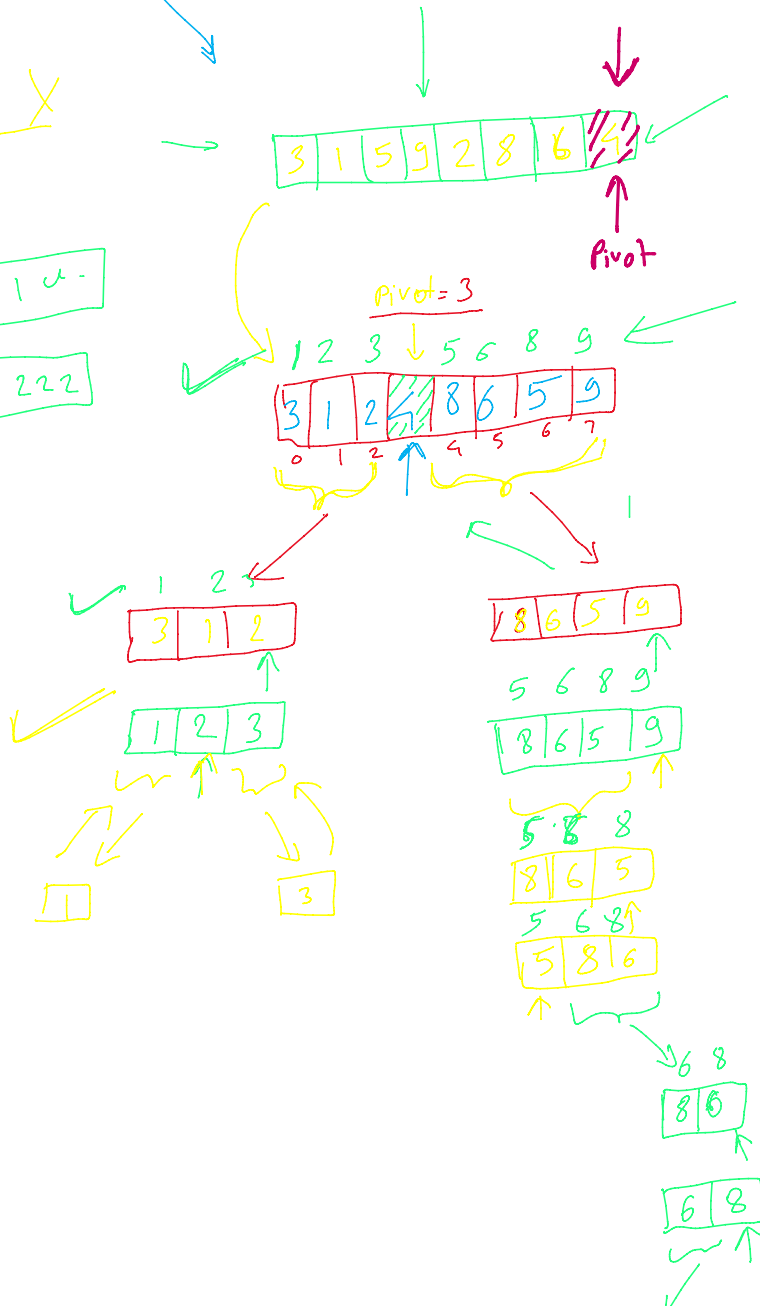


- Selection ~~X~~
- Bubble ✓
- Insertion ✓
- Merge Sort ✓
- Quick Sort

stability -  
time -  
space -  
iterative / recursive -  
Divide & conquer

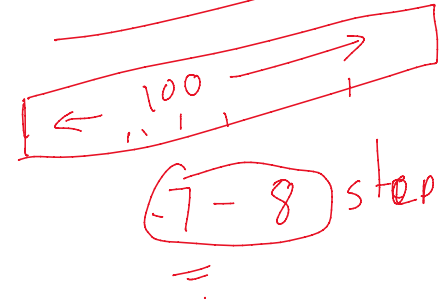
stability X

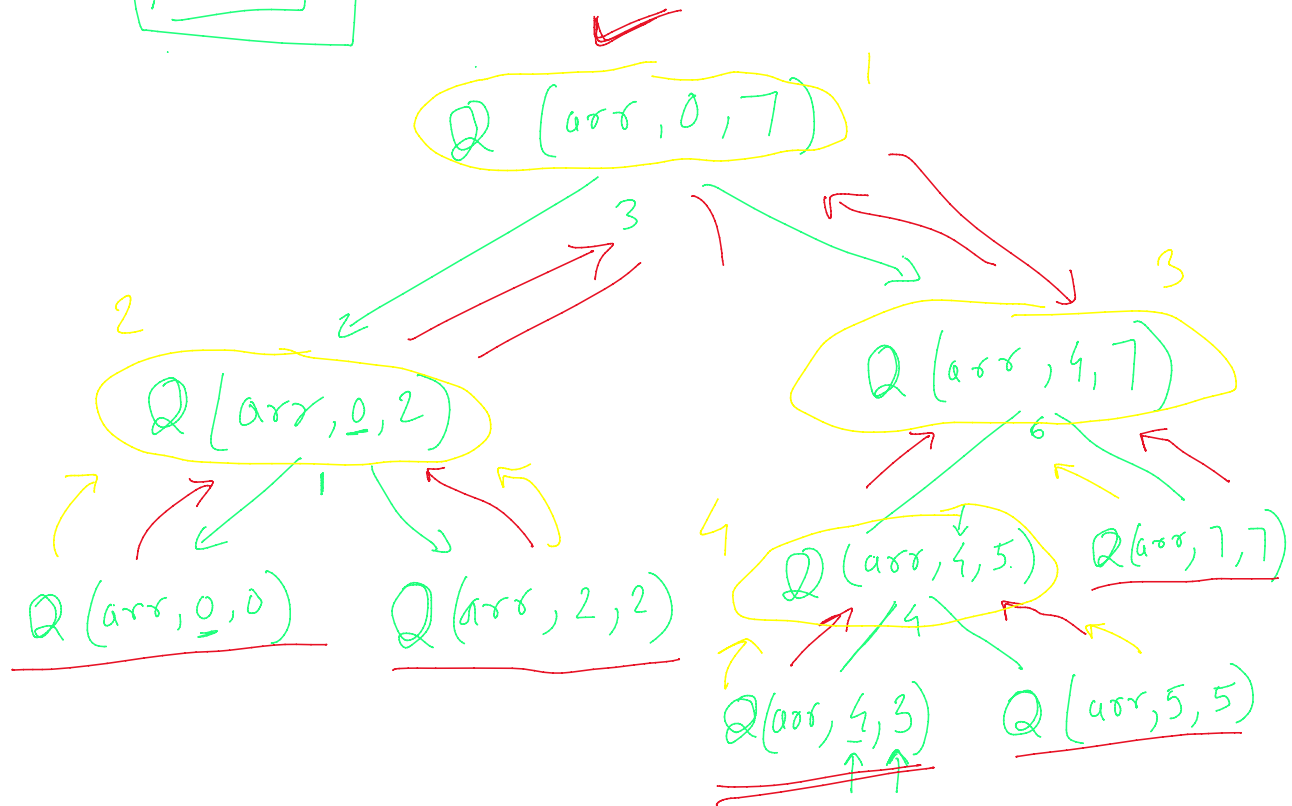
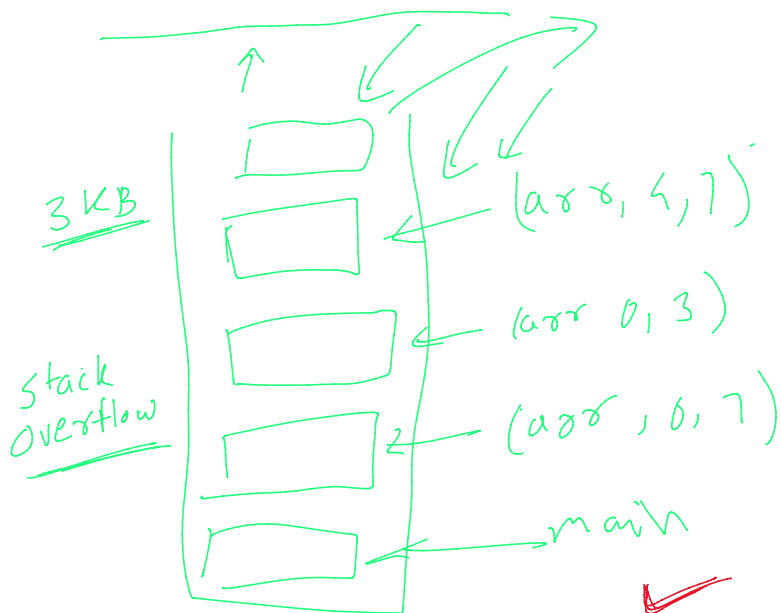
- ✓ 0000 2100
- ✓ 0000 111222



