

Group A:

Implement the following static method in Merge Sort (Follow the skeleton given in the VLE):

```
private static void merge (int[ ] a, int lo, int mid, int hi);
```

Precondition: Array `a[]` has at least `mid + hi` components starting at `a[lo]`. The first `lo` (Lowest) elements (from `a[lo]` to `data[lo+mid-1]`) are sorted from smallest to largest, and the last `hi` (last) elements (from `a[lo + mid]` to `a[lo+mid+hi-1]`) are also sorted from smallest to largest.

Post condition: Starting at `a[lo, mid + hi]` elements of the array `a[]` have been rearranged to be sorted from smallest to largest.