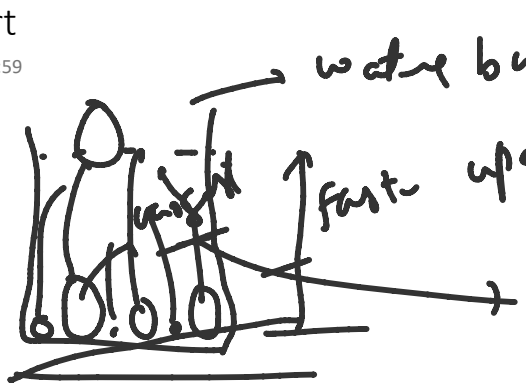
Bubble Sort

15 June 2023 20:59



den(air) < den(wat)

force → acc → speed & fast.

arr = | 9 | 5 | 4 | 3 | 2 | 1 |
0 1 2 3 4 5

n = 6

from i = 0.
i = n - 2

adjacent elements compare

compare[i] with arr[i+1]

if arr[i] > arr[i+1]

swap(arr[i], arr[i+1]) i.e.

[0, 4] ⑥

i = 0 1 2 3 4 ⑤

5, 9, 9, 3, 2, 1

5, 4, 9, 3, 2, 1 → 5, 4, 3, 9, 2, 1

5, 4, 3, 2, 9, 1 → 5, 4, 3, 2, 1, 9

sorted

arr = | 5, 4, 3, 2, 1, 9 |

arr = | 5, 4, 3, 2, 1, 9 |

i = 0
adjacent elements comp.

swap arr[i] arr[i+1]

5 > 4 ✓

→ 4, 5, 3, 2, 1, 9

5 > 3 ✓

4, 3, 5, 2, 1, 9 ✗

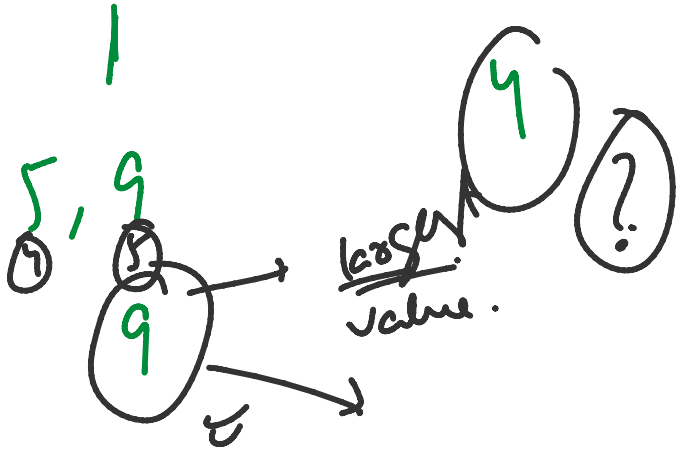
5 > 2 ✓

4, 3, 2, 5, 1, 9 ✗

5 > 1 ✓

4, 3, 2, 1, 5, 9

5 ✗



for → 1st largest j = [0 → n-2]

for 1st largest

[0, n-1) → 1st
[0, n-2) → 2nd ______
[0, n-3) 3rd ______

[0 → n-3]
[0 → n-4]

```
for (int i=0; i<n-1; i++)
{ for (int j=0; j<n-i-1 ; j++ )
    { if (arr[j] > arr[j+1])
         swap(arr[j], arr[j+1]
    }
}
```

[0, 5] → including 0 & 5 both

[0, 5) → ______ 0 but not 5

(0, 5] → ______ 5 ______ 0.

(0, 5) → excluding both 0 & 5