JAVA 기초

정렬 & 탐색

스마트인재개발원
나 예 호

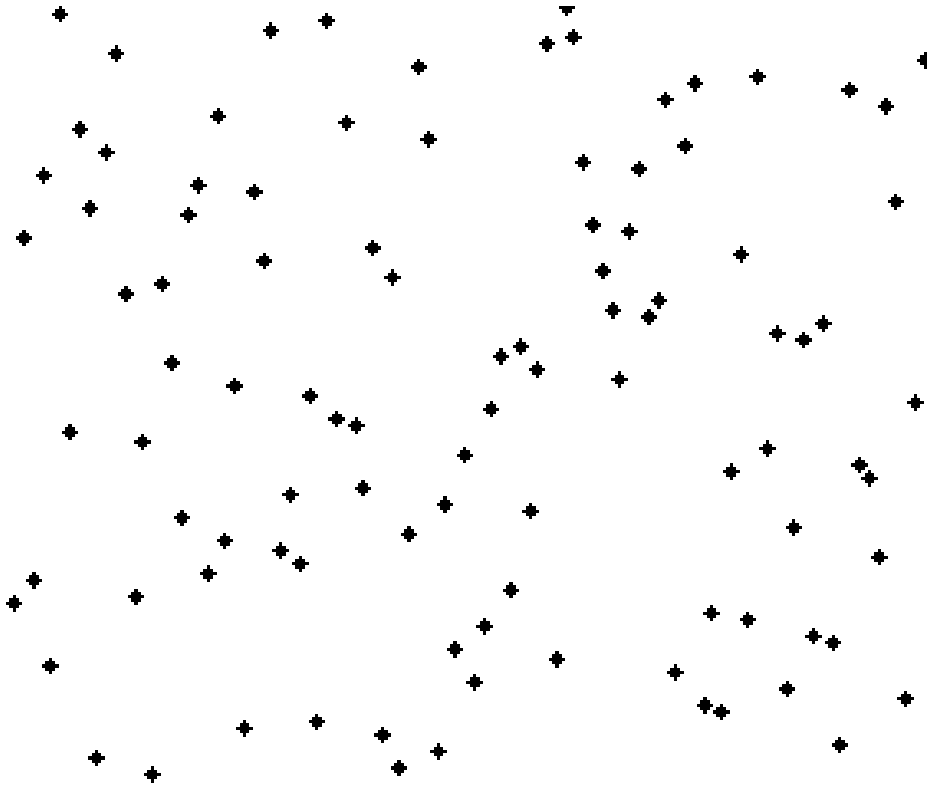
정렬 알고리즘

원소들을 일정한 순서대로 열거하는 알고리즘

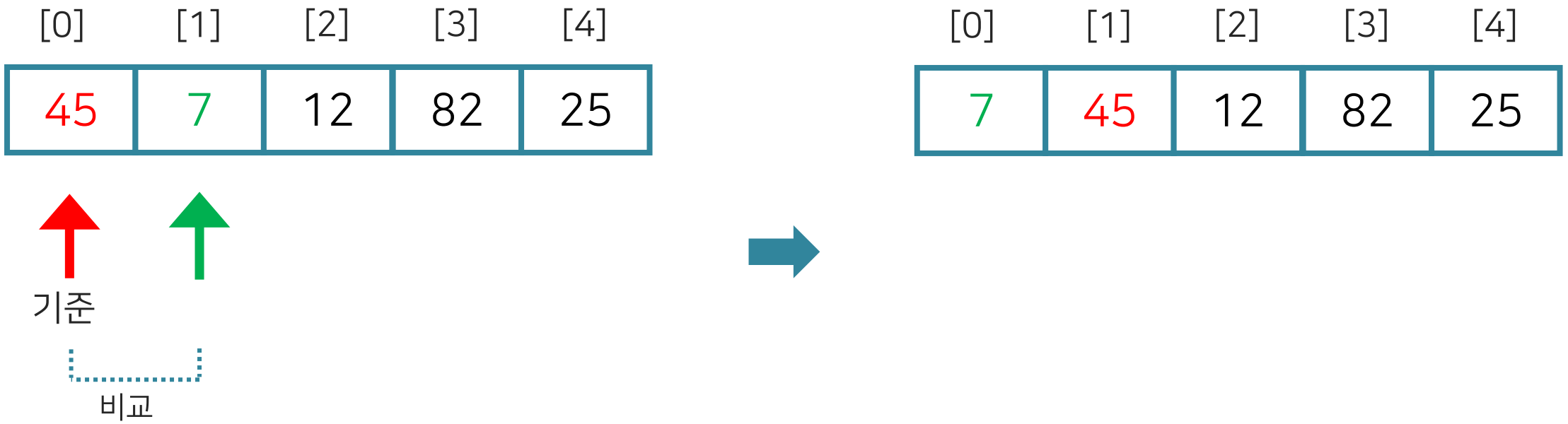
Bubble sort

두 인접한 원소를 비교하여 정렬하는 방법
속도는 느리지만 코드가 단순하다.

