Assignments

COMP3131/9102: Programming Languages and Compilers

Semester 1, 2017

VC Language Definition

VC stands for a variant of C. The current version of the language document is Version 11.0 -- 21 February 2017.

Bonus Assignment: A Compiler for EVC

Assignment 1: Scanner

You will implement a scanner. This is the easiest of all assignments.

- FAQs
- Mark Statistics
- Feedback
- testcases

Assignment 2: Recogniser

You will implement a predictive recursive-descent parser. At this stage, your parser checks only syntactic correctness. This assignment is also straightforward.

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Assignment 3: Parser

You will modify your recogniser to build a parser to construct an AST for the program being compiled.

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Assignment 4: Static Semantics (or Contextual Analysis)

You will implement a third component of the compiler that checks the static semantics of the program being compiled. You will use the visitor design pattern to walk the AST to check anything that can be verified (statically) at compile-time.

Note that this is the third component for the VC compiler since the recogniser, once extended into a parser, will no longer be used.

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Assignment 5: Code Generation

You will implement a code generator to generate byte code for the Java Virtual Machine (JVM). You can then run your compiled program using the Java interpreter.

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- Feedback
- testcases

Jingling Xue