Project proposal (Advanced Computer Architectures)

A compiler front-end for Modelica

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Size of the project: 1 student

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Abstract

This project focus on the Modelica programming language. Develop a LL-parser for a given subset
of the Modelica language and integrate it within a compiler prototype which is under development
at Politecnico di Milano.

Pre-requirements

- Formal Languages and Compiler course

- Basic knowledge of C++11 language and idioms

- Basic Linux skills

- [preferred] previous experience with Modelica

Involved Technologies and Frameworks

- C++11

Detailed description

State-of-the-art compilers for the Modelica language suffers of important design issues, which we aim at mitigating with our new proposal.

This project will start from a compiler prototype which is under development at Politenico di Milano. This is a joint work between the compiler team at Politecnico di Milano and the automation control team at Politecnico di Milano.

The goal of this project is to write an efficient (LL-based) parser for a given subset of the Modelica grammar.

This project can be extended to thesis.