

Complexity Analysis of Meta Binary Search:

- **Time Complexity:**
 - Best Case: $O(1)$
 - Average Case: $O(\log N)$
 - Worst Case: $O(\log N)$
- **Auxiliary Space:** $O(1)$, as we are not using any extra space

Advantages of Meta Binary Search:

- The advantage of Meta Binary Search over binary search is that it can perform fewer comparisons in some cases, particularly when the target element is close to the beginning of the list

Drawbacks of Meta Binary Search:

- The disadvantage is that the algorithm may perform more comparisons than binary search in other cases, particularly when the target element is close to the end of the list.

When to use Meta Binary Search:

- Therefore, Meta Binary Search is most effective when the list is ordered in a way that is consistent with the distribution of the target elements.