Array Partitioning

```
def arrayPartitioning(arr,pivot):
    i = 0
    j = 0
    while i<len(arr):
        if arr[i]>pivot:
            i=i+1
        else:
            arr[i],arr[j]=arr[j],arr[i]
            i = i+1
            j = j+1
    return arr
```

Points:

We have regions defined:

1. 0 to j-1 ===> elements less than or equal to pivot

2. j to i-1 ==> elements greater than pivot

3. i to e(though its not that important)===> Unknown area.

Popular question:

1. separate odd and even

2. separate 0 and 1

3. Dutch National Flag algorithm

4. QuickSort

5. Find Kth element in an array which is largest.