Write a program for Merge two sorted arrays using Array list

CODE:

import java.util.ArrayList;

import java.util.Arrays;

public class MergeSortedArrays {

public static void main(String[] args) {

int[] arr1 = {1, 3, 4, 5};

int[] arr2 = {2, 4, 6, 8};

ArrayList<Integer> mergedList = mergeArrays(arr1, arr2);

System.out.println("Merged Array: " + mergedList);

}

private static ArrayList<Integer> mergeArrays(int[] arr1, int[] arr2) {

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

int i = 0, j = 0;

while (i < arr1.length && j < arr2.length) {

if (arr1[i] <= arr2[j]) {

mergedList.add(arr1[i]);

i++;

} else {

mergedList.add(arr2[j]);

j++;

}

}

// Add remaining elements from arr1

while (i < arr1.length) {

mergedList.add(arr1[i]);

i++;

}

// Add remaining elements from arr2

while (j < arr2.length) {

mergedList.add(arr2[j]);

j++;

}

return mergedList;

}

}

OUTPUT:

C:\javap>javac MergeSortedArrays.java

C:\javap>java MergeSortedArrays

Merged Array: [1, 2, 3, 4, 4, 5, 6, 8]

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C:\javap>java MergeSortedArrays

Merged Array: [1, 2, 3, 4, 4, 5, 6, 8]