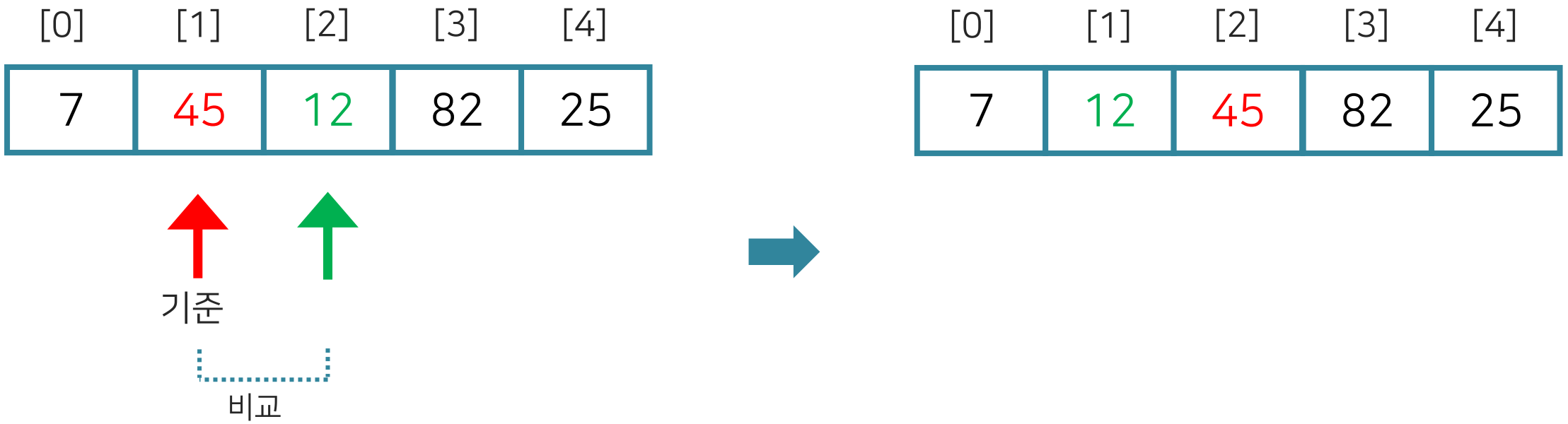
Bubble sort



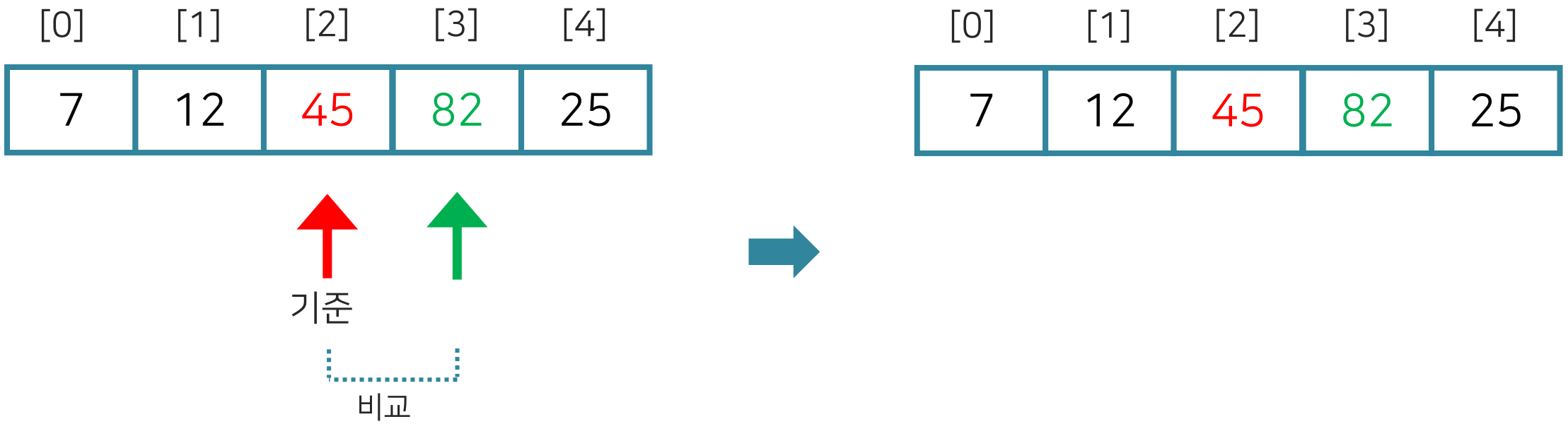
Bubble sort(오름차순)



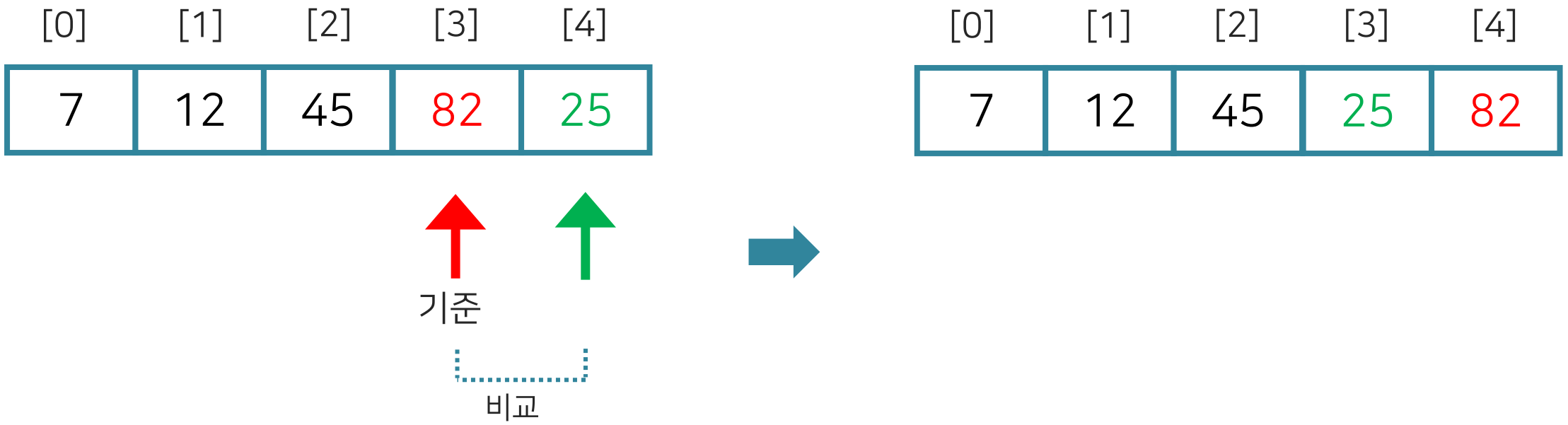
Bubble sort(오름차순)



