Practice Lab 2 Worksheet

Ques1. Implement Bubble Sort, Selection Sort, Linear Search and Binary Search on your systems and perform the empirical analysis for all these algorithms.

Bubble Sort

n	T(n)	T(n)/n	$T(n)/n^2$	$T(n)/n^3$
10				
50				
100				
1000				
10,000				
50,000				
1,00,000				
10,00,000				

Selection Sort

n	T(n)	T(n)/n	$T(n)/n^2$	$T(n)/n^3$
10				
50				
100				
1000				
10,000				
50,000				
1,00,000				
10,00,000				

Linear Search

n	T(n)	T(n)/(n/2)	T(n)/n	$T(n)/n^2$
10				
50				
100				
1000				
10,000				
50,000				
1,00,000				
10,00,000				

Binary Search

n	T(n)	T(n)/(log (n/2))	T(n)/(log n)	T(n)/(n/2)
10				
50				
100				
1000				
10,000				
50,000				
1,00,000				
10,00,000				