compare between binary search and linear search in terms of performance and best case and worst case and average case.

Linear search : Linear Search 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 data set. It is the easiest searching algorithm , the time complexity O(Log n)

Binary Search is a searching algorithm used in a sorted array by repeatedly dividing the search interval in half. The idea of binary search is to use the information that the array is sorted and reduce the time complexity to O(Log n).

Searching method	Linear search	Binary Search
Best case	First Element O(1)	Center Element O(1)
Worst case	O(n)	O(Log n)
Average case	O(n)	O(Log n)