

Project2 report

●Changes I have to make to my scanner since the previous version I turned in :

除了comment, pseudocomment, whitespace,換行之外,其餘的都會進行return、補上上次在換行的comment中少印的linenum、把main刪除。

●The abilities of my parser : 將lex.l return的資料進行parser。可以辨別以下項目 :

(1)program

identifier;

<zero or more variable and constant declaration>

<zero or more function declaration>

<one compound statement>

end identifier

variable的部分則可以分為global及local

(2)function

identifier (<zero or more formal arguments>): type;

<one compound statement>

end identifier

function 可以沒有type

(3)可以有inreger,real,string,boolean,array這五種形式的資料

var identifier list: scalar type;

| var identifier list: array integer constant to integer constant of type;

| var identi_er list: literal constant;

(4)statement, 主要分為7種: compound、simple、conditional、while、for、return、

function_invocation

(i)compound :

begin

<zero or more variable and constant declaration>

<zero or more statements>

end

variable and constant 的宣告皆為local

(ii)simple :

variable reference := expression;

| print variable reference;

| print expression;

| read variable reference;

以及 expressions

(iii)conditional :

if boolean expr then

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<zero or more statements>
else
<zero or more statements>
end if
or
if boolean expr then <zero or more statements> end if
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(iv)while :
    while boolean expr do
    <zero or more statements>
    end do
```

```
(v)for :
    for identifier := integer constant to integer constant do
    <zero or more statements>
    end do
```

```
(vi)return :
    return expression ;
```

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(vii) function_invocation :
    identifier (<expressions separated by zero or more comma>) ;
```

●The platform to run my parser : 系上工作站 bsd1.cs.nctu.edu.tw

●how to run my parser : 將lex.l、yacctemplate.y及Makefile放於相同的資料夾中，輸入make 後接著輸入./parser [file_name]即可。