

Problem Statement:- Write a program to store roll numbers of student in array who attended a training program in random order. Write a function for searching whether a particular student attended a training program or not, using Linear search.

Linear Search

```
#include <stdio.h>
```

```
#define MAX 100
```

```
// Linear search function
```

```
int linearSearch(int arr[], int n, int key) {
```

```
    for (int i = 0; i < n; i++) {
```

```
        if (arr[i] == key) {
```

```
            return i; // found at index i
```

```
        }
```

```
    }
```

```
    return -1; // not found
```

```
}
```

```
int main() {
```

```
    int arr[MAX], n, key, pos;
```

```
    printf("Enter number of students who attended training program: ");
```

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

```
    printf("Enter roll numbers of students (in random order):\n");
```

```
    for (int i = 0; i < n; i++) {
```

```

        scanf("%d", &arr[i]);
    }

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

    pos = linearSearch(arr, n, key);

    if (pos != -1)
        printf("Roll number %d attended the training program (found at position %d).\n", key,
pos + 1);
    else
        printf("Roll number %d did NOT attend the training program.\n", key);

    return 0;
}

```

Output

```

PS E:\New folder (2)\output> cd 'e:\New folder (2)\output'
● PS E:\New folder (2)\output> & .\prg 1 a.exe
● Enter number of students who attended training program: 5
Enter roll numbers of students (in random order):
10
12
15
16
18
Enter roll number to search: 10
Roll number 10 attended the training program (found at position 1).
○ PS E:\New folder (2)\output> █

```