

Remove Duplicates in C++

```
#include <iostream>
using namespace std;

int removeDup(int arr[], int n) {
    int res = 1;
    for (int i = 1; i < n; i++) {
        if (arr[i] != arr[res - 1]) {
            arr[res] = arr[i];
            res++;
        }
    }
    return res;
}

int main() {
    int arr[] = {2, 2, 3, 4, 5, 6};
    int n = sizeof(arr) / sizeof(arr[0]);
    int p = removeDup(arr, n);

    cout << "After Removal" << endl;

    for (int i = 0; i < p; i++) {
        cout << arr[i] << " ";
    }
    cout << endl;

    return 0;
}
```

Dry Run Table

i	arr[i]	arr[res - 1]	Condition Met (!=)	Action	arr[res]	res
1	2	2	✗ No	Skip	-	1
2	3	2	✓ Yes	arr[1] = 3	3	2
3	4	3	✓ Yes	arr[2] = 4	4	3
4	5	4	✓ Yes	arr[3] = 5	5	4
5	6	5	✓ Yes	arr[4] = 6	6	5

✓ **Final Values:**

- `res = 5` → means 5 unique elements.
- Modified array (first `res` elements):

$$\text{arr}[] = \{2, 3, 4, 5, 6\}$$

After Removal
2 3 4 5 6