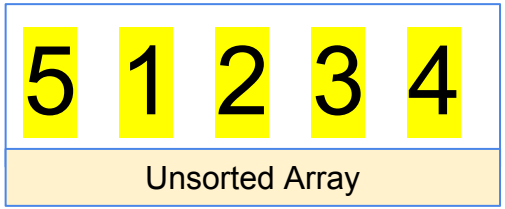
Tinker Academy

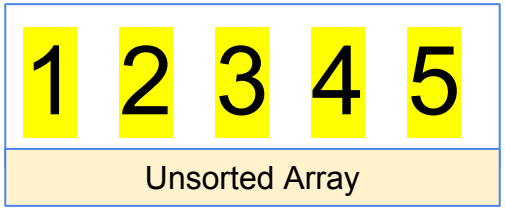
Programming Using Java
(Bubble Sort)

Spring 2015

Bubble Sort

Simple Sorting Algorithm

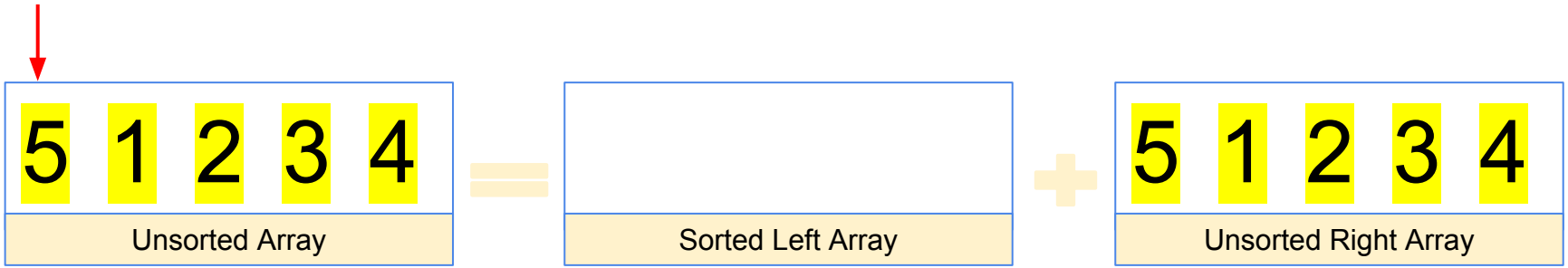




Sorting is "slow", which means it takes more cpu time to complete sort

Bubble Sort

Sorts array progressively from left to right using Pivot

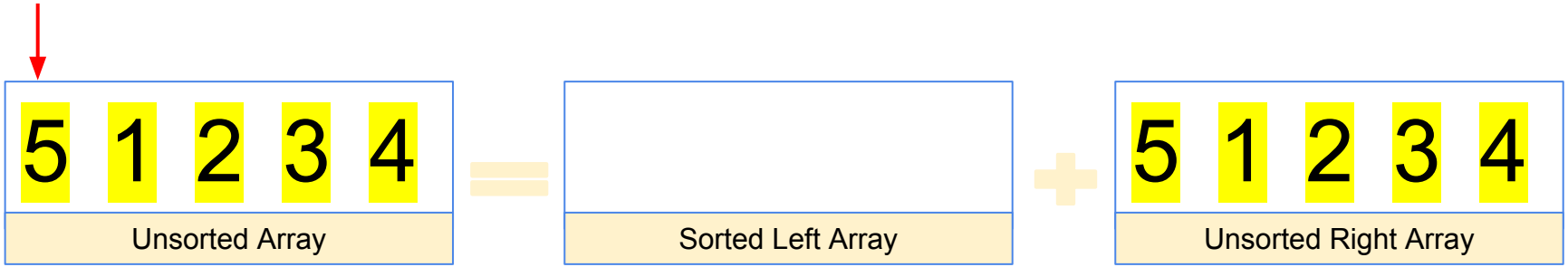


Pivot divides the array into 2, a sorted left subarray, unsorted right array

Pivot at index 0 divides array into empty left subarray, full right subarray

Bubble Sort

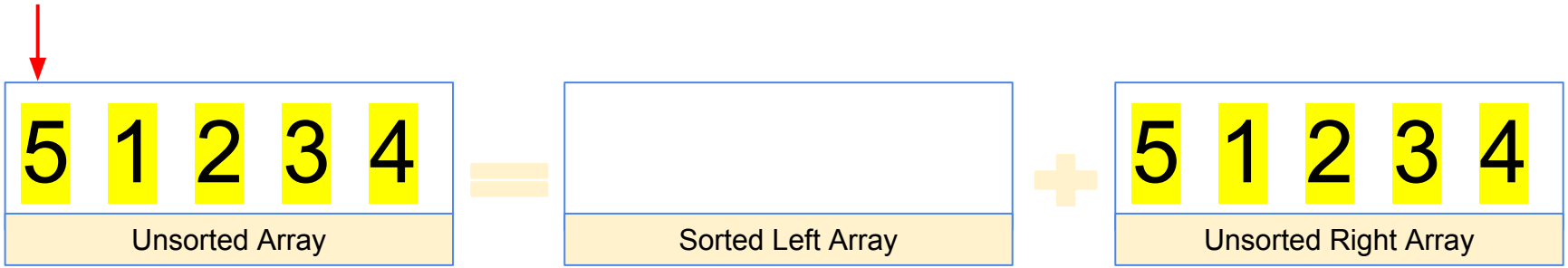
Bubble Sort first ensures left subarray always sorted



