Scalars

Project 1 Report: Scanner/Parser
Jack Choi, Allen Mi, Hanxiang Ren
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1 Group Name

Our group name is *Scalars*.

2 Group Members

The following members are listed in alphabetical order:

1. Wonsuk (Jack) Choi
   `jchoi5me@mit.edu`
2. Allen Mi
   `allenmi@mit.edu`
3. Hanxiang Ren
   `renh@mit.edu`

3 Intended Language

Our intended language, as our name suggests, is Scala.

4 Individual Results

Wonsuk (Jack) Choi

1. Language: Scala
2. Public test score: 100%
3. Hidden test score: 100%
4. Improvement since hidden tests were released: Approximately 7%. Previously failed 2-3 hidden tests because EOF was a part of my grammar.

Allen Mi

1. Language: Scala
2. Public test score: 100%
3. Hidden test score: 100%
4. Improvement since hidden tests were released: Program incomplete when hidden tests were released.

Hanxiang Ren

1. Language: Scala
2. Public test score: 100%
3. Hidden test score: 100%
4. Improvement since hidden tests were released: Passed all hidden test without modification.

5 Plan

We plan to follow a modular paradigm by separating the task of building the IR tree from the scanner/parser codebase. Jack's parser will be used to generate a generic ANTLR parse tree. The tree is then passed to the semantic checker codebase, where an IR tree will be constructed accordingly. This approach utilizes standardized communication between the parser and the semantic checker, while preserving the integrity of the scanner/parser codebase. Hence we expect it to facilitate a more effective debugging towards the later stages of the project. Additionally, Hanxiang has completed a set of parser grammar that outputs structural information while the parse tree is generated. This information will be used for cross-verifying the correctness of our semantic checker.