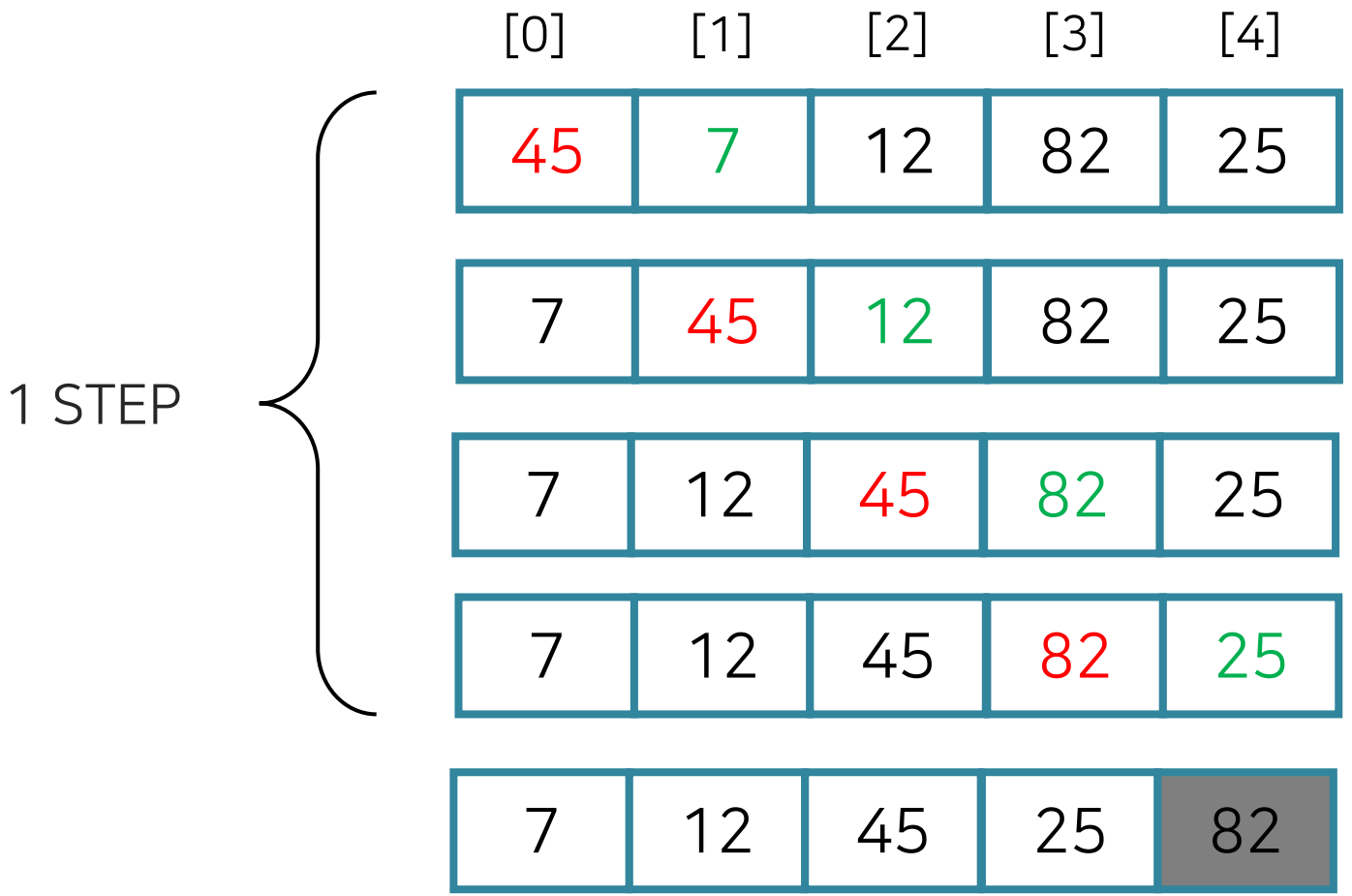
Bubble sort(오름차순)



