



COMP520 – Milestone 1

Project Report
Group Project 8

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1. Introduction

We will implement a compiler for the GoLite language, a simpler language of the Go language.

The first milestone of the GoLite project covers the lexical, syntactic, and intermediate representation of your compiler.

We are going to discuss those 3 parts in this report.

2. Lexical Analyser

2.1 Scanner

To convert text input into token, there is a lot of choice, but here we use flex because it is written in C++, the language chosen by our team.

2.2 Flex

FLEX (fast lexical analyzer generator) is a tool/computer program for generating lexical analyzers (scanners or lexers). Flex use regular expression to recognize the input text. And it uses NFA, to navigates through the tokens.

2.3 Regular expression

This part is very similar to the assignment, each input is recognized and associate with a token, pretty straight forward. The only tricky part is finding the matching regular expression and don't forget any.

3. Syntax Analyser

3.1 Choice of the parser

For this section we decide to choose Bison as our parser for the GoLite Language. Indeed, it works well with Flex and C/C++.

3.2 Grammar

We build here the grammar of our project. Again, same as the assignment. We add to watch for any conflicts that may occurs.

3.3AST

Then for the pretty printer and what is coming next, we choose to use C++. We would have to implement more classes.

3.4Pretty printer

For the pretty printer we implemented a class that prints every token.

4. Team organization and resources