

# Algorithm

## ↳ Search

↳ linear search → used with Array not sorted  
ex

50	17	8	10
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↳ Binary search → used with sorted Array

↳ start = 0

↳ end = size - 1 = 5

loop (Condition)

$$\rightarrow \text{mid} = \frac{\text{start} + \text{end}}{2} = 3$$

Arr[mid] == value

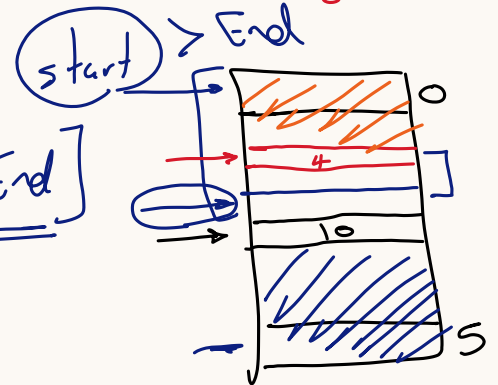
✓

Arr[mid] > value

end = mid - 1

Arr[mid] < value

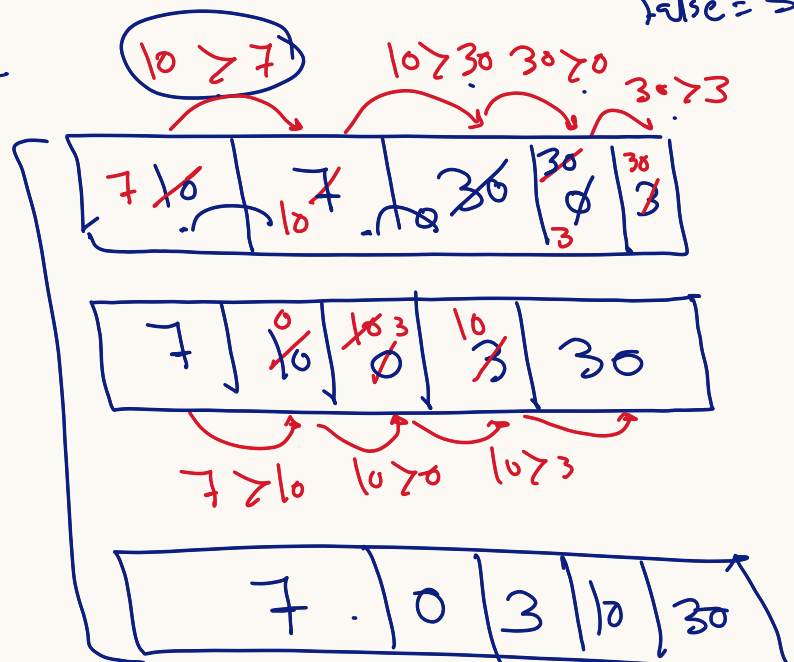
start = mid + 1



## ↳ Sort Algorithm

### ↳ Bubble Sort

↳ ordered element



True = swap  
False = stay

① int Arr[5];

for (x=0; x < size; x++)

{

for (i=0; i < size-1; i++)

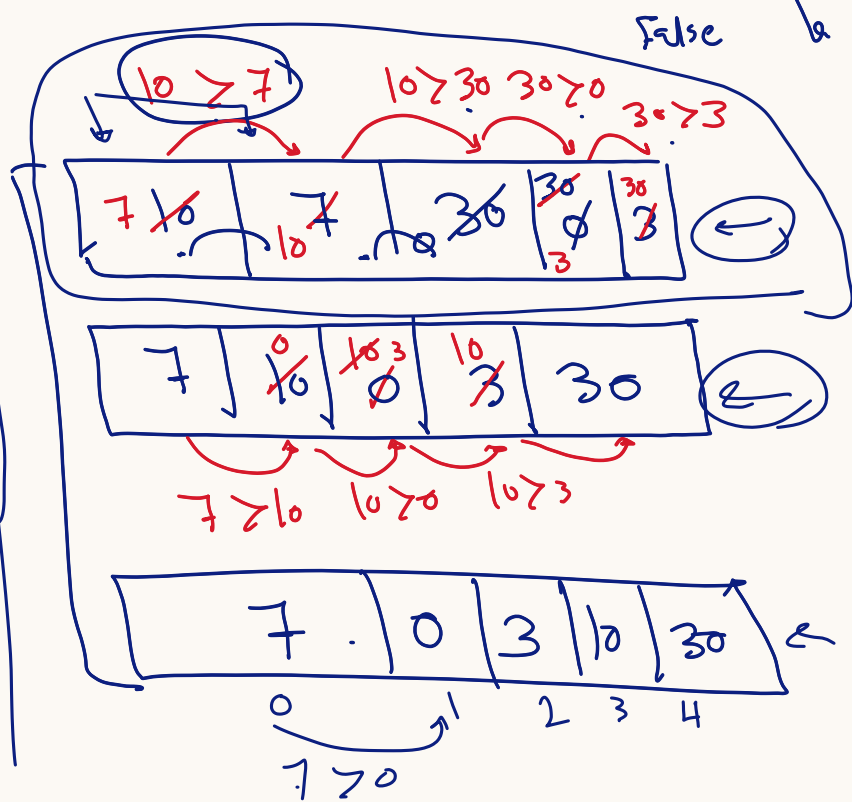
{ if (Arr[i] > Arr[i+1])

{ swap → Compare

}

}

nested loop



Swap Con cert

int x = 7;

int y = 20;

→ int temp;

temp = x;

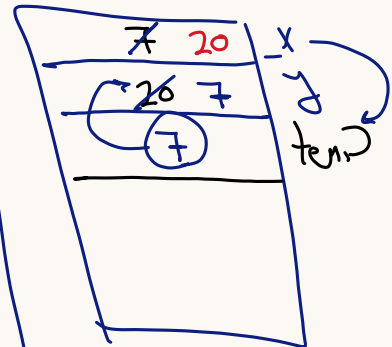
x = y;

y = temp;

temp = x;

x = y;

y = temp;



if (Bubble Arr[inner] > Bubble Arr[inner+1])

temp = Bubble Arr[inner];

Bubble Arr[inner] = Bubble Arr[inner+1];

Bubble Arr[inner+1] = temp;