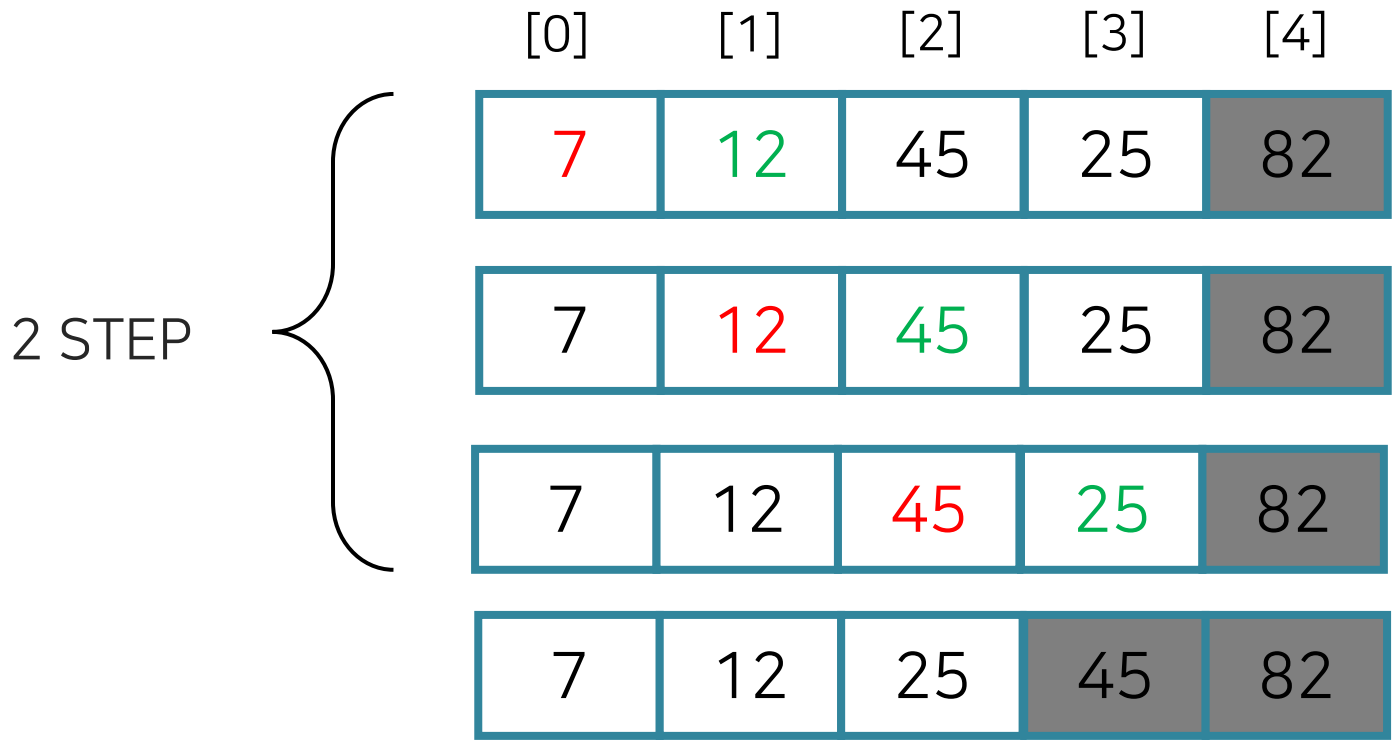
Bubble sort(오름차순)



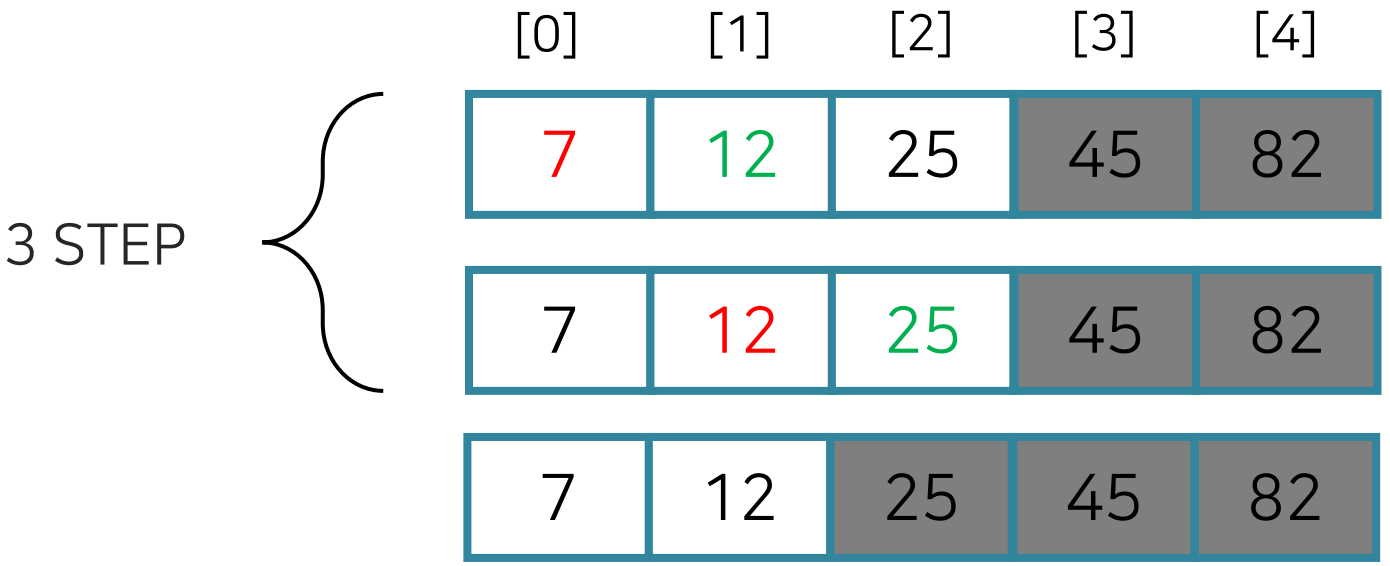
Bubble sort(오름차순)



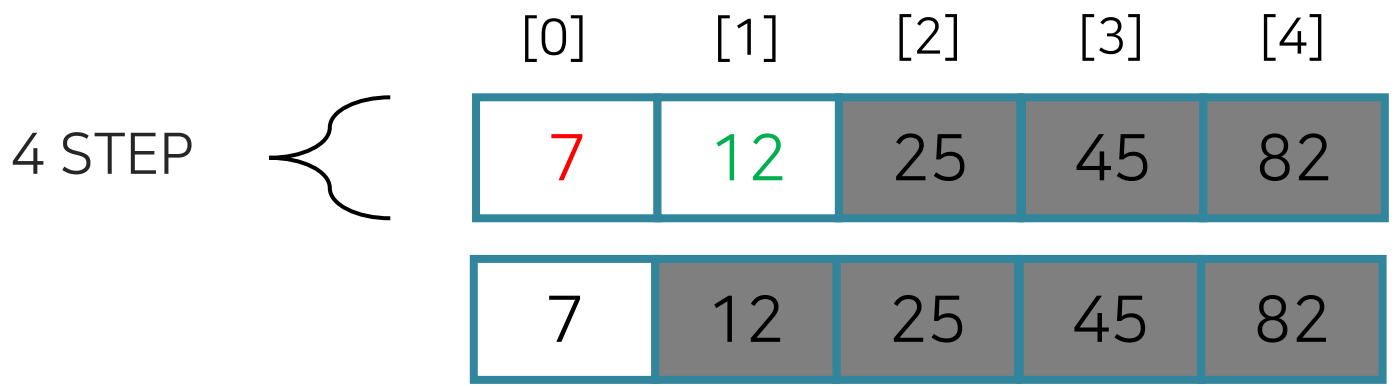
Bubble sort(오름차순)



