

C++ Tips & Tricks



Instead of this




```
#include <iostream>
#include <algorithm>
#include <string>
#include <vector>
#include <stack>
#include <set>
#include <queue>
#include <map>
```



```
#include <bits/stdc++.c>
```

you can use this


use range based for loops when needed



```
tips&tricks.cpp

int numbers[] = {1,2,3,4,5};

for(int i=0; i<5; i++){
    cout<< numbers[i] << endl;
}
```

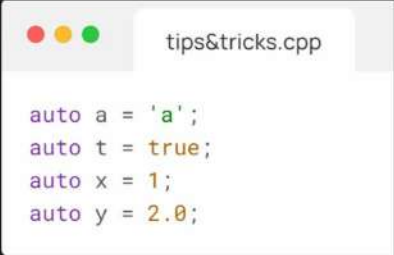


```
tips&tricks.cpp

int numbers[] = {1,2,3,4,5};

for (auto n: numbers){
    cout << n << endl;
}
```

use auto to omit data types of a variable



```
auto a = 'a';  
auto t = true;  
auto x = 1;  
auto y = 2.0;
```

**c++ will automatically know
the data type**

Swapping of 2 numbers

you don't have to use a 3rd variable in this



tips&tricks.cpp

```
a ^= 6;  
b ^= a;  
a ^= b;
```

checking if the number is odd or even



tips&tricks.cpp

```
if (number & 1)
    cout << "ODD";
else
    cout << "EVEN";
```

One liner if else statement



```
int age = 9;

if (age < 18){
    printf("A CHILD");
} else {
    printf("An ADULT")
}
```



```
age < 18 ? printf("A Child") : printf("An Adult");
```

erator

Count the number of digits using log



```
int countNumber(long long n){  
    return floor(log10(n) + 1);  
}
```


Copy elements from one container to another



tips&tricks.cpp

```
int source[5] = {0, 20, 15, 28, 18};  
int target[5];  
// copy 5 elements from source to target  
copy_n(source, 5, target);
```

Initialization in Binary form



```
// C++ code to demonstrate working of
// "binary" numbers
#include<iostream>
using namespace std;
int main()
{
    auto number = 0b011;
    cout << number;
    return 0;
}
```

In C++ 11 assignments can also be made in binary form.