

«C++ for C Programmer» Notes

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Week 1

From C to C++

C	C++
<code>#include <stdio.h></code>	<code>#include <cstdio></code>
	<code>using namespace std</code>
<code>#define PI 3.14</code>	<code>const float PI = 3.14</code>
<code>#define max(a,b) (...)</code>	<code>inline max(a, b) {...}</code>

Simple I/O functions

```
cout << "Print something" << endl
```

```
cin >> input
```

Cast

`static cast` : (safe cast) `static cast<double>` 5/4
Convert if there is a rule based
conversion, otherwise error

Function call

Call by value

Call by pointer

Call by reference

[An Introduction to Reference](#)

</>C++ Generic

```
template<class T>
inline void swap(T &i, T &j) {
    T tmp = i
    i = j
    j = tmp
}
```

</>C++ Overload

```
inline void swap(int &i, int &j) {
    int tmp = i
    i = j
    j = tmp
}
inline void swap(double &i, double &j) {
    double tmp = i
    i = j
    j = tmp
}
```

Cheatographer

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Cheat Sheet

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Page 1 of 1.

Footer

FootNote