**Text

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**Compiler**

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\*B.Sc. (Hons) Software Development

Study-unit: **Compiler Theory and Practice**

Code: **CPS2000**

Lecturer: **Dr Sandro Spina**

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY**

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# Introduction

The aim of this project was to build a compiler which translates an input source code file using the imperative language PixArLang, to the assembly-like language PixIR.

Diagram

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1. The compilation process works as follows; the user provides a source code file.
2. A lexer and parser are initiated, the parser gets tokens from the lexer and produces an AST tree.
3. The AST tree goes through the following passes in order.
   1. Xml generation
   2. Semantic analysis
   3. Code generation
4. The result of the code generation pass is saved to a file where it is accesible to the user.

# Frontend

The frontend of the compiler