

## Extensible Text Editor

### Project Description:

The main task in this diploma work is to design a powerful text editing framework with syntax highlighting features and code completion functionality based on JFC/Swing. The text editor's indented purpose is to be used within the SyAD tool for editing source files written in several languages (e.g., SystemC/C++, VHDL, VHDL-AMS, Verilog, etc.), visualizing compiler outputs, and controlling breakpoints for the debugger. For the different features of SyAD, the text editor has to support editor annotations, which are various markers, such as bookmarks, task markers, warning and error indicators, search result markers, and more. Undo/redo functionality as well as adjustable settings have to be provided. The focus of this work is to provide a mature design for an easily extensible text editor framework, rather than to implement the various features, although the implementation of some basic features should be included.

SyAD is an EDA tool developed at the Institute for Technical Informatics (ITI) at the Graz University of Technology in cooperation with the company CISC Semiconductor Design + Consulting GmbH. SyAD is a multi-HDL (Hardware Description Language) design tool for automatic setup of a verification platform for heterogeneous system designs. Following subtasks are to fulfill in this diploma work:

- Literature research, comparing state-of-the-art editor frameworks, (e.g., eclipse editor)
- Identify the requirements of the text editor framework.
- Design of the extensible text editor framework.
- Implementation of some basic features.
- Documentation.

### Desired skills:

- Java, OOP Paradigm / Design Patterns

For more details about this and/or other projects/theses please, take a contact.

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