Data Structures and Algo in Java - Day 8

learned complex sorting technique which is called merge sort.

I might have studied only one topic today but I have thoroughly studied it .

below there is the code for Merge sort.

import java.util.ArrayList;

import java.util.Arrays;

public class mergesort

{

public static void main(String[] args)

{

int arr [] = {42, 7, 89, 15, 63, 28, 91, 34, 76, 53, 12, 99, 5, 68, 37, 82, 24,

59, 47, 31, 97, 1, 70, 20, 88, 14, 55, 3, 64, 40, 19, 78, 6, 92, 50, 35, 80,

27, 45, 11, 95, 21, 9, 66, 32, 86, 57, 23, 74, 98};

int low = 0;

int n = arr.length;

int high = n-1;

merSort(arr,low,high);

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

}

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

{

if(low>=high)

{

return;

}

int mid = (low+high)/2;

merSort(arr,low,mid);

merSort(arr,mid+1,high);

merge(arr,low,mid,high);

}

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

{

ArrayList <Integer> list = new ArrayList<>();

int left = low;

int right = mid + 1;

while(left<=mid && right<=high)

{

if(arr[left]<=arr[right])

{

list.add(arr[left]);

left++;

}

else

{

list.add(arr[right]);

right++;

}

}

while(left<=mid)

{

list.add(arr[left]);

left++;

}

while(right<=high)

{

list.add(arr[right]);

right++;

}

for(int i=low;i<=high;i++)

{

arr[i] = list.get(i-low);

}

}

}