

0511 周报

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进展0511

打印AST

Flex 和 Bison

下周计划

进展0511

打印AST

代码路径:/home/ts/bupt/workspace/Kaleidoscope/Chapter4

- 函数打印:

```
1 def foo(a b) a * b + 2;
```

```
ready> def foo(a b) a*b+2;
ready> *****
AST: {
  PrototypeAST: {
    Name: foo
    Args : a b
  }
  BinaryExpression: {
    BinaryExpression: {
      VariableExprssion: {
        Name: a
      }
      *
      VariableExprssion: {
        Name: b
      }
    }
    +
    NumberExpression :{
      Value: 2.000000
    }
  }
}
```

- 调用函数

```
1 foo(1, 2);
```

```
ready> foo(1, 2);
ready> *****
AST: {
  CallExpression: {
    Callee :foo
    NumberExpression :{
      Value: 1.000000
    }
    NumberExpression :{
      Value: 2.000000
    }
  }
}
```

- 表达式

```
1 1+3*4*5-2;
```

```

ready> 1+3*4*5-2;
ready> *****
AST: {
  BinaryExpression: {
    BinaryExpression: {
      NumberExpression :{
        Value: 1.000000
      }
    +
      BinaryExpression: {
        BinaryExpression: {
          NumberExpression :{
            Value: 3.000000
          }
        *
          NumberExpression :{
            Value: 4.000000
          }
        }
      *
        NumberExpression :{
          Value: 5.000000
        }
      }
    }
  -
    NumberExpression :{
      Value: 2.000000
    }
  }
}
*****
Evaluated to 59.000000

```

- extern

```

ready> extern sin();
ready> *****
PrototypeAST: {
  Name: sin
  Args :
}
*****

```

Flex 和 Bison

1. 编译运行袁昊同学提供给我的Flex和Bison demo程序.

```

• (base) tsmenglei:~/bupt/workspace/myshixun/demo/build$ ls
CMakeCache.txt  cmake_install.cmake  demo  demoParser.h  location.hh  position.hh  testcase.sy  testcase_trace_scanning.txt
CMakeFiles      compile_commands.json  demoParser.cpp  demoScanner.cpp  Makefile     stack.hh     testcase_trace_parsing.txt  testcase_trace_sanning.txt

```

2. 学习Flex的词法说明和Bison的语法说明.

下周计划

1. 梳理代码流程,修改代码,使其能够打印出test程序的AST.
2. 深入了解Flex 和Bison 使用方法.