

SELECTION SORT

By Prince Agarwal
[“ Hello World ”]

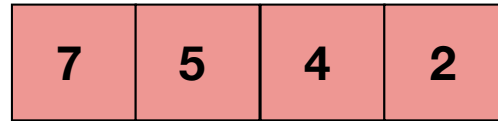
SELECTION SORT

ALGORITHM :-

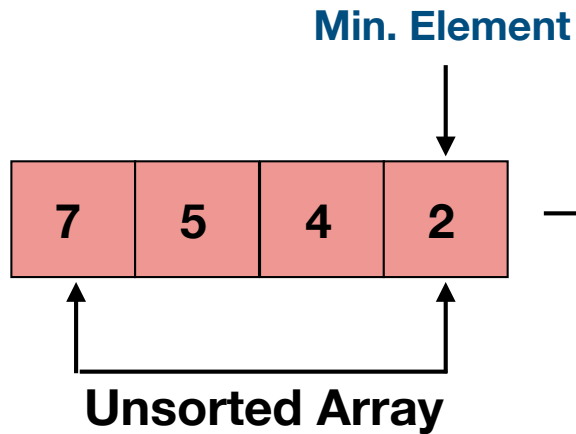
- 1) TAKE THE UNSORTED ARRAY
- 2) FIND THE MINIMUM ELEMENTS FROM THE UNSORTED ARRAY
- 3) AND PUT OR SWAP WITH THE RESPECTIVE ELEMENTS
- 4) UNTIL WE TRAVERSE LAST ELEMENT
- 5) THEN WE GOT SORTED ARRAY

SELECTION SORT

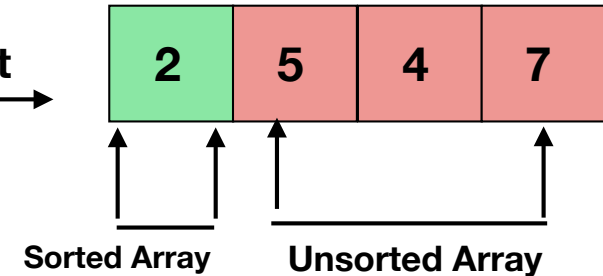
UNSORTED ARRAY :-



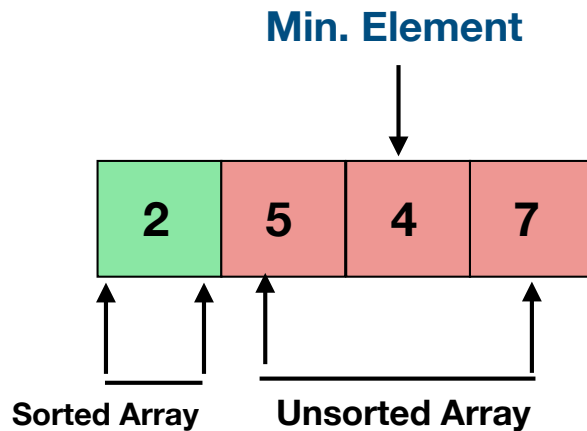
Step 1:
(i=0)



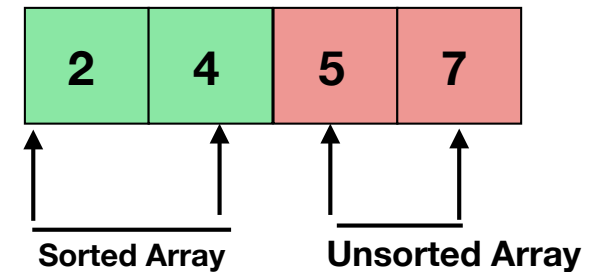
SWAP Min. Element
With (i=0)



Step 2:
(i=1)

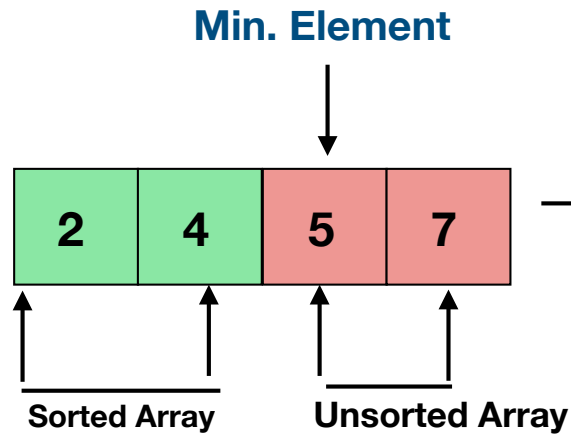


SWAP Min. Element
With (i=1)

