

Frequency in C++	
<pre> #include <iostream> #include <unordered_map> // for unordered_map using namespace std; void countFreq(int arr[], int n) { unordered_map<int, int> hmp; // Declaration of unordered_map to store element frequencies // Count frequencies of each element in the array for (int i = 0; i < n; i++) { int key = arr[i]; if (hmp.find(arr[i]) != hmp.end()) { hmp[arr[i]]++; } else { hmp[arr[i]] = 1; } } // Print the frequencies for (auto itr = hmp.begin(); itr != hmp.end(); itr++) { cout << itr->first << " " << itr->second << endl; } } int main() { int arr[] = {3112102, 3112500, 3112501, 3112700, 3112800}; int n = sizeof(arr) / sizeof(arr[0]); countFreq(arr, n); return 0; } </pre>	<p>Input</p> <p>Array: {3112102, 3112500, 3112501, 3112700, 3112800} Size of array (n) = 5.</p> <p>Step 1: Initialize an unordered_map</p> <p>We use an unordered_map named hmp to store element frequencies, where the key is the array element, and the value is its count.</p> <p>Initially, hmp is empty:</p> <p>hmp = {}</p> <p>Step 2: Traverse the Array to Count Frequencies</p> <p>Iteration 1 (i = 0):</p> <ul style="list-style-type: none"> key = arr[0] = 3112102 hmp.find(3112102) == hmp.end() (not found in the map). Add 3112102 to the map with a frequency of 1: <p>hmp = {3112102: 1}</p> <p>Iteration 2 (i = 1):</p> <ul style="list-style-type: none"> key = arr[1] = 3112500 hmp.find(3112500) == hmp.end() (not found in the map). Add 3112500 to the map with a frequency of 1: <p>hmp = {3112102: 1, 3112500: 1}</p> <p>Iteration 3 (i = 2):</p> <ul style="list-style-type: none"> key = arr[2] = 3112501 hmp.find(3112501) == hmp.end() (not found in the map). Add 3112501 to the map with a frequency of 1: <p>hmp = {3112102: 1, 3112500: 1, 3112501: 1}</p> <p>Iteration 4 (i = 3):</p> <ul style="list-style-type: none"> key = arr[3] = 3112700

- `hmp.find(3112700) == hmp.end()` (not found in the map).
- Add 3112700 to the map with a frequency of 1:

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```
hmp = {3112102: 1, 3112500: 1, 3112501: 1, 3112700: 1}
```

Iteration 5 (i = 4):

- `key = arr[4] = 3112800`
- `hmp.find(3112800) == hmp.end()` (not found in the map).
- Add 3112800 to the map with a frequency of 1:

```
hmp = {3112102: 1, 3112500: 1, 3112501: 1, 3112700: 1, 3112800: 1}
```

Step 3: Print the Frequencies

Now, we iterate through `hmp` and print each key-value pair:

1. 3112102 1
2. 3112500 1
3. 3112501 1
4. 3112700 1
5. 3112800 1

Output:

```
3112800 1
3112102 1
3112500 1
3112700 1
3112501 1
```