

## SEM 3\Exp7\Linear\_Search.c

```
1  #include <stdio.h>
2
3  // Function to perform linear search
4  int linearSearch(int arr[], int size, int key)
5  {
6      for (int i = 0; i < size; i++)
7      {
8          if (arr[i] == key)
9          {
10             return i; // Return the index of the found element
11          }
12      }
13      return -1; // Return -1 if the element is not found
14 }
15
16 int main()
17 {
18     int arr[] = {4, 84, 23, 45, 67, 12, 98, 34, 56, 78};
19     int size = sizeof(arr) / sizeof(arr[0]);
20     int key;
21
22     printf("Enter the element to search for (Linear Search): ");
23     scanf("%d", &key);
24
25     int index = linearSearch(arr, size, key);
26     if (index != -1)
27     {
28         printf("Element %d found at index %d.\n", key, index);
29     }
30     else
31     {
32         printf("Element %d not found in the array.\n", key);
33     }
34
35     return 0;
36 }
37
```