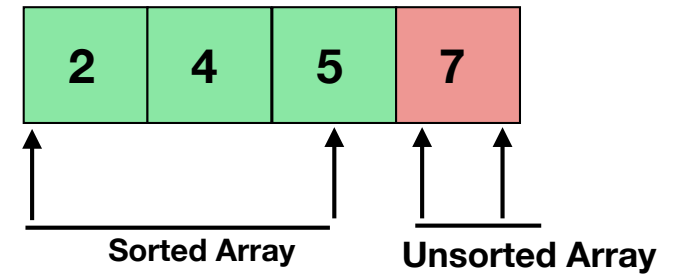


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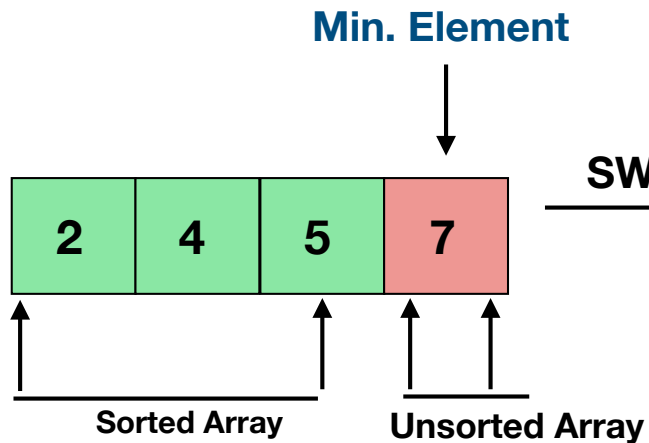
Step 3:
($i=2$)



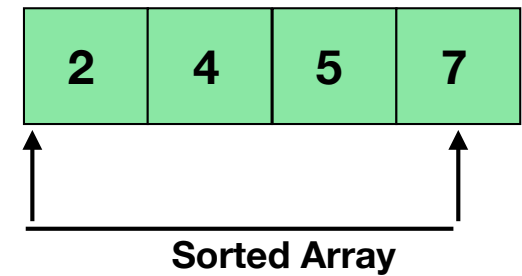
SWAP Min. Element
With ($i=2$)



Step 4:
($i=3$)



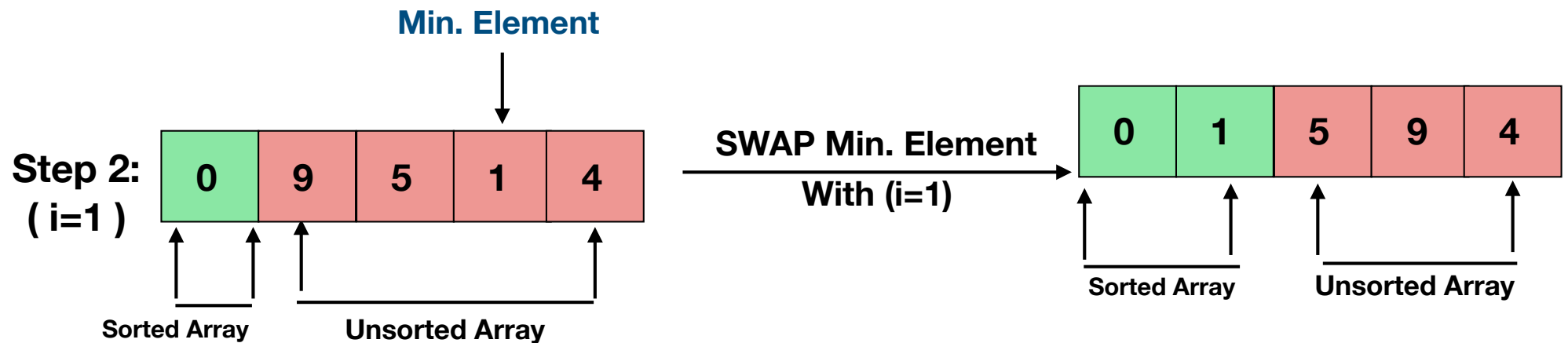
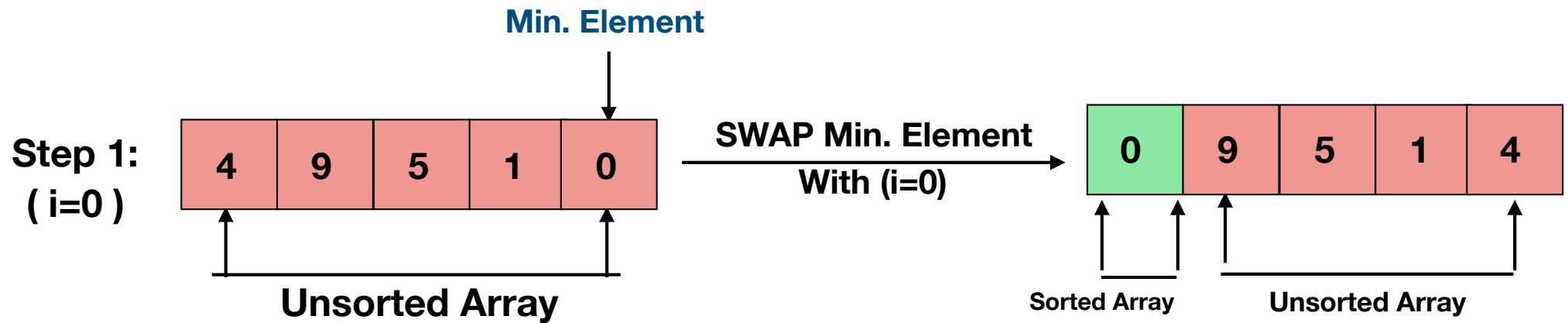
SWAP Min. Element
With ($i=3$)