Bubble sort(오름차순)



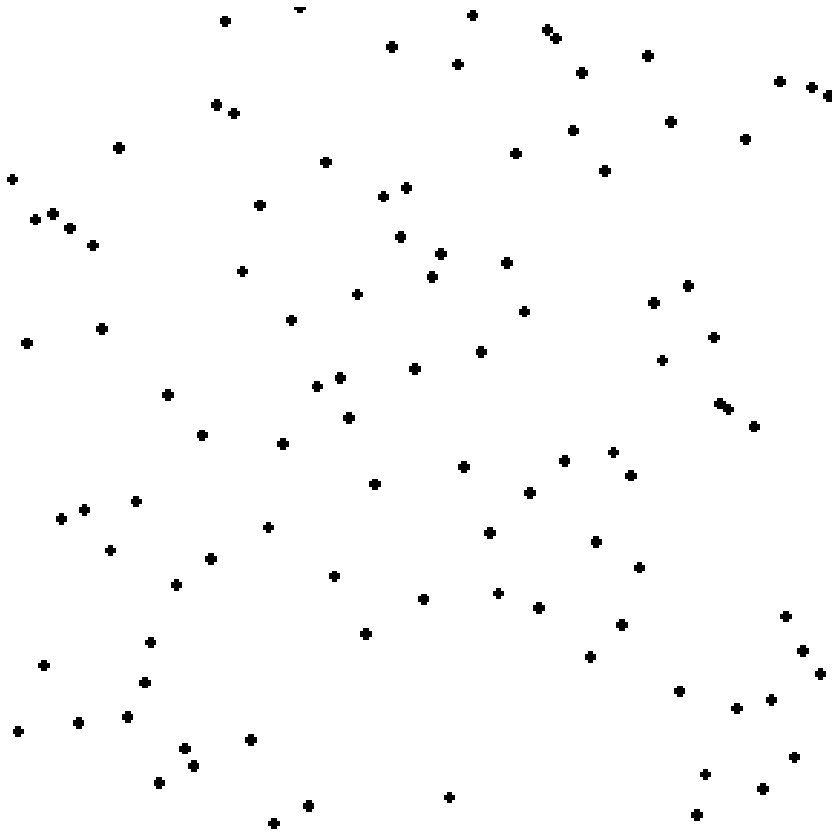
Bubble sort(오름차순)



