Exercise\_6\_DSA\_Theory\_Solution

1. Understand Search Algorithms :

Linear Search : The linear search algorithm is defined as a sequential search algorithm that starts at one end and goes through each element of a list until the desired element is found; otherwise, the search continues till the end of the dataset.

Binary Search : Binary Search Algorithm is a searching algorithm used in a sorted array by repeatedly dividing the search interval in half.

Analysis :

Linear Search : Best case(O(1)) Average case(O(N)) Worst case(O(N))

Binary Search : Best case(O(1)) Average case(O(logN)) Worst case(O(log(N))

Binary search is more useful since it reduces the time complexity more as compared to linear search.