**Experiment No 2:**

**A program for Linear Search**

**Aim:** Write a program to implement linear search.

**Theory:**

**Linear Search** is defined as a sequential [search algorithm](https://www.geeksforgeeks.org/searching-algorithms/) 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.

In Linear Search Algorithm,

* Every element is considered as a potential match for the key and checked for the same.
* If any element is found equal to the key, the search is successful and the index of that element is returned.
* If no element is found equal to the key, the search yields “No match found”.

**Algorithm:**

(Linear Search) LINEAR (DATA, N, ITEM, LOC)Here DATA is a linear array with N elements, and ITEM is a given item of information. This algorithm finds the location LOC of ITEM in DTA, or sets LOC:=0 if the search is unsuccessful.1.[Insert ITEM at the end of DATA.] Set DATA[N+1]:=ITEM2.[Initialize counter.]Set LOC:=1.3.[Search for ITEM.] Repeat while DATA[LOC]≠ITEM: Set LOC:=LOC+1. [End of loop.]4.[Successful?]If LOC=N+1,then: Set LOC:=05.Exit.

**PROGRAM:**

**OUTPUT**

**CONCLUSION**