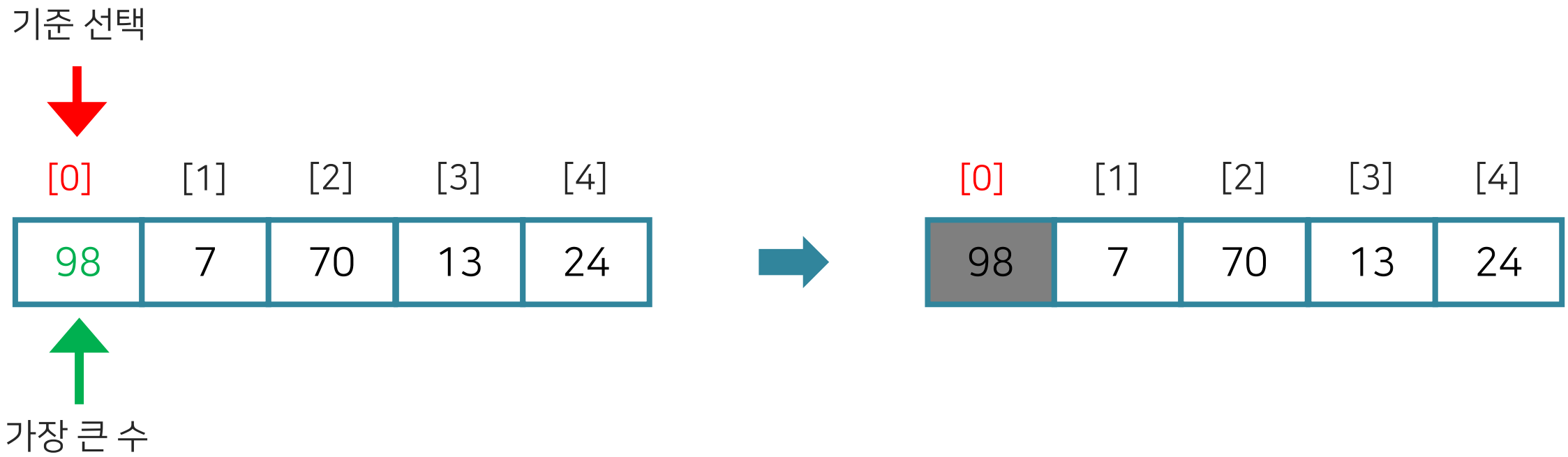
Selection sort

가장 큰 원소 또는 작은 원소를 찾아
주어진 위치(리스트 처음~끝)를 교체해 나가는 정렬 방법

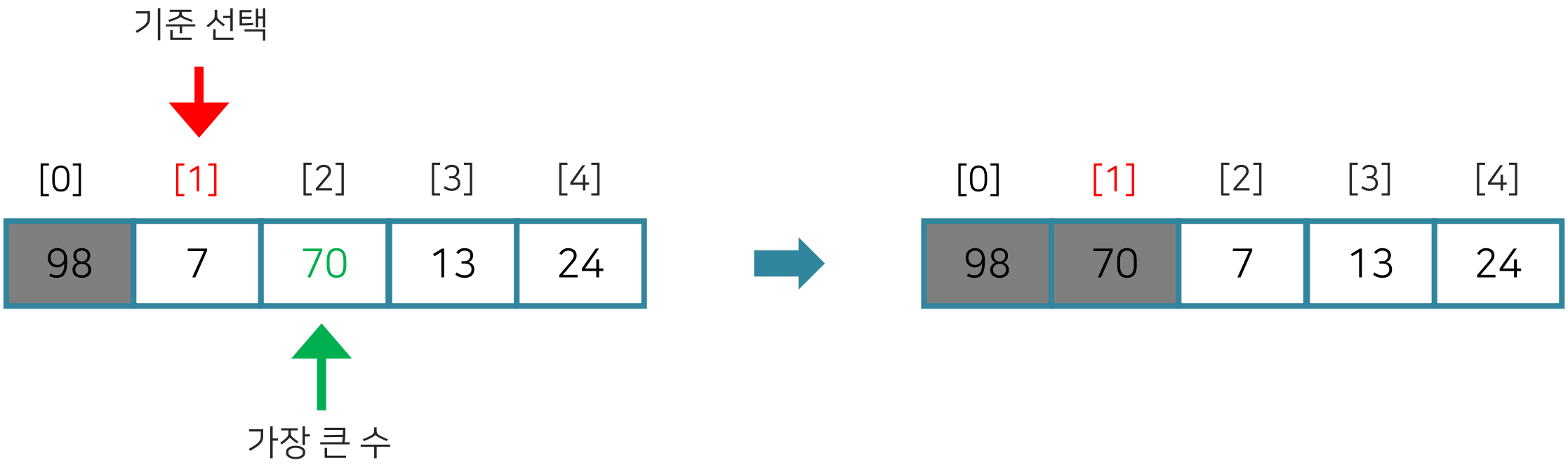
Selection sort



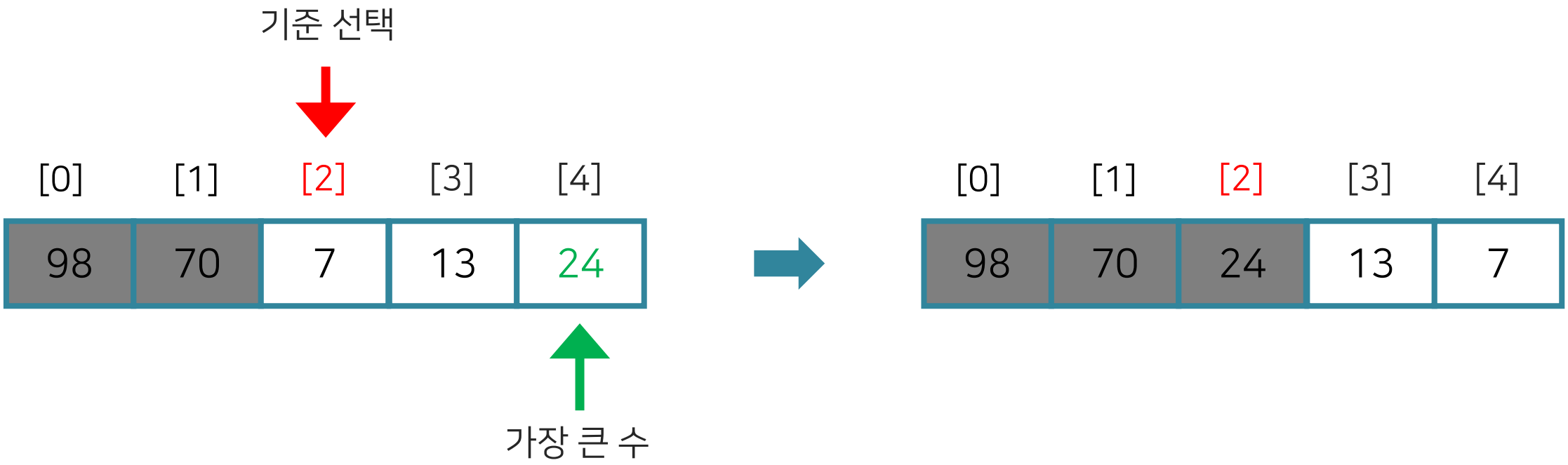
Selection sort(내림차순)