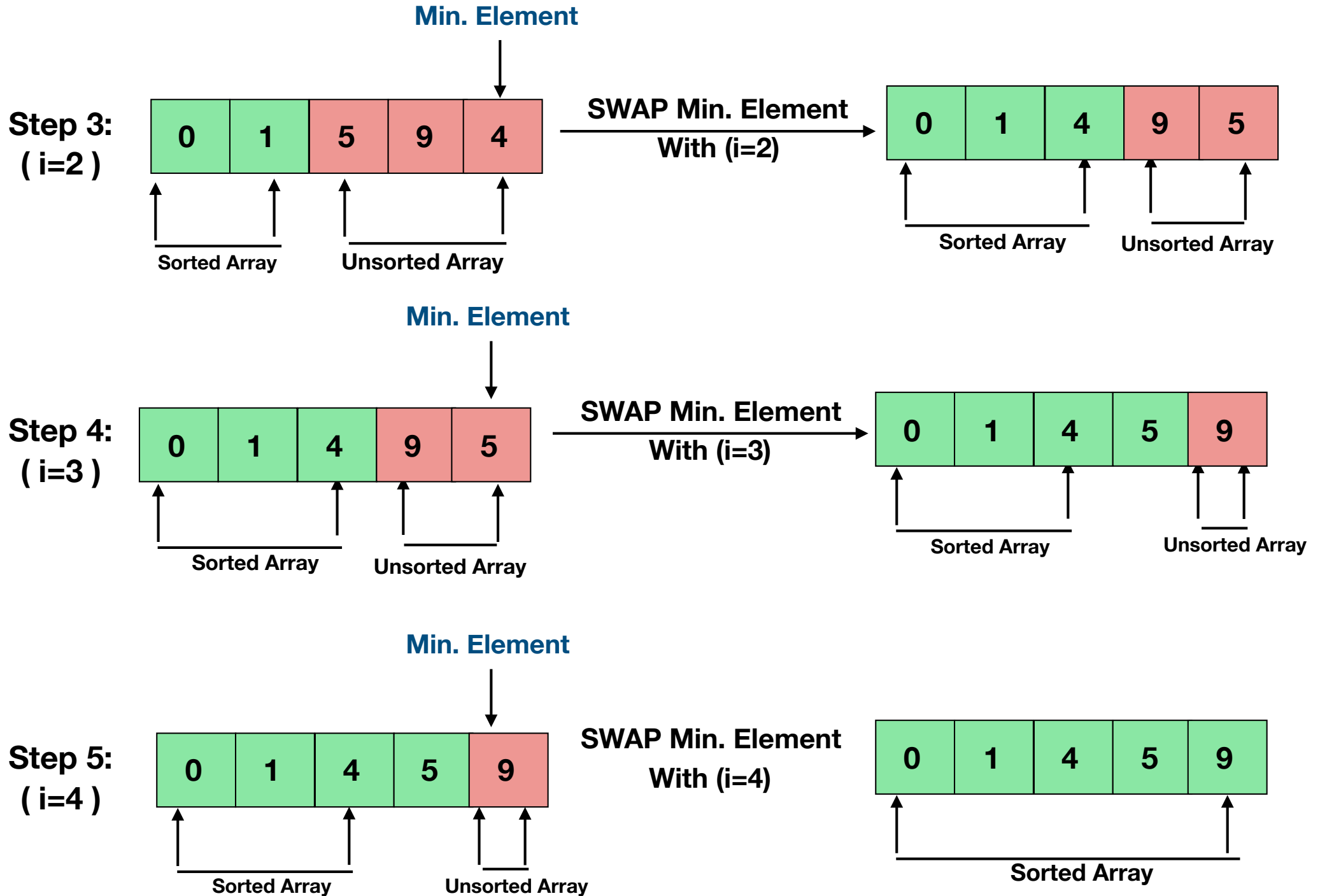
SELECTION SORT

UNSORTED ARRAY :-

4	9	5	1	0
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SELECTION SORT



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TIME COMPLEXITY

1) Time Complexity = $O(n^2)$

To Find the minimum element among N elements N-1 Comparison Required

Now we swap With respective Elements

Here, none of time is taken

Now, After swapping the size of unsorted array
reduces to N-2 , then N-3 and so on

Therefore, Complexity is :-

$$(N-1) + (N-2) + (N-3) + \dots + 1 = [N * (N-1)] / 2 = O(N^2)$$

Home Work Question :-

25	11	9	2	55	4	26	7
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SORT this Array By using SELECTION SORT

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Hello World

*“ If you feel any problem then comments in my video
I will reply as soon as possible “*

- Prince Agarwal