

# Advanced Refactoring for Modelica in Eclipse Plugin

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At PELAB, together with the Open Source Modelica Consortium (an international open source effort supported by 28 organizations, see [www.openmodelica.org](http://www.openmodelica.org)) the OpenModelica environment including the OpenModelica Compiler (OMC) of the Modelica language including MetaModelica extensions is developed. The development is open source under the OSMC-PL and GNU V3 licenses.

Currently OMC compiles Modelica/MetaModelica into C-code via several optimizing steps. The development is supported by an Eclipse plug-in MDT (Modelica Development Tooling), also including a debugger.

A refactoring is a transformation of a program that improves its structure and understandability. Earlier basic refactoring support in MDT has been developed, including the unique property of preserving comments and indentation. The goal of this master thesis project is to develop several advanced refactorings on top of the basic functionality and apply these refactorings to the 150 000 line OpenModelica compiler.

The master thesis project requires some knowledge of compiler construction, as well as some experience and interest in advanced programming.

