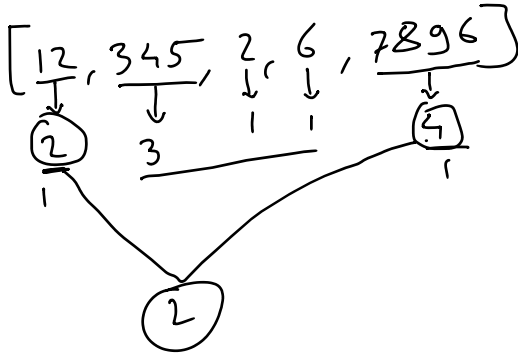


[8, 1, 2, 2, 3]
 \rightarrow \downarrow \downarrow \downarrow \downarrow \downarrow

[4, 0, 1, 1, 3, *]

8 2 3

if ($i \neq j$ and $nums[j] < nums[i]$)
 (count++)



----- x ----- x -----

Sorting algorithm

\hookrightarrow ascending order \rightarrow small \rightarrow large
 \hookrightarrow descending order \rightarrow large \rightarrow small

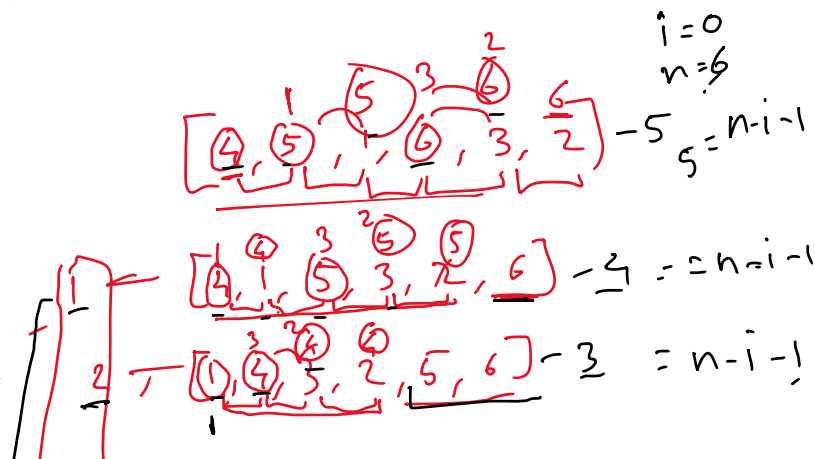
[5A, 3, 2, 5B]

[2, 3, 5A, 5B] \rightarrow stable

[2, 3, 5B, 5A] \rightarrow unstable

Sorting algorithm

- ① bubble sort
- ② selection sort
- ③ insertion sort



③ insertion sort

1 - [1, 4, 5, 2, 6, 3] - 1
 2 - [1, 2, 3, 4, 5, 6] - 2
 3 - [1, 2, 3, 4, 5, 6] - 1
 4 - [1, 2, 3, 4, 5, 6] - 1
 5 - [1, 2, 3, 4, 5, 6]

```

for(int i=0; i<n-1; i++){
  for(int j=0; j<n-i-1; j++){
    if(arr[j] > arr[j+1]){
      temp = arr[j]
      arr[j] = arr[j+1]
      arr[j+1] = temp
    }
  }
}

```

selection sort

[4, 8, 1, 3, 2]

i j
 0 1 2 3 4
 4 8 1 3 2

[1, 2, 3, 4, 8]

$i = 0$
 $current = 4$
 $j = i + 1$

$[2] = 1$
 $j = 2$

[1, 8, 4, 3, 2]

i j
 0 1 2 3 4
 1 8 4 3 2

[1, 2, 4, 3, 8]

i j
 0 1 2 3 4
 1 2 4 3 8

; ~~xy~~ ,
[1, 2, 3, 4, 8]

[5, 4, 2, 8, 3]