Data structures in Java - Day 9

Learned another complex sorting algorithm which is called as quick sort . we basically fix a pivot element as we like and sort the smaller elements and then the larger elements . it’s a complex version of merge sort.

import java.util.Arrays;

public class quicksort

{

public static void main(String[] args)

{

int arr[] = {4,6,1,5,7,3,2,8};

int low = 0;

int n=arr.length;

int high = n-1;

quick(arr,low,high);

System.out.println(Arrays.toString(arr));

}

public static void quick (int arr [] , int low , int high)

{

if(low<high)

{

int partition\_index = partition(arr,low,high);

quick(arr,low,partition\_index-1);

quick(arr,partition\_index+1,high);

}

}

public static int partition(int arr[],int low,int high)

{

int pivot = arr[low];

int i = low;

int j = high;

while(i<j)

{

while(i<=high-1 && arr[i]<= pivot)

{

i++;

}

while(j>=low+1 && arr[j]>pivot)

{

j--;

}

if(i<j)

{

int temp = arr[i];

arr[i]=arr[j];

arr[j] = temp;

}

}

int temp = arr[low];

arr[low] = arr[j];

arr[j]= temp;

return j;

}

}