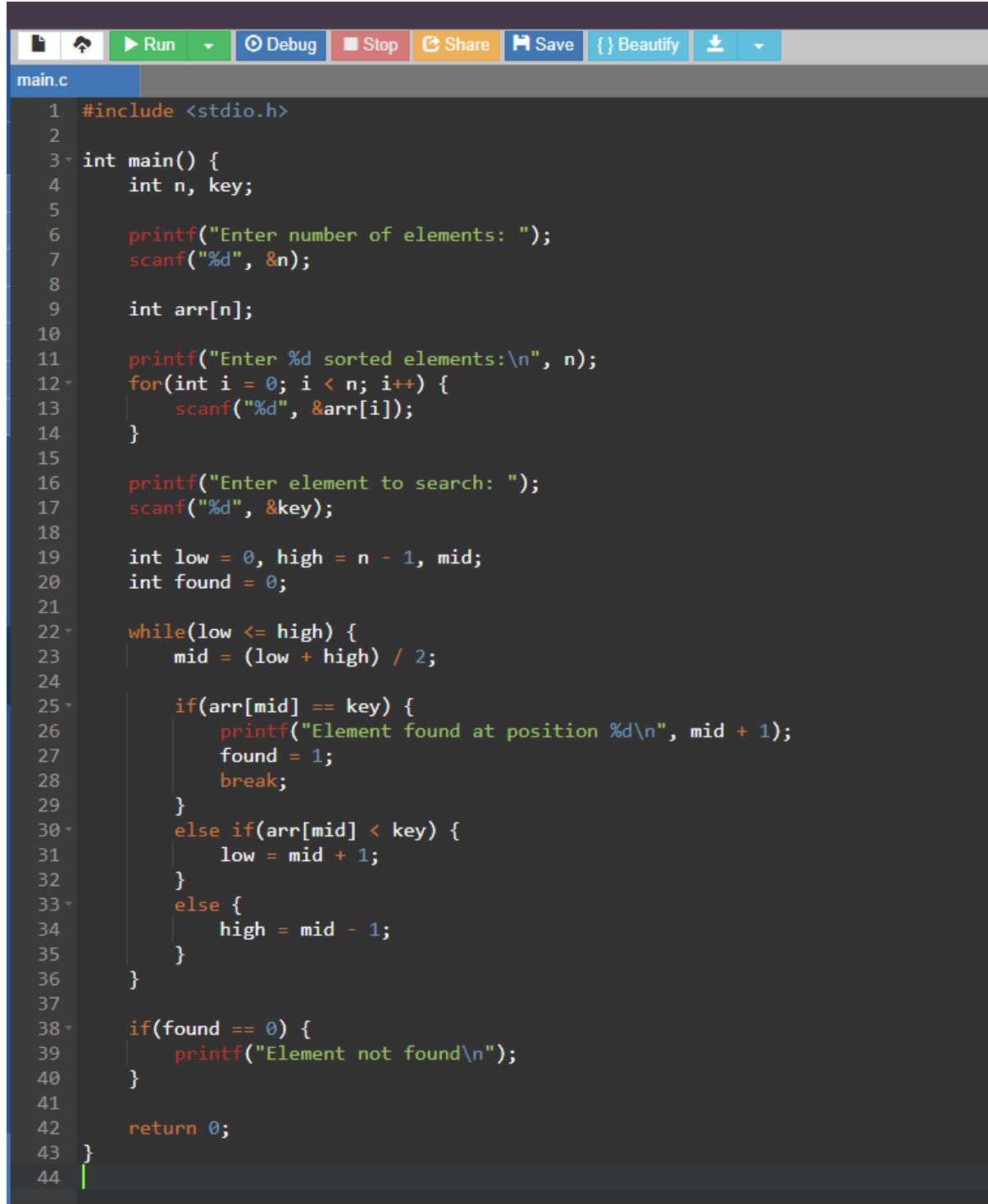


## Binary search:

Code:



The screenshot shows a code editor window with the following details:

- Toolbar:** Includes icons for file operations (New, Open, Save), run (Run, Debug, Stop, Share), and code beautification.
- File:** The current file is "main.c".
- Code Content:** The C code for a binary search algorithm. The code prompts the user for the number of elements, the elements themselves, and the element to search for. It then performs a binary search to find the element and prints the result or a message if it was not found.

```
1 #include <stdio.h>
2
3 int main() {
4     int n, key;
5
6     printf("Enter number of elements: ");
7     scanf("%d", &n);
8
9     int arr[n];
10
11    printf("Enter %d sorted elements:\n", n);
12    for(int i = 0; i < n; i++) {
13        scanf("%d", &arr[i]);
14    }
15
16    printf("Enter element to search: ");
17    scanf("%d", &key);
18
19    int low = 0, high = n - 1, mid;
20    int found = 0;
21
22    while(low <= high) {
23        mid = (low + high) / 2;
24
25        if(arr[mid] == key) {
26            printf("Element found at position %d\n", mid + 1);
27            found = 1;
28            break;
29        }
30        else if(arr[mid] < key) {
31            low = mid + 1;
32        }
33        else {
34            high = mid - 1;
35        }
36    }
37
38    if(found == 0) {
39        printf("Element not found\n");
40    }
41
42    return 0;
43 }
```

Output:

```
Enter number of elements: 5
Enter 5 sorted elements:
12
34
21
14
67
Enter element to search: 67
Element found at position 5

...Program finished with exit code 0
Press ENTER to exit console.
```

```
Enter number of elements: 6
Enter 6 sorted elements:
23
43
14
67
89
30
Enter element to search: 12
Element not found
```