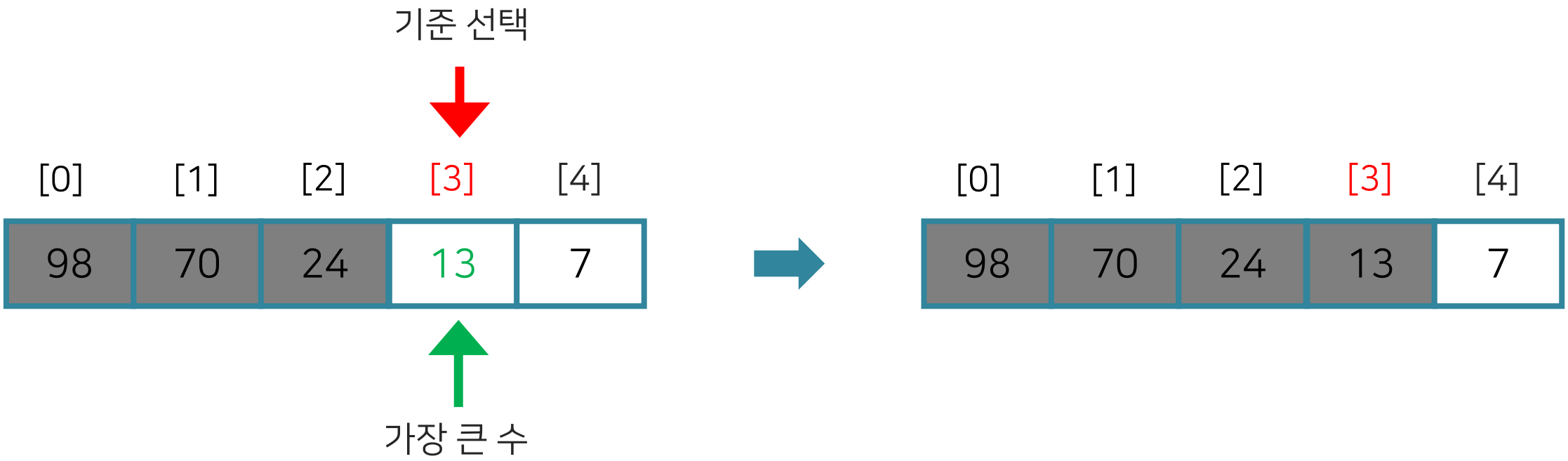
Selection sort(내림차순)



Selection sort(내림차순)



Selection sort(내림차순)



검색 알고리즘

특정 원소를 검색하는 알고리즘

Sequential search

가장 단순한 검색 방법으로 원소의 정렬이 필요 없다.
하지만 리스트 길이가 길면 비효율적

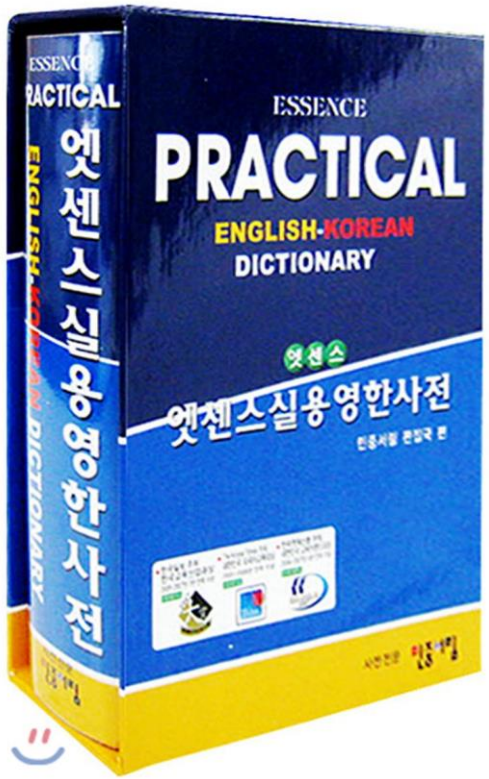
Sequential search

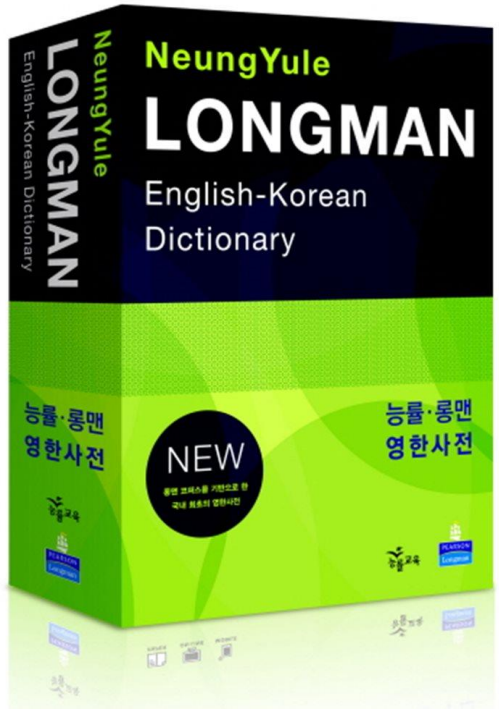
처음부터 끝까지 순차적으로 비교

Binary search

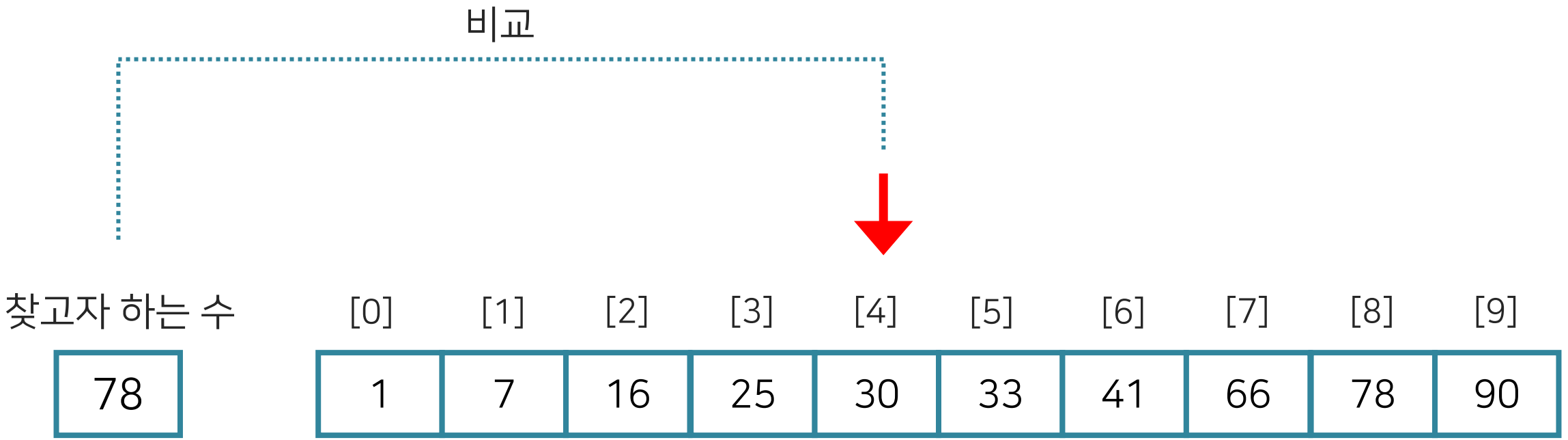
리스트의 중간 값을 정해 크고 작음을 비교해
검색하는 알고리즘 정렬된 리스트에 사용 할 수 있다.

