quick_sort</code>	●	●	×	×	●
<code>quick_sort_pro</code>	●	●	×	×	●
<code>quick_sort_pro_safe</code>	●	●	×	×	●
<code>heap_sort</code>	●	●	●	●	●
<code>LSD_sort</code>	●	●	×	×	×

Functions	vector	deque	list	forward_list	array
LSD_sort_pro	●	●	×	×	×
LSD_sort_pro_heap1	●	●	×	×	●
LSD_sort_pro_heap2	●	●	×	×	×
MSD_sort	●	●	×	×	×
MSD_sort_pro	●	●	×	×	×
(STL sort)	●	●	×	×	●

Note: ● means support, × means no support.

## Note

- LSD\_sort, LSD\_sort\_pro, LSD\_sort\_pro\_heap1, LSD\_sort\_pro\_heap2, MSD\_sort, MSD\_sort\_pro only supports integer elements (Including `int`, `long long`, `unsigned char` and etc.).
- Using STL container iterators, container element has to be specified in the function.
- Here are two sample `.cpp` files, which can be an easy introduction to TVJ\_Sort.
- This project uses TVJ\_Timer.h in my repository [TVJ\\_Timer](#).