When Pivot at index 0, left subarray is empty and is sorted by definition

Bubble Sort

Bubble Sort next ensures item at pivot index is lowest in right subarray

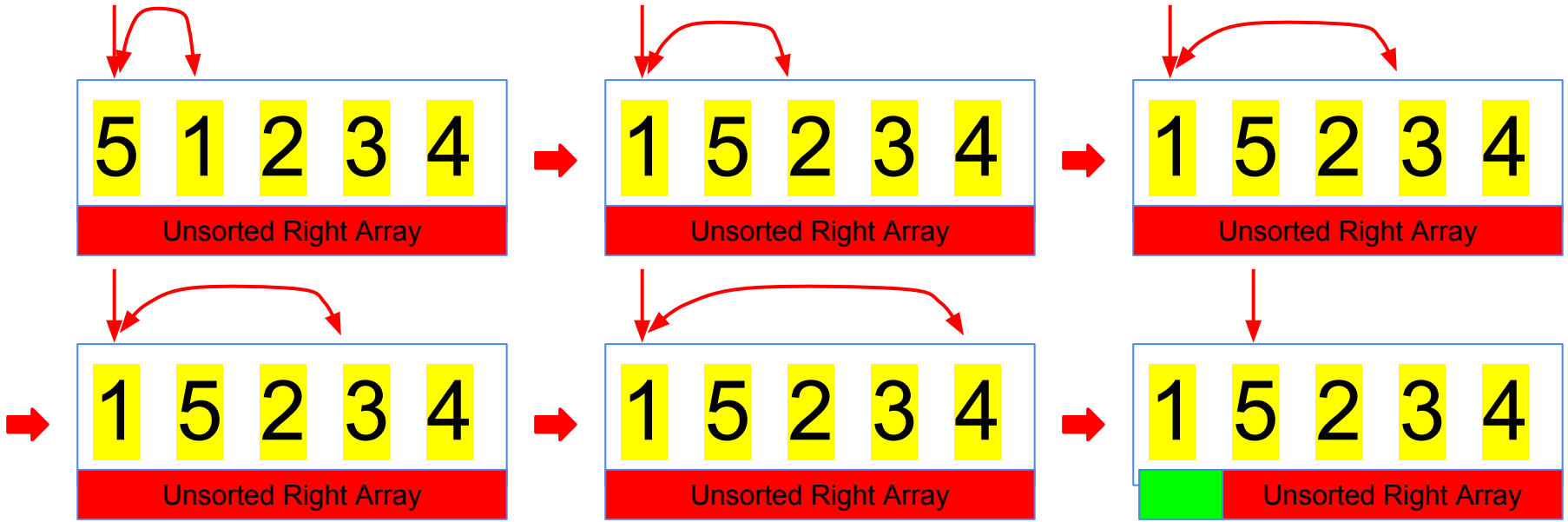


Bubble Sort compares each item to right of Pivot with pivot item

Swaps items if items to right of Pivot < Pivot Item

Bubble Sort

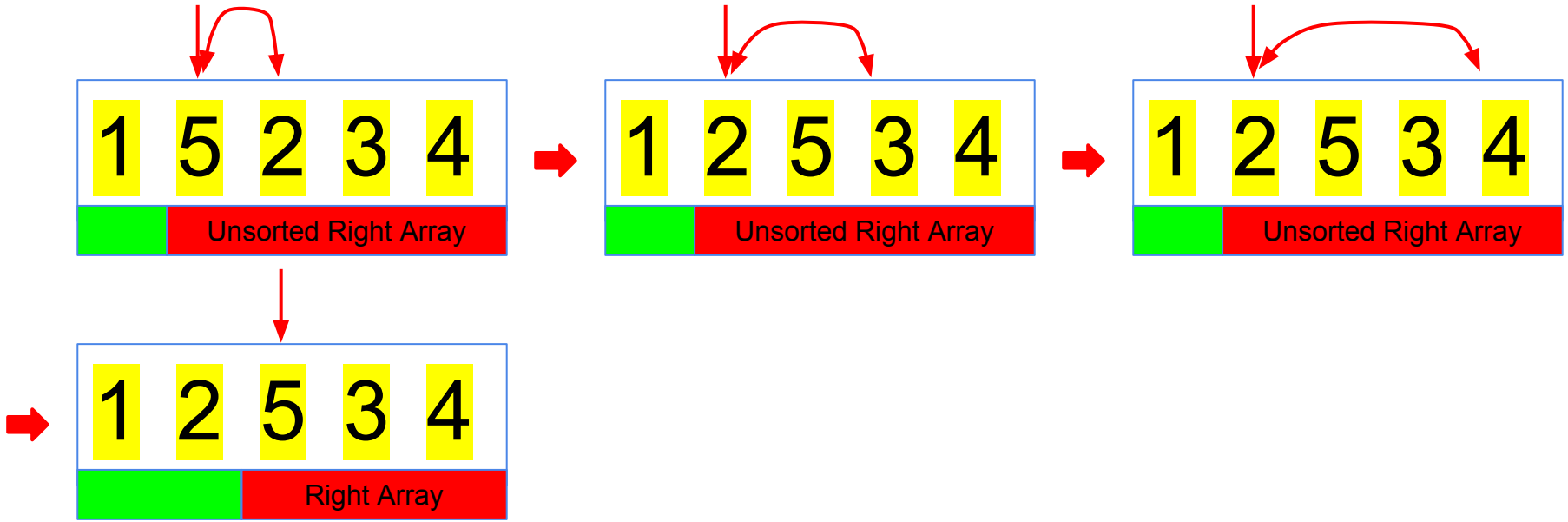
Bubble Sort next ensures item at pivot index is lowest in right subarray



