Write an algorithm to depict Merge sort

1. MERGE\_SORT(arr, beg, end)
2. if beg < end.
3. set mid = (beg + end)/2.
4. MERGE\_SORT(arr, beg, mid)
5. MERGE\_SORT(arr, mid + 1, end)
6. MERGE (arr, beg, mid, end)
7. end of if.
8. END MERGE\_SORT.

Write an algorithm to depict Binary Search

* **Step 1 -**Read the search element from the user.
* **Step 2 -**Find the middle element in the sorted list.
* **Step 3 -**Compare the search element with the middle element in the sorted list.
* **Step 4 -**If both are matched, then display "Given element is found!!!" and terminate the function.
* **Step 5 -**If both are not matched, then check whether the search element is smaller or larger than the middle element.
* **Step 6 -**If the search element is smaller than middle element, repeat steps 2, 3, 4 and 5 for the left sublist of the middle element.
* **Step 7 -**If the search element is larger than middle element, repeat steps 2, 3, 4 and 5 for the right sublist of the middle element.
* **Step 8 -**Repeat the same process until we find the search element in the list or until sublist contains only one element.
* **Step 9 -** If that element also doesn't match with the search element, then display "Element is not found in the list!!!" and terminate the function.