Selection sort

4, 5, 1, 2, 3

4, 5, 1, 2, 3

① find maximum, (5) in arr

swap it with the last element

↓

[4, 3, 1, 2], 5

now consider this arr[0-3] array & perform the same there.

② [4 3 1 2] 5

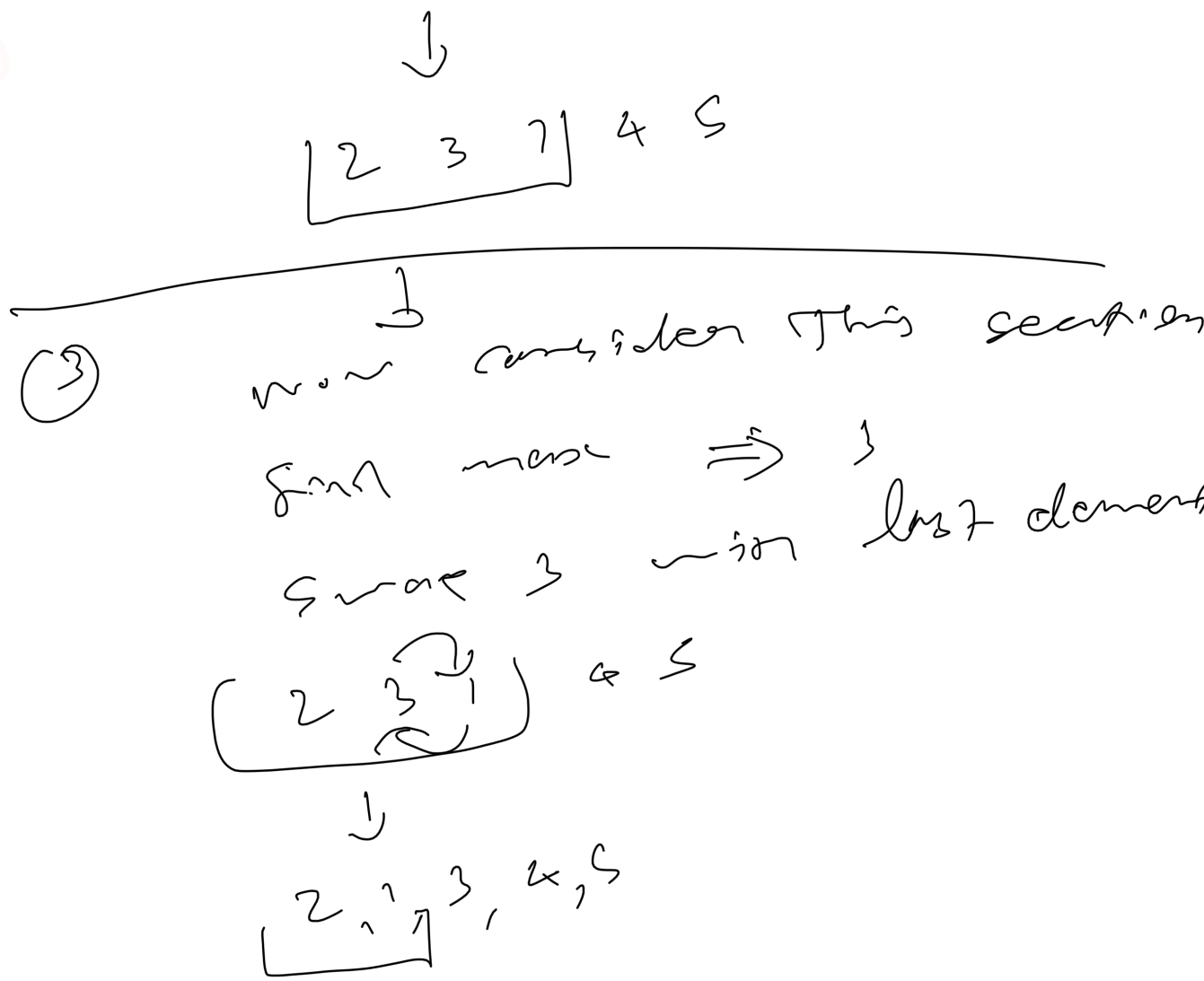
↓

find max in this array

i.e 4

swap 4 with last element

i.e 2


[2 3 1] 4 5
(3)
now consider this section
first move ⇒ 3
swap 3 with last element (1)
[2 3 1] 4 5
[2, 1, 3, 4, 5]
(4)
[2, 1] 3 4 5
move = 2
swap 2 with rest (1)
1 2 3 4 5
run we loop n-1 times
here
4, 5, 1, 2, 3

n = 5

loops = 4

last = 5 - 1 = arr[4]

i = 0 → 4, 5, 1, 2, 3

i = 1 → [4 3 1 2] 5 → last = 3 => 5 - 1 - i

i = 2 → [2, 3, 1] 4 5 → last = 2 => 5 - 1 - i = 4 - 2 = 2

i = 3 → [2, 1] 3 2 1 → last = 1 => 5 - 1 - i = 4 - 3 = 1

i = 4

```
function selectionSort(arr) {
  for(i = 0; i < arr.length; i++) {
    let last = arr.length - 1 - i;
    let max = findMaxIndex(arr, last);
    swap(arr, maxIndex, lastIndex);
```

```
}

function findMaxIdx(arr, start, last){
{
  let max = start;        a, 11 }, 4-4
  for(i=0; i<=last; i++){
    if(a[max] < arr[i]){
      max = i;
    }}
    return max;
}
```

```
function swap(arr, max, last){
  let temp = arr[max];
  arr[max] = arr[last]
  arr[last] = temp;
}
```