Semantic and Intermediate Code Generation

Mini Perl Compiler use flex & bison/yacc and C.

Quick Overview of Perl

- Perl Identifiers
  - A Perl variable name starts with either $, @ or % followed by zero or more letters, underscores, and digits (0 to 9).
- Three basic data type
  - `Scalar` Scalars are simple variables. They are preceded by a dollar sign ($). A scalar is either a number, a string, or a reference.
  - `Arrays` Arrays are ordered lists of scalars that you access with a numeric index, which starts with 0. They are preceded by an "at" sign (@).
  - `Hashes` Hashes are unordered sets of key/value pairs that you access using the keys as subscripts. They are preceded by a percent sign (%).

Dependency

- flex
- bison/yacc

Developing Environment

- OS : Ubuntu/kali 16.04 LTS
- Language : C & C++
- Compiler : gcc & g++

Issue

- There is some issue while generating Imtermediate code generation for `Array`.

How to run

```
$ lex s_lexer.l  or  flex s_lexer.l
$ yacc s_parser.y
$ gcc y.tab.c -ll -w
$ ./a.out <testfile>
else run -------------------------
bash run.sh
```

What we have done

INTERMEDIATE CODE GENERATION AND SEMANTIC ANALYSER.

1. Identifiers
2. Data types •Primitive data types: Scalar (it includes INT FLOAT STRING) •Derived data types: Array and Hash
3. Constants: Integer, float, string, and character literals
4. Operators: All the operators

5. Statements: •Simple statements •Control flow: if-else, if-else if, , while, for, do-while , foreach, until, unless, elsif .
6. s_symbol.c file a table that contains all Tokens Adress Values Scope and Type.
7. Our Adress starts from 4000.

Ignore

Output contain some warnings and shift reduce conflicts .

References

- Geeksforgeeks
- `info flex`
- YouTube
- notes

Authors


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