

Find element at a given Index

Given an array **arr** of integers and an index **key**(0-based index). Your task is to return the element present at the index key in the array.

Examples:

Input: key = 2 , arr = [10, 20, 30, 40, 50]

Output: 30

Explanation: The value of arr[2] is 30 .

Expected Time Complexity: O(1)

Expected Auxiliary Space: O(1)

Constraints:

$0 \leq \text{key} \leq \text{arr.size} - 1$

$1 \leq \text{arr.size} \leq 10^6$

$1 \leq \text{arr}[i] \leq 10^9$

For Input:

5

1 1 2 2 3 4 5 5 6 7

Your Output:

```
#include <iostream>
```

```
#include <vector>
```

```
using namespace std;
```

```
class Solution
```

```
{
```

```
public:
```

```
    int findElementAtIndex(int key, vector<int> &arr)
```

```
{
    for (int i = 0; i < arr.size(); ++i)
    {
        if (arr[i] == key) return i;
    }
    return -1;
}
};
```

```
int main()
{
    vector<int> arr = {1, 1, 2, 2, 3, 4, 5, 5, 6, 7};
    Solution solution;

    int key = 5;
    int index = solution.findElementAtIndex(key, arr);

    if (index != -1)
        cout << "Element " << key << " found at index " << index << endl;
    else
        cout << "Element not found" << endl;

    return 0;
}
```