Aim:

To implement **Linear Search** in C to find the position of a given element in an array.

Algorithm:

1. Start
2. Input the array elements.
3. Input the number (key) to search.
4. Compare key with each element from index 0 to n-1.
5. If found, return position; otherwise print "Not found".
6. Stop

CODE:

```
#include <stdio.h>

int main() {
   int arr[10], n, key, i, found = 0;

   printf("Enter number of elements: ");
   scanf("%d", &n);

   printf("Enter %d elements:\n", n);
   for (i = 0; i < n; i++)
      scanf("%d", &arr[i]);

   printf("Enter number to search: ");
```

```
    scanf("%d", &key);

    for (i = 0; i < n; i++) {
        if (arr[i] == key) {
            printf("Element %d found at position %d\n", key, i);
            found = 1;
            break;
        }
    }

    if (!found)
        printf("Element %d not found in array\n", key);

    return 0;
}
```

Output

```
Enter number of elements: 5
Enter 5 elements:
10 20 30 40 50
Enter number to search: 20
Element 20 found at position 2


=== Code Execution Successful ===
```

RESULT:

The program successfully executed and displayed the search element using linear search.