Binary search



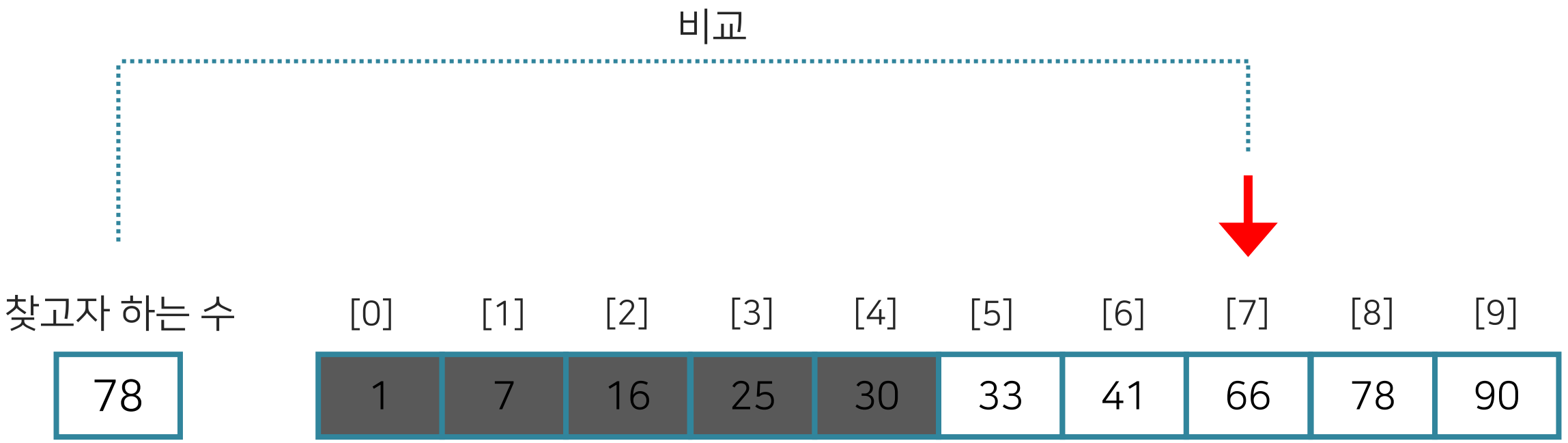


Binary search



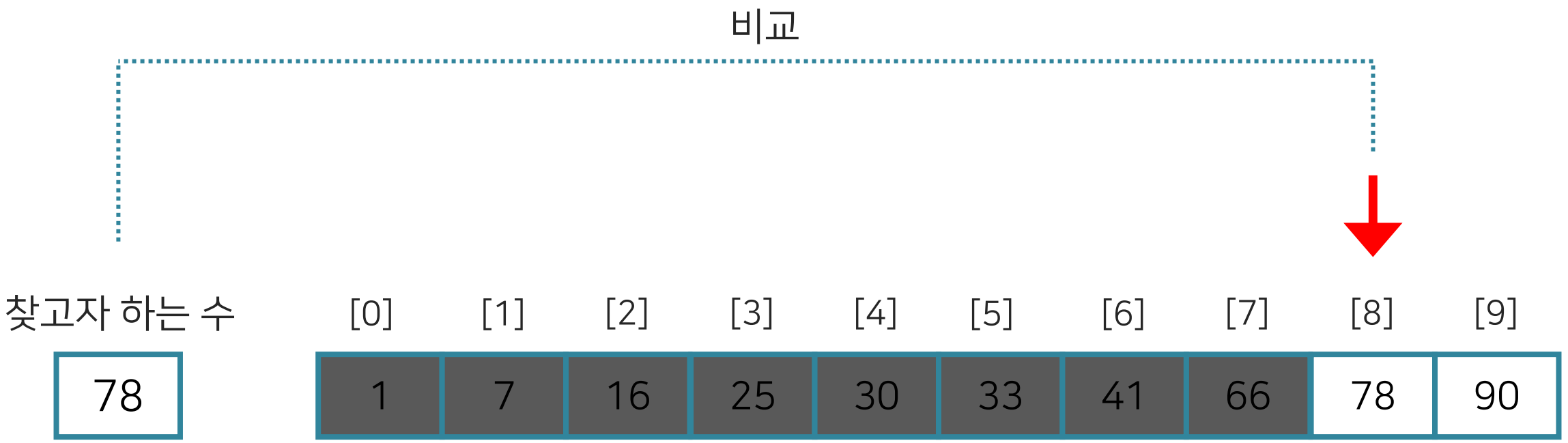
lowIndex = 0, highIndex = 9

Binary search



lowIndex = 5, highIndex = 9

Binary search



lowIndex = 8, highIndex = 9

자바

감사합니다.