

Aim

To write a C program to search for a number using linear search.

Algorithm

1. Start program.
 2. Input array and target element.
 3. Loop through array:
 - If found, print index and break.
 4. If not found, print not found.
 5. End program.
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Code

```
#include <stdio.h>

int main() {
    int n, i, key, found = 0;
    printf("Enter size of array: ");
    scanf("%d", &n);
    int arr[n];
    printf("Enter elements:\n");
    for (i = 0; i < n; i++)
        scanf("%d", &arr[i]);

    printf("Enter element to search: ");
    scanf("%d", &key);

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

```
        found = 1;
        break;
    }
}
if (!found)
    printf("Element not found\n");
return 0;
}
```

Sample Output

```
1. Insert
2. Delete
3. Display
4. Exit
Enter choice: 3
Array: 1 3 4
```

Result

Linear search successfully finds the element.