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Paper contains Quick Sort.

Quick Sort

Pivot

[3] 1 4 1 5 9 2 6 5 3 5 8 9

i i ← swap → j j

3 1 2 1 5 9 4 6 5 3 5 8 9

i j i j

Because i > j → swap

[1 1 2] 3 [5 9 4 6 5 3 5 8 9]

Pivot

[5] 9 4 6 5 3 5 8 9

i ← swap → j j

5 3 4 6 5 9 5 8 9

i j i j

Because i > j → swap

4 3 [5] 6 5 9 5 8 9

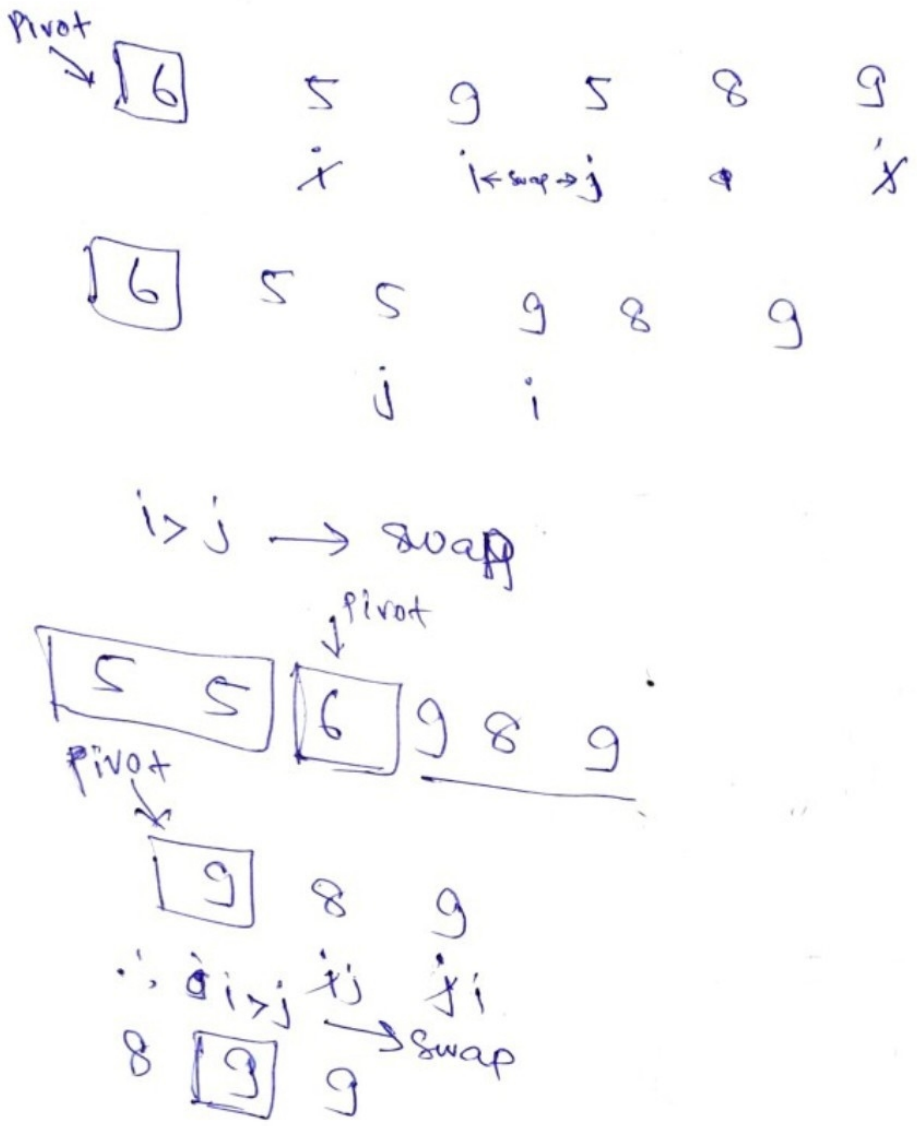
Pivot

[4] 3

i j i

i > j → swap

3 4



Sorted

1 1 2 3 3 4 5 5 5 6 8 9 9

#write a program to implement Quick sort by Python language used.

```
def
    Pivot_Loc[list1, first, last]:
    Pivot = list1[first]
    left = first+1
    right = last
    While True:
    While left <= right and left1[left] <=Pivot:
        left = left+1
    while left <= right and list1[right] >= Pivot:
        right = right-1
        if right < left:
        break
        else
    List1[left], left1[right] = list1[right], left1[left]
list1[first], list1[right] = list1[right], list1[first]
    return right
```

```
def quick_sort(list1, first, last):
    if first<last:
    p= pivot_loc(list1, first, last)
    quick_sort (last1, first, p-1)
    quick_sort(last1, p+1, last)
# main
list1=[]
n= int(input(" Enter list length"))
Print(" Enter numbers :")
for i in range(n):
    data =int (input())
    list1. append(data)
quick_sort(list1, 0, n-1)
Print(list1)
```