

C++ User Group - Talk #1672

Template Metaprogramming

2015-05-02 15:57 - Kretz, Matthias

Status:	Presented	Start date:	2015-05-02
Priority:	Normal	Due date:	2015-05-27
Assignee:	Glesaaen, Jonas	% Done:	100%
Category:		Estimated time:	0.00 hour
Talk Author(s):	Glesaaen, Jonas	Presenter:	Glesaaen, Jonas

Description

One can do much more with C++ templates than most realise, as the template system itself happens to be Turing-complete. Using this language within C++ it is possible to move some executions from runtime to compile time, possibly reducing runtime and moving error checks to take place during compilation.

In this talk we will look at how to use the template system to carry out simple calculations during compilation. We will also scratch the surface of boost's metaprogramming library (MPL) which provides a lot of useful metafunctions and metaclasses to facilitate programming with templates.

History

#1 - 2015-05-27 16:21 - Glesaaen, Jonas

- File *template_meta_programming.pdf* added
- File *template_meta_programming_w_notes.pdf* added
- % Done changed from 0 to 100
- Talk Author(s) set to Glesaaen, Jonas
- Presenter set to Glesaaen, Jonas

One can do much more with C++ templates than most realise, as the template system itself happens to be Turing-complete. Using this language within C++ it is possible to move some executions from runtime to compile time, possibly reducing runtime and moving error checks to take place during compilation.

In this talk we will look at how to use the template system to carry out simple calculations during compilation. We will also scratch the surface of boost's metaprogramming library (MPL) which provides a lot of useful metafunctions and metaclasses to facilitate programming with templates.

#2 - 2015-05-28 12:55 - Glesaaen, Jonas

- Description updated

#3 - 2015-06-08 09:56 - Kretz, Matthias

- Status changed from New to Presented

Files

template_meta_programming.pdf	284 KB	2015-05-27	Glesaaen, Jonas
template_meta_programming_w_notes.pdf	297 KB	2015-05-27	Glesaaen, Jonas