Project Phase 1: Front end

Total points: 150

Due Date: 10/13/2020, 8 am (via Canvas)

Introduction

This semester, through a project split into 3 phases, we are going to build a full compiler for a small language called Tiger targeted towards the MIPS machine. As discussed in the pacing schedule, the phases of the project are:

- Phase 1A (front end): Parser and lexer for Tiger, detecting syntax errors
- Phase 1B (front end): Symbol table, semantic analysis, and intermediate representation (IR) generation
- Phase 2 (back end): Instruction selection, register allocation and MIPS code generation

Documents

Project 1A description : Describes phase 1A of the project including deliverables and due date

Project 1B description: Describes phase 1B of the project including deliverables and due date

Project 2 description: Describes phase 2 of the project including deliverables and due date

Tiger specification: Describes full specification of the mini language Tiger – lexical, grammatical, and semantic specification including sample programs (needed for phase 1A and 1B)

IR specification: Exact specification of the intermediate code to be generated at the end of phase 1B

MIPS quick guide: Specification of MIPS language and assembly code (to be generated at the end of phase 2)

Deliverables

Deliverables and due dates are specified in the course overview and project specifications.

Resources

Websites referred in respective documents