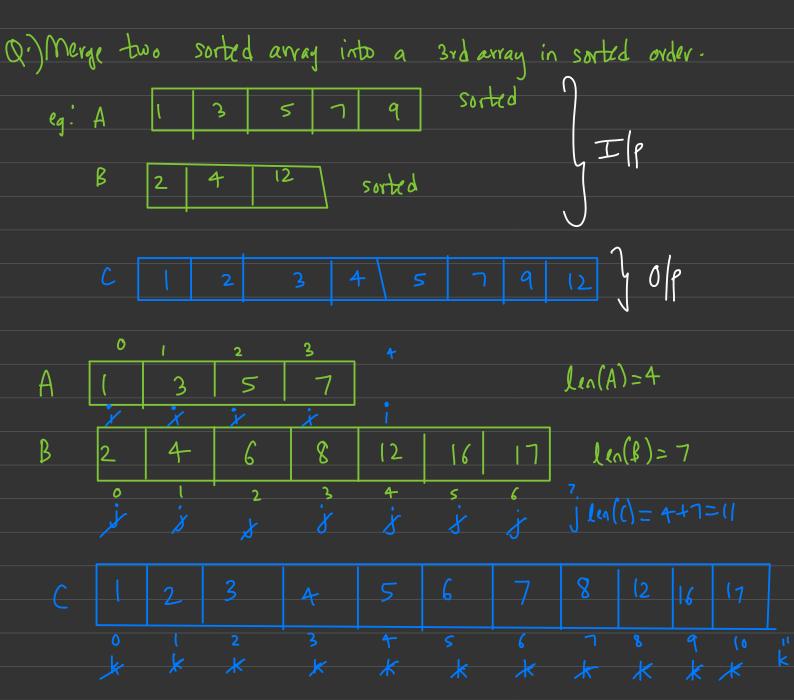
16 Apr 2023 Merge Sort

Divide L Conquer: 7
https://upload.wikimedia.org/wikipedia/commons/c/cc/Merge-sortexample-300px.gif



```
static int[] mergeSortedArrays[int avri[], int arr2[])
  int merged [] = new int [avr. length + arrz.length];
   int ijik;
   while (i < arri.length & j < arr2.length)
        if (arri[i] < arr2[j])
            I merged [k] = avri[i];
              i#;
         else
            merged [K] = avr 2[j];
    while ( ; < arr | . length)
      [ merged [k] = avr[[i];
        k++; i++;
    while ( ) < arrz. length)
         merged[k]= arr2[j];
```

```
return merged;
                                                              J Main.java ×
凸
       J Main.java > ⇔ Main > ☆ main(String[])
                 public static int[] mergeSort(int arr1[], int arr2[]){
                     int merged[] = new int[arr1.length + arr2.length];
                                                                                                          (in(arr)=3
                                                                                       3
                     int i=0, j=0, k=0;
while(i < arr1.length && j < arr2.length){</pre>
                         if(arr1[i] < arr2[j]){</pre>
                                                                                                              lin(aurz)=4
                                                                         arr2
                             merged[k++] = arr1[i++];
                                                                                                                     K
                         else{
                                                                                              X
                             merged[k++] = arr2[j++];
                                                                                                              5
                                                                                       2
                                                                                               3
                                                                                                       4
                                                                        mergary
                     while(i < arr1.length){</pre>
                         merged[k++] = arr1[i++];
                                                                                                            Ica(mergan)=7
                     while(j < arr2.length){</pre>
                         merged[k++] = arr2[j++];
                                                                                                             1
                     return merged;
                 public static void main(String[] args) {
                     int arr1[] = {1, 3, 5, 7, 9, 13, 24, 25, 27, 29}; // Sorted array
        26
                     int arr2[] = {2, 4, 6, 8, 12, 16, 17}; // Sorted array
                     int merged[] = mergeSort(arr1, arr2);
       28
중 Live Share
                     for(int i=0: i/merged length: i++){
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                                                                                         Ln 26, Col 63 Tab Size: 4 UTF-8 LF {} Java 🔊 🚨
```

