

Linear

```
C/C++
#include <iostream>
using namespace std;

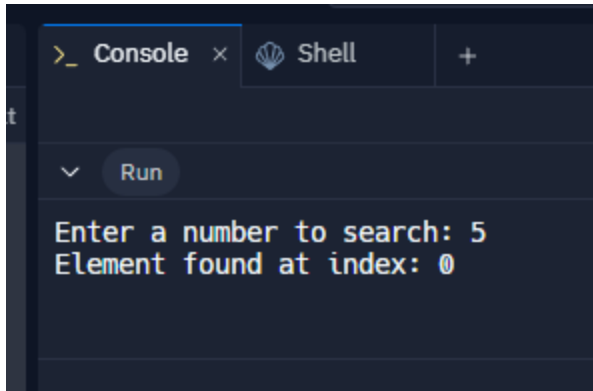
int linearSearch(int arr[], int size, int target) {
    for (int i = 0; i < size; i++) {
        if (arr[i] == target) {
            return i; // Return the index if found
        }
    }
    return -1; // Return -1 if not found, if may error nothing dun sa array is
target
}

int main() {
    int arr[] = {5, 3, 8, 4, 2};
    int size = sizeof(arr) / sizeof(arr[0]);
    int target;

    cout << "Enter a number to search: ";
    cin >> target;

    int result = linearSearch(arr, size, target);
    if (result != -1) {
        cout << "Element found at index: " << result << endl;
    } else {
        cout << "Element not found." << endl;
    }

    return 0;
}
```



Binary

```
C/C++
#include <iostream>
using namespace std;

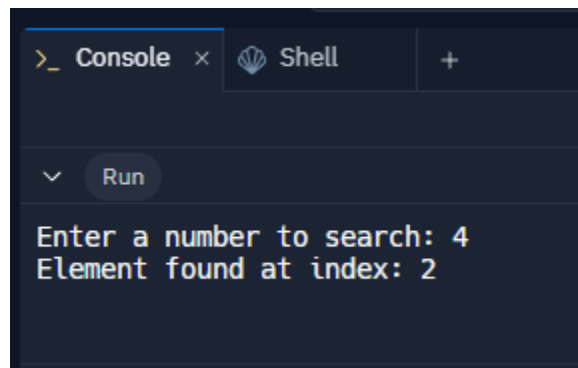
int binarySearch(int arr[], int size, int target) {
    int left = 0;
    int right = size - 1;

    while (left <= right) {
        int mid = left + (right - left) / 2;
        if (arr[mid] == target) {
            return mid; // Return the index if found
        }
        if (arr[mid] < target) {
            left = mid + 1; // Search in the right half
        } else {
            right = mid - 1; // Search in the left half
        }
    }
    return -1; // Return -1 if not found
}

int main() {
    int arr[] = {2, 3, 4, 5, 8}; // This array must be sorted
    int size = sizeof(arr) / sizeof(arr[0]);
    int target;

    cout << "Enter a number to search: ";
    cin >> target;
```

```
int result = binarySearch(arr, size, target);  
if (result != -1) {  
    cout << "Element found at index: " << result << endl;  
} else {  
    cout << "Element not found." << endl;  
}  
  
return 0;  
}
```



The screenshot shows a code editor interface with a dark theme. At the top, there are two tabs: 'Console' (active) and 'Shell'. Below the tabs, there is a 'Run' button. The console output displays the program's execution: 'Enter a number to search: 4' followed by 'Element found at index: 2'.

```
>_ Console × Shell +  
Run  
Enter a number to search: 4  
Element found at index: 2
```