**import** java.util.Scanner;  
**class** MergeSort  
{  
 **void** merge(**int** arr[], **int** l, **int** m, **int** r)  
 {  
 *// Find sizes of two subarrays to be merged* **int** n1 = m - l + 1;  
 **int** n2 = r - m;  
  
 */\* Create temp arrays \*/* **int** L[] = **new int** [n1];  
 **int** R[] = **new int** [n2];  
  
 */\*Copy data to temp arrays\*/* **for** (**int** i=0; i<n1; ++i)  
 L[i] = arr[l + i];  
 **for** (**int** j=0; j<n2; ++j)  
 R[j] = arr[m + 1+ j];  
  
  
 */\* Merge the temp arrays \*/  
  
 // Initial indexes of first and second subarrays* **int** i = 0, j = 0;  
  
 *// Initial index of merged subarry array* **int** k = l;  
 **while** (i < n1 && j < n2)  
 {  
 **if** (L[i] <= R[j])  
 {  
 arr[k] = L[i];  
 i++;  
 }  
 **else** {  
 arr[k] = R[j];  
 j++;  
 }  
 k++;  
 }  
  
 */\* Copy remaining elements of L[] if any \*/* **while** (i < n1)  
 {  
 arr[k] = L[i];  
 i++;  
 k++;  
 }  
  
 */\* Copy remaining elements of R[] if any \*/* **while** (j < n2)  
 {  
 arr[k] = R[j];  
 j++;  
 k++;  
 }  
 }  
  
 **void** sort(**int** arr[], **int** l, **int** r)  
 {  
 **if** (l < r)  
 {  
 **int** m = (l+r)/2;  
 sort(arr, l, m);  
 sort(arr , m+1, r);  
 merge(arr, l, m, r);  
 }  
 }  
  
 **static void** printArray(**int** arr[])  
 {  
 **int** n = arr.**length**;  
 **for** (**int** i=0; i<n; ++i)  
 System.***out***.print(arr[i] + **" "**);  
 System.***out***.println();  
 }  
  
 *// Driver method* **public static void** main(String args[])  
 {  
 Scanner sc = **new** Scanner(System.***in***);  
 System.***out***.println(**"Enter the Number of elements in the array"**);  
 **int** N = sc.nextInt();  
 **int** arr[] = **new int**[N];  
 System.***out***.println(**"Enter the elements in the arry"**);  
 **for**(**int** i = 0; i < N; i++){  
 arr[i] = sc.nextInt();  
 }  
 MergeSort ob = **new** MergeSort();  
 ob.sort(arr, 0, arr.**length**-1);  
  
 System.***out***.println(**"\nSorted array"**);  
 *printArray*(arr);  
 }  
}