C++ Programming

Step-by-Step

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C++ PROGRAMMING: STEP BY STEP

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31. CONST CORRECTNESS

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Abstract

The const keyword allows you to specify whether or not a variable is modifiable. You can use const to prevent modifications to variables and const pointers and const references prevent changing the data pointed to (or referenced).

31.1 Const Keyword

Const gives you the ability to document your program more clearly and actually enforce that documentation. By enforcing your documentation, the const keyword provides guarantees to your users that allow you to make performance optimizations without the threat of damaging their data. For instance, const references allow you to specify that the data referred to won't be changed; this means that you can use const references as a simple and immediate way of improving performance for any function that currently takes objects by value without having to worry that your function might modify the data. Even if it does, the compiler will prevent the code from compiling and alert you to the problem. On the other hand, if you didn't use const references, you'd have no easy way to ensure that your data wasn't modified.