

C++ User Group - Talk #3188

Thinking with Templates

2016-01-27 18:00 - Glesaaen, Jonas

Status:	Presented	Start date:	2016-01-27
Priority:	Normal	Due date:	2016-01-27
Assignee:	Glesaaen, Jonas	% Done:	100%
Category:		Estimated time:	0.00 hour
Talk Author(s):	Jonas Rylund Glesaaen	Presenter:	Jonas Rylund Glesaaen

Description

The template system in C++ is a convenient tool to overcome unnecessary code bloat. However, this is only the tip of the iceberg of the potential in efficiency, readability and problem solving it can bring to the table. With the help of C++ compilers' ability to do advanced pattern matching, programming with templates might prove to be the best approach to abstraction a practitioner needs to heighten their skills.

In this talk we will first give an overview of the power of the C++ typing system. We will then look at how one can use templates to transcend types and start writing "expressions" instead of code. Here we will also study how the new additions to C++11 and C++14 makes writing generic code easier for everyone. Finally we will see how all of this allows us to solve problems and implement algorithms in a readable and reusable way.

History

#1 - 2016-01-27 18:14 - Pinke, Christopher

- Status changed from New to Presented

#2 - 2016-02-05 12:59 - Glesaaen, Jonas

- File *thinking_with_templates.pdf* added

- File *ex4_crtp.cpp* added

- File *ex5_counter.cpp* added

#3 - 2016-02-05 13:00 - Glesaaen, Jonas

- File deleted (*thinking_with_templates.pdf*)

Files

ex1_type_deduction.cpp	1.43 KB	2016-01-27	Glesaaen, Jonas
ex2_variadic.cpp	863 Bytes	2016-01-27	Glesaaen, Jonas
ex3_template_tree.cpp	1.47 KB	2016-01-27	Glesaaen, Jonas
bonus_array_deduction.cpp	1.07 KB	2016-01-27	Glesaaen, Jonas
thinking_with_templates.pdf	109 KB	2016-02-05	Glesaaen, Jonas
ex4_crtp.cpp	666 Bytes	2016-02-05	Glesaaen, Jonas
ex5_counter.cpp	541 Bytes	2016-02-05	Glesaaen, Jonas