Binary Search

$$O(\log n)$$



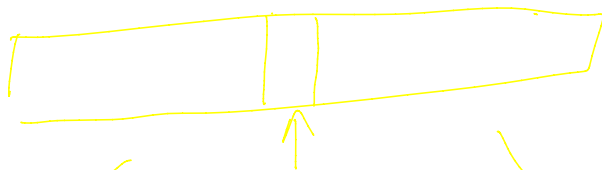


Quick → Avg. →  $O(n \log n)$   
 worse. →  $O(n^2)$

worse  $\rightarrow O(n^2)$

avg Space =  $O(\log n)$

avg

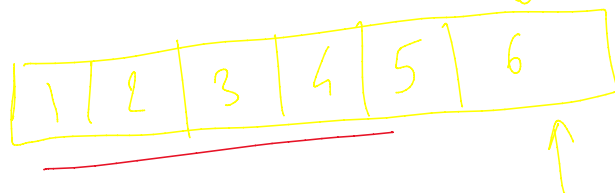
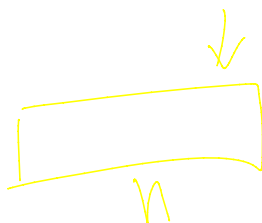


100  
10

$n \log n$  Time

Space  
 $O(n)$

$(n^2)$   
 $O(1)$



$$O(1) \times n = O(n)$$

