Unforgetting standard functions \texttt{min/max} as \texttt{constexpr}

Gabriel Dos Reis

Microsoft

Abstract

This short paper proposes to make the standard functions \texttt{min} and \texttt{max} \texttt{constexpr}. They were top on the list of motivating cases for allowing reference parameters for \texttt{constexpr} functions in C++11. They were forgotten after the core language change was accepted.

1 Introduction

Having standard functions such as \texttt{min} and \texttt{max} as \texttt{constexpr} functions was among the top primary motivations for allowing reference parameters for \texttt{constexpr} functions in C++11. However, after the core language change was voted in, we forgot to update the library part to reflect the original motivation. This short note proposes to fix that. See also LWG issue 2350.

2 Resolution

The resolution is the same as the one proposed by Ville Voutilainen, so is not repeated here. The summary is that the \texttt{min} function templates and the \texttt{max} functions templates (including those taking initializer-lists arguments) are declared \texttt{constexpr}.

Acknowledgment

Thanks to Ville Voutilainen for raising the issue and providing a resolution.