**DAY 4 ASSIGNMENT**

1. Write the algorithm/function for Ternary Search.

Ans) The algorithm for Ternary Search is :-

****-> Step 1****: Divide the search space (initially, the list) in three parts (with two mid-points: mid1 and mid2)

****-> Step 2****: The target element is compared with the edge elements that is elements at location mid1, mid2 and the end of the search space. If element matches, go to step 3 else predict in which section the target element lies. The search space is reduced to 1/3rd. If the element is not in the list, go to step 4 or to step 1.

****-> Step 3****: Element found. Return index and exit.

****-> Step 4****: Element not found. Exit.

Q) In the Binary Search algorithm, it is suggested to calculate the mid as beg + (end - beg) / 2 instead of (beg + end) / 2. Why is it so?

Ans) In the Binary Search algorithm, it is suggested to calculate the mid as beg + (end - beg) / 2 instead of (beg + end) / 2. This is because the first one, i.e., beg + (end - beg) / 2 can prevent stack overflow.