$$\frac{\text{MERGE}(A[1..n], m):}{i \leftarrow 1; \ j \leftarrow m+1}$$

$$\text{for } k \leftarrow 1 \text{ to } n$$

$$\text{if } j > n$$

$$B[k] \leftarrow A[i]; \ i \leftarrow i+1$$

$$\text{else if } i > m$$

$$B[k] \leftarrow A[j]; \ j \leftarrow j+1$$

$$\text{else if } A[i] < A[j]$$

$$B[k] \leftarrow A[i]; \ i \leftarrow i+1$$

$$\text{else}$$

$$B[k] \leftarrow A[j]; \ j \leftarrow j+1$$

$$\text{for } k \leftarrow 1 \text{ to } n$$

$$A[k] \leftarrow B[k]$$