**Title: Linear Search**

**Abstract:**

The sequential search, also known as the linear search, are the most basic search algorithms and are often the first search method learned in introductory computer science courses.The basic strategy is straightforward. Every element in the data set is examined in the order presented until the value being searched for is found. If the value being searched for doesn't exist, a flag value is returned (such as -1 for an array or NULL for a linked list).Sequential search is at best *O*(1), at worst *O*(*n*), and on average *O*(*n*). If the data being searched are not sorted, then it is a relatively efficient search. However, if the data being searched are sorted, we can do much better.

**Methodology:**

At first We open our Code-Blocks Editor ,then File, New , Empty file, save As. Then file Name Insertion ,save . finally coding start . At first We Declaration header file ,then define p of print,and s of scanf , then Declaration main method .

**Discussion:**

* In computer science, a **linear search** or **sequential search** is a method for finding an element within a list.
* **Linear search** is rarely practical because other **search**algorithms and schemes.
* Such as the **binary search** algorithm and hash tables.
* Allow **significantly** faster **searching** for all but short lists.
* **Worst-case space complexity:**O(1) iterative
* **Worst-case performance:**[O(n)](https://en.wikipedia.org/wiki/Big_O_notation#Orders_of_common_functions)
* Jump to [**Application**](https://en.wikipedia.org/wiki/Linear_search#Application) - In computer science, a **linear search** or **sequential search** is a method for finding an element within a list.
* It sequentially checks each element of the list until a match is found or the whole list has been searched.

**Source code:**

#include <stdio.h>

int main()

{

int array[100], search, c, n;

printf("Enter number of elements in array**\n**");

scanf("%d", &n);

printf("Enter %d integer(s)**\n**", n);

for (c = 0; c < n; c++)

scanf("%d", &array[c]);

printf("Enter a number to search**\n**");

scanf("%d", &search);

for (c = 0; c < n; c++)

{

if (array[c] == search)    */\* If required element is found \*/*

{

printf("%d is present at location %d.**\n**", search, c+1);

**break**;

}

}

if (c == n)

printf("%d isn't present in the array.**\n**", search);

return 0;

}

