

# Compiler Design \_ HW 1 5

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code.txt - 記事本

檔案(F) 編輯(E) 格式(O) 檢視(V) 說明

Program testP

Begin

```
declare I as integer;
declare A,B,C,D, LLL[100] as float;
```

End

error\_code.txt - 記事本

檔案(F) 編輯(E) 格式(O) 檢視(V) 說明

Program testP

Begin

```
declare I as integer;
declare A,B,C,D, LLL[100] float;
```

End

```
%{
#include <stdio.h>
}%

%token PROGRAM NAME BEGIN_ END DECLARE AS SEMICOLON INTEGER FLOAT NUMBER COMMA LEFT RIGHT

%%
Prog: PROGRAM NAME BEGIN_ statement_list END    { printf("Complie Success\n"); };

statement_list: statement SEMICOLON
| statement_list statement SEMICOLON
;

statement : vardeclare;

vardeclare : DECLARE varlist AS vartype ;

varlist :var
| varlist COMMA var
;

vartype : INTEGER
| FLOAT
;

var : NAME
| NAME LEFT NUMBER RIGHT
;
```

```

%{
#include "y.tab.h"
extern int yylval;
%}

%%

[ \t]+          ;

\%\%[^\(\\r?\n)]*\\r?\n ;

\\r?\n          ;

,                { return COMMA; }

\[              { return LEFT; }

\]              { return RIGHT; }

[0-9]+          { return NUMBER; }

;               { return SEMICOLON; }

[Pp][Rr][Oo][Gg][Rr][Aa][Mm] { return PROGRAM; }

[Bb][Ee][Gg][Ii][Nn]         { return BEGIN_; }

[Dd][Ee][Cc][Ll][Aa][Rr][Ee] { return DECLARE; }

[Aa][Ss]                     { return AS; }

[Ii][Nn][Tt][Ee][Gg][Ee][Rr] { return INTEGER; }

[Ee][Nn][Dd]                 { return END; }

[Ff][Ll][Oo][Aa][Tt