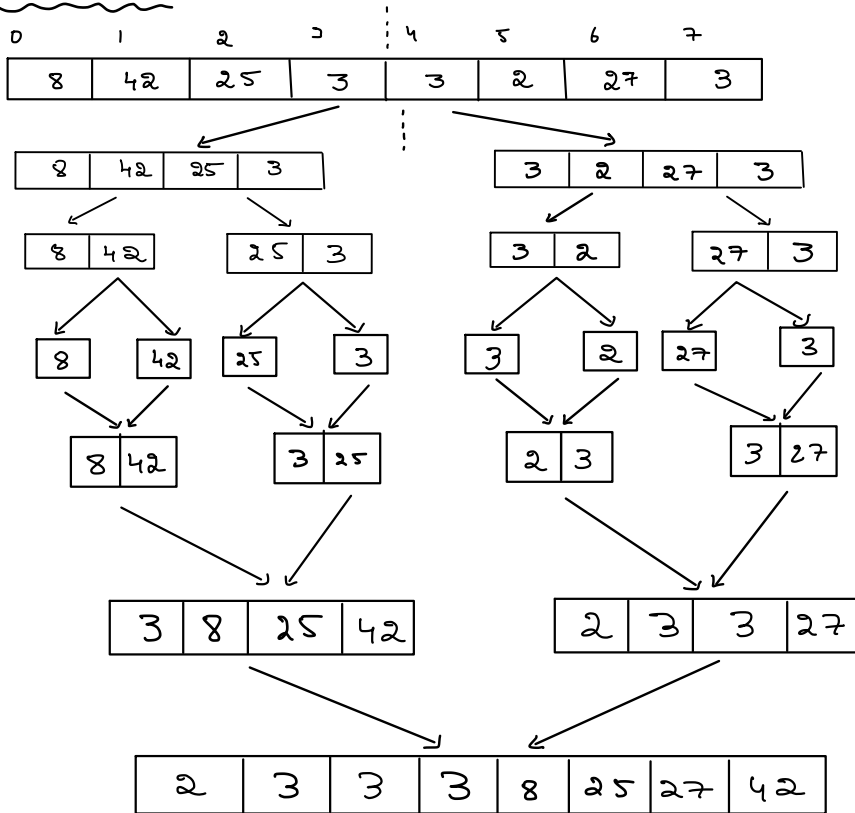


Lab #3

Exercise #1

3.



Using the divide & Conquer approach, we divide a problem into sub problems. When the solution to each subproblem is ready. We merge the results from the subproblems to solve the main problem.

4. Yes, the number of steps were consistent with the time complexity analysis. In our example we had 8 elements in the input. The steps taken by Merge Sort for this vector was $8 * \log(8) \Rightarrow 8 * 3 = 24$. This result is consistent with the expected performance of Merge sort. We had 3 recursive level with 8 operations in each level.