

# Panoramix - A context sensitive completion and linter for WhyML in VSCode

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## 1 Context

Why3 ([link](#)) is a platform for deductive program verification. It provides a rich language for specification and programming, called WhyML, and relies on external theorem provers, both automated and interactive, to discharge verification conditions. This MSc Dissertation proposal aims at promoting the use of Why3 in the academic community, namely by providing a support for its native language in a popular editor such as VSCode ([link](#)). Such task implies a re-engineering of the why3 compiler in order to provide on-demand, incremental and background compilation.

## 2 Objectives

The student is expected to implement a code analyser for WhyML, henceforth *Panoramix*, that will flag programming errors, stylistic errors, and suspicious constructs. Furthermore, the student should implement a VSCode plugin that outputs the messages given by *Panoramix*. In order to help the programmer in “real-time”, *Panoramix* should provide a code completion feature thus providing the user with a cheat-sheet for a faster development.

## 3 Work Schedule

- ★ Sep. – Nov. : Technological review and state of the art.
- ★ Dec. – Jan. : Architectural design for the proposed solution.
- ★ Feb. – Mar. : Implementation.
- ★ Apr. – May : Proof of Concept, Validation and Verification
- ★ May – Jun. : Dissertation writing.

## 4 Contacts

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