Swaps item if item to right of Pivot < Pivot Item

Bubble Sort

Pivot index is increased and process continues until end of array



Swaps item if item to right of Pivot < Pivot Item

Bubble Sort

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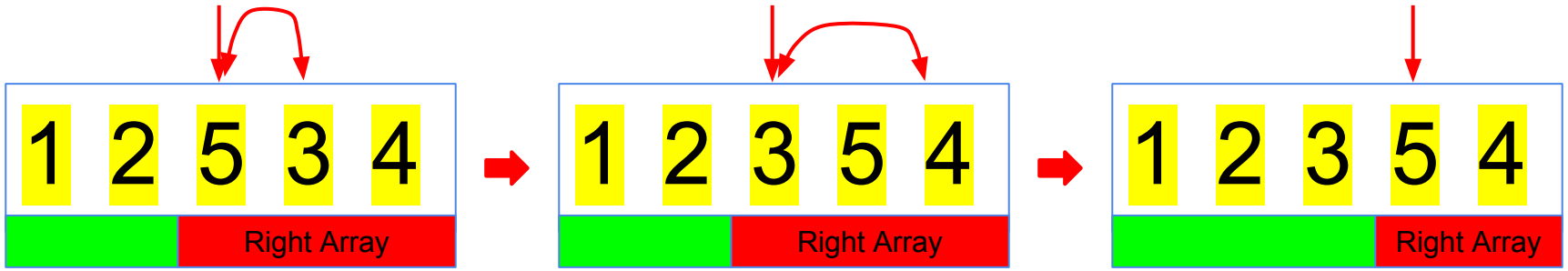

Swaps item if item to right of Pivot < Pivot Item

Bubble Sort

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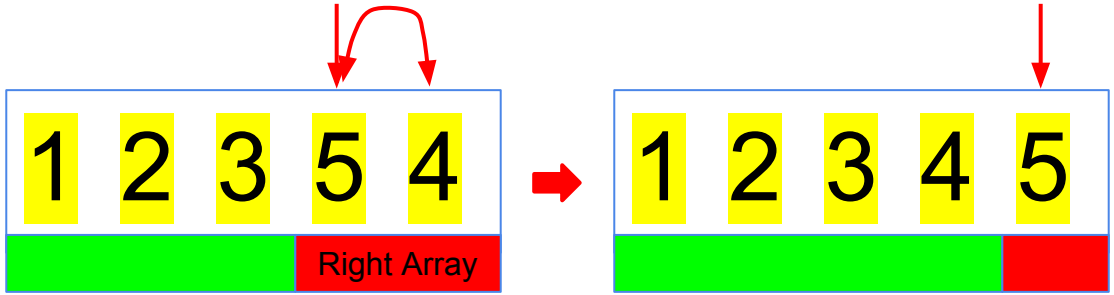
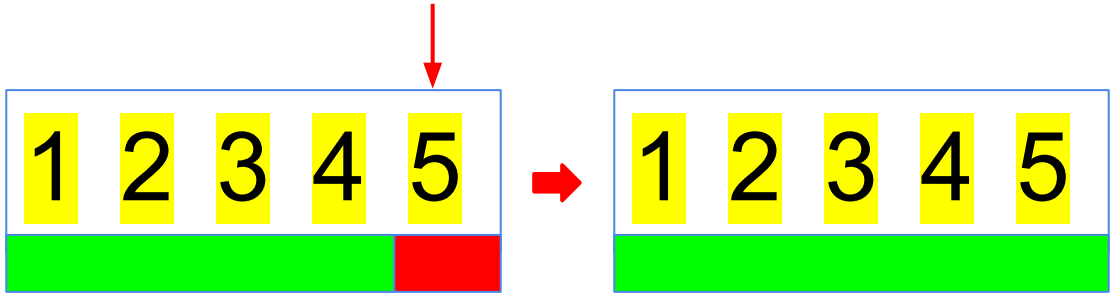


Swaps item if item to right of Pivot < Pivot Item

Bubble Sort

Pivot index is increased and process continues until end of array



Final Sorted Array

Swaps item if item to right of Pivot < Pivot Item