Recursion Concepts & Qns

Video 9

"मैं, DSA की शपथ लेता हूँ कि मैं जो पढ़ाऊंगा बहोत अच्छे से पढ़ाऊंगा।"

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Motivation
(भाषण)

"Setting a goal for each day or week will help you measure your Progress & give you a sense of accomplishment"

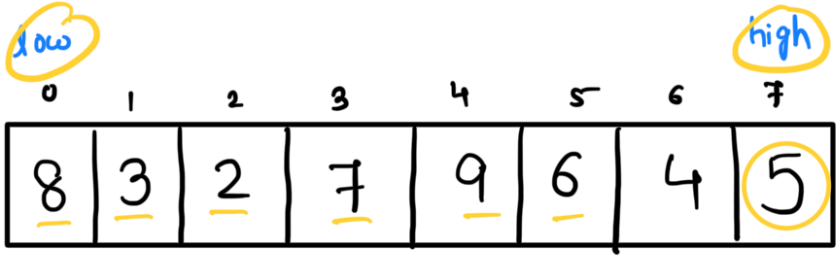
confidance ...

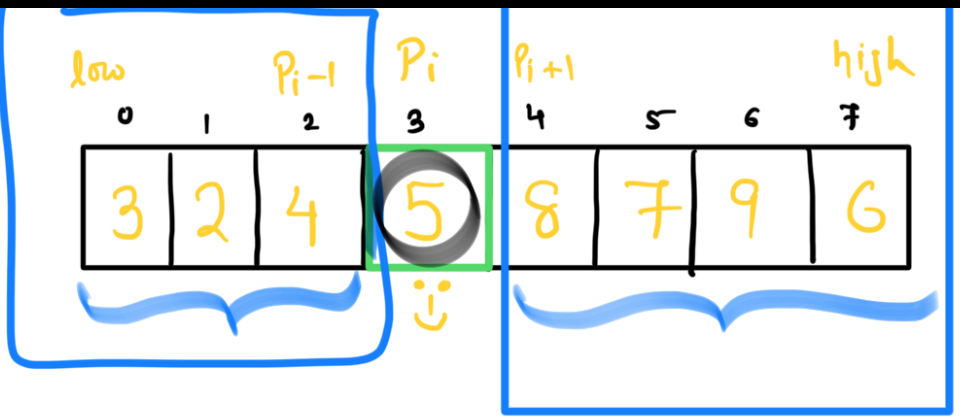
#codestorywithMIK ...

Quick Sort

First of all, what does Quick Sort instructs us to do ???

1. Pivot Selection
2. Partitioning
3. Recursion ← यही तो पढ़ना है।





(low , Pi-1)

(Pi+1 , high)

```
                                    0       n-1
void QuickSort (arr , low,  high) {
    if (low > high) {
        return ;
    }
```

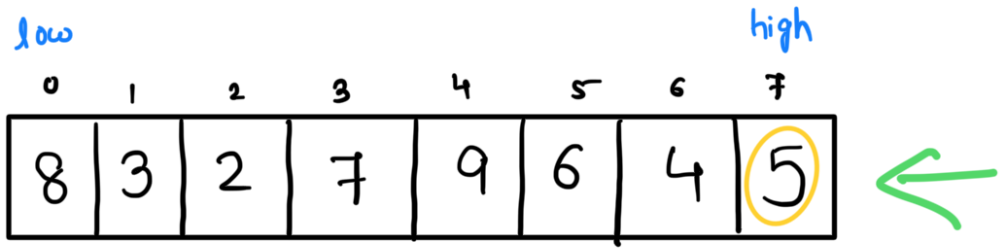
O(n) ⇐ Pi = Partitioning (arr, low, high);

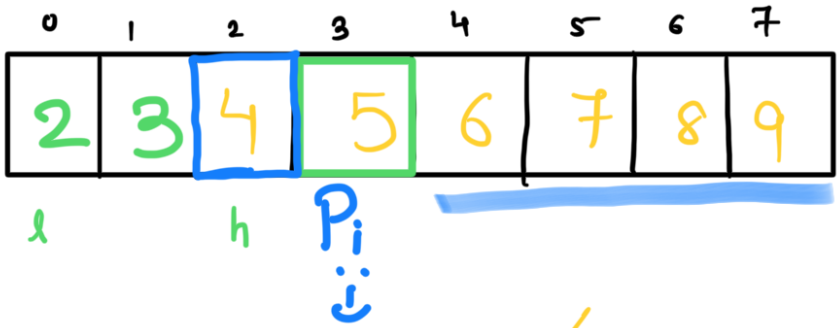
Trust

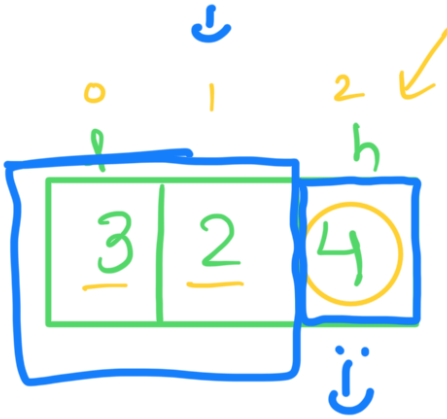
```
    QuickSort (arr, 0 low, 2 Pi-1) ; ⇐
    QuickSort (arr, Pi+1, high) ; ⇐
```

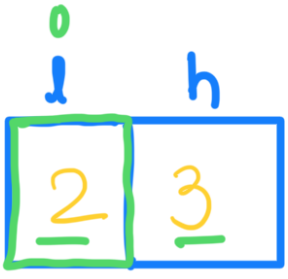
}

Partitioning :-



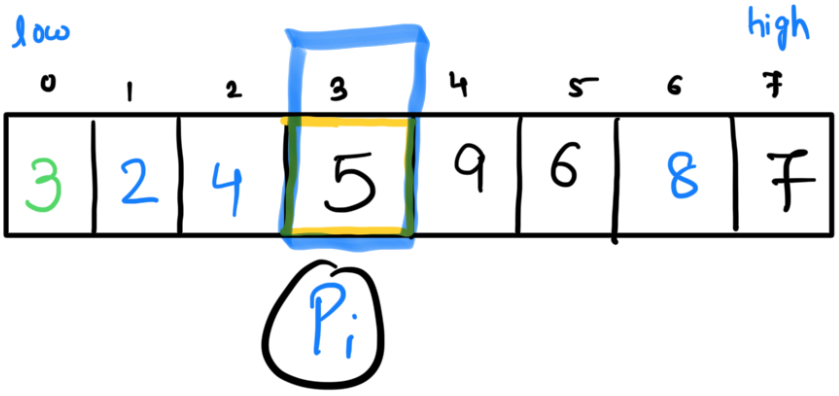






Partitioning Code :-

(No need to memorise)
(understand intuition)




```
Pivot = arr[high] ; //5
Pi    = 0 ;
for (i = low ; i < high ; i++) {->O(n)
    if (arr[i] < Pivot) {
        swap (arr[Pi] , arr[i]);
    }
}

swap ( arr[Pi] , arr[high]);

return Pi ;
}
```