



**SIMATS**  
ENGINEERING



**SIMATS**  
Saveetha Institute of Medical And Technical Sciences  
(Declared as Deemed to be University under Section 3 of UGC Act 1956)

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**COURSE NAME : DATA STRUCTURES FOR MODERN COMPUTING SYSTEMS**




**COURSE CODE : CSA0302**

**5. WRITE A C PROGRAM TO PERFORM LINEAR SEARCH  
IN AN ARRAY**

**C PROGRAMMING CODE:**

```
#include <stdio.h>
int main() {
int a[100], n, i, key, found=0;
printf("Enter number of elements: ");
scanf("%d", &n);
printf("Enter %d elements:\n", n);
for(i=0; i<n; i++) scanf("%d", &a[i]);
printf("Enter element to search: ");
scanf("%d", &key);
for(i=0; i<n; i++){
if(a[i]==key){
printf("Element found at position %d\n", i+1);
found=1;
break;
}
}
if(!found) printf("Element not found\n");
return 0;
}
```

## OUTPUT:

main.c	   Share	Run	Output
<pre>1 #include &lt;stdio.h&gt; 2 int main() { 3     int a[100], n, i, key, found=0; 4     printf("Enter number of elements: "); 5     scanf("%d", &amp;n); 6     printf("Enter %d elements:\n", n); 7     for(i=0;i&lt;n;i++) scanf("%d",&amp;a[i]); 8     printf("Enter element to search: "); 9     scanf("%d",&amp;key); 10    for(i=0;i&lt;n;i++){ 11        if(a[i]==key){ 12            printf("Element found at position %d\n", i+1); 13            found=1; 14            break; 15        } 16    } 17    if(!found) printf("Element not found\n"); 18    return 0; 19 } 20</pre>			<pre>Enter number of elements: 5 Enter 5 elements: 10 80 40 60 50 Enter element to search: 40 Element found at position 3  === Code Execution Successful ===</pre>