

Lab #2

LINEAR SEARCH

OBJECTIVE:

Introduction:

Linear search is a very simple search algorithm. In this type of search, a sequential search is made over all items one by one. Every item is checked and if a match is found then that particular item is returned, otherwise the search continues till the end of the data collection.

This procedure is also applicable for unsorted data set. Linear search is also known as sequential search. It is named as linear because its time complexity is of the order of n $O(n)$.



Algorithm

Linear Search (Array A, Value x)

Step 1: Set i to 1

Step 2: if $i > n$ then go to step 7

Step 3: if $A[i] = x$ then go to step 6

Step 4: Set i to $i + 1$

Step 5: Go to Step 2

Step 6: Print Element x Found at index i and go to step 8

Step 7: Print element not found

Step 8: Exit

Lab Task

Find a given target number using linear search from a list of numbers using Visual Studio C++ and attach screenshots.