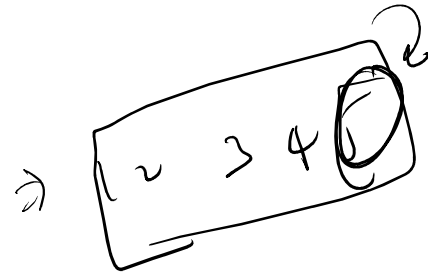
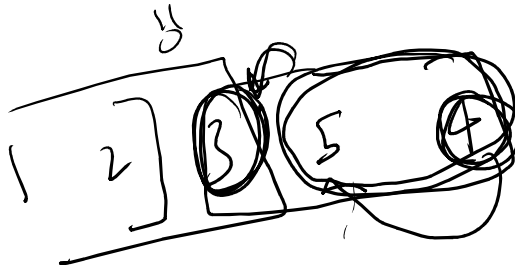
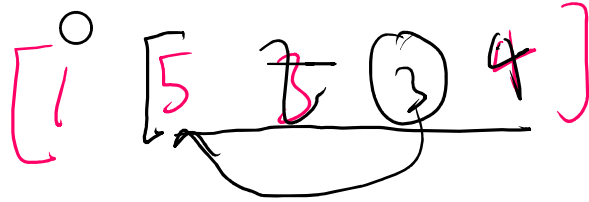
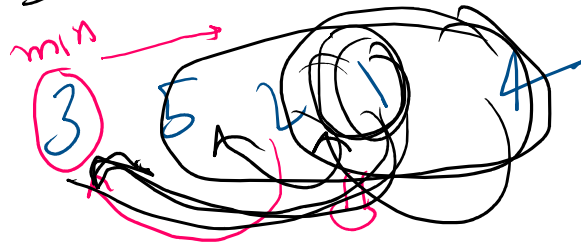


## 1.17 - Sorting

Sunday, September 21, 2025 2:55 PM

### # Selection sort

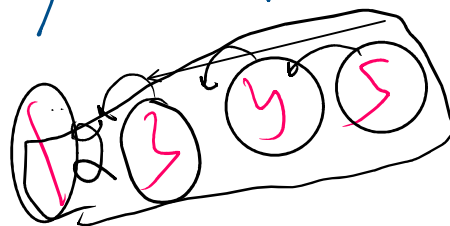


⇒ Best Case T.C  $\Rightarrow O(N^2)$

⇒ Avg Case  $\Rightarrow O(N^2)$

⇒ Worst case  $\Rightarrow O(N^2)$ .

### # Insertion Sort



7 13 15 4 8

→ Best Case  $O(n)$

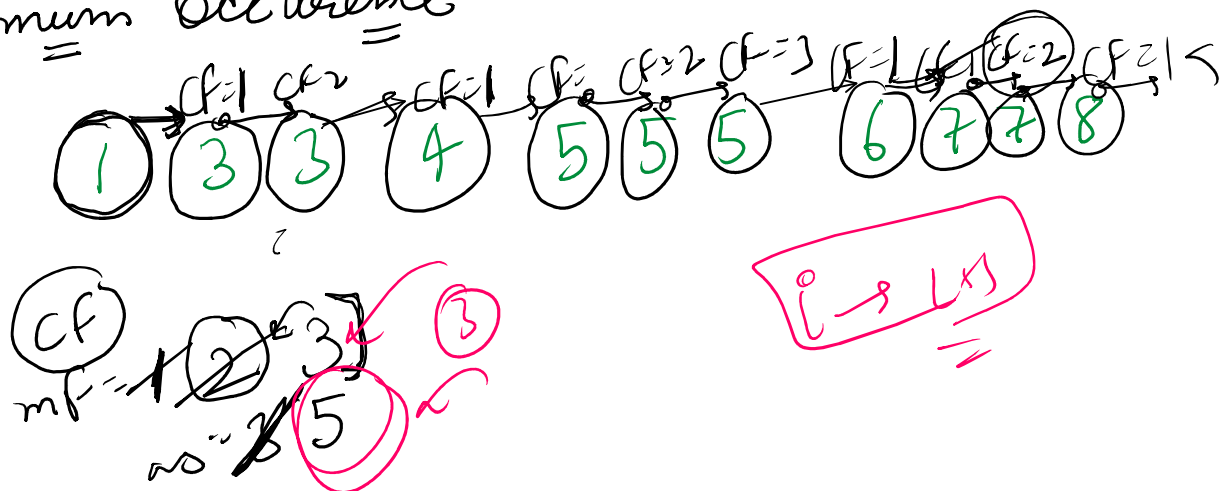
Avg & Worst  $O(n^2)$

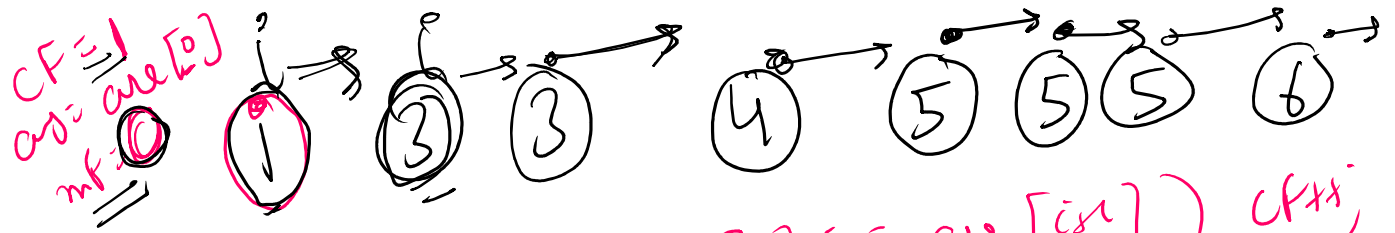
# In built sorts

→  $O(n \log n)$

→ By default strings are sorted in  
lexicographical  
dictionary.

# Maximum Occurrence





mf = ~~0~~ 3  
 ans = ~~1~~ 3 5  
 CF = ~~1~~ 2 3

if (ans[i] == ans[i+1]) CF++;  
 else  
 if (CF > mf) {  
 mf = CF;  
 ans = ans[i];  
 CF = 1  
 }

# Sort an array of 0s, 1s, and 2s :-  
 (1)  
 [DNF ⇒ Dutch National Flag]