Explanation:

Task 1:

In this task I just implemented the pseudo code of merge sort algorithm

Task 2:

Here I implemented merge sort algorithm to and changed the code so that it only compared the values and ultimately return the max value.

Task 3:

Here I modified the merge sort algorithm and checked when a[i] > b[j] then changed the value of count and lastly write the total count.

Task 4:

In this code I found out the max value and max sum value and compared throughout the list..

In this code I used merge sort to sort the unsorted squared value and by this I achieved nlogn time complexity.

Task 5:

Here I implemented the pseudocode of quick sort algorithm.

Task 6:

Here I used the logic of partion of quick sort and to find out kth smallest value I basically used quick selection algorithm which helped to search the kth smallest values.