语法分析结果文档

前言：由于能力有限，这次程序只进行并通过了单元测试，在测试完整的程序时遇到了许多问题，文档将分析可能的错误原因，以待改进。

输出结果：

successfully open the file

This is an unsigned integer.

This is a signed integer.

This is an unsigned integer.

This is a signed integer.

This is an unsigned integer.

This is a signed integer.

This is a const definition.

This is a const definition.

This is a const statement.

This is a head declaration.

an error occured.

错误原因：读入变量声明时被识别成了函数头部声明。

相关代码：

int varState(){

int varStateCount = 0;

while(true){

if(varDefine()==0){

// printf("why no varDDefine output??\n");

}

varStateCount += 1;

// printf("result = %d\n", result);

if(result==SEMISY){

getsym();

}else{

error();

return -1;

}

int varStateTag = 0;

recordRead();

if(result==INTSY||result==CHARSY){

getsym();

if(result==IDSY){

getsym();

if(result!=LBRACSY) varStateTag = 1;

}else varStateTag = 1;

}else varStateTag = 1;

resetRead();

// printf("varStateTag=%d\n", varStateTag);

if(varStateTag==1){

// 说明下一个成分不是变量定义

break;

}else continue;

}

printf("This is a variable statement.\n");

return 0;

}

部分单元测试代码及结果：

输入：

const int a = -1;

const int b = +2, c = 3;

const char d = 'd';

const char e = 'e', f = 'f';

输出：

successfully open the file

This is an unsigned integer.

This is a signed integer.

This is a const definition.

This is an unsigned integer.

This is a signed integer.

This is an unsigned integer.

This is a signed integer.

This is a const definition.

This is a const definition.

This is a const definition.

This is a const statement.

输入：

int a, b[10], c;

char d, e, f[6];

输出：

successfully open the file

This is an unsigned integer.

This is a variable definition.

This is a variable statement.

输入：

foo(a, b)

输出：

successfully open the file

This is a factor.

输入：

-b[1]\*5+1/ee[10]

输出：

successfully open the file

This is a factor.

This is a term.

This is an expression.

This is a factor.

This is a factor.

This is a term.

This is a factor.

This is a factor.

This is a term.

This is an expression.

This is a factor.

This is a term.

This is an expression.

其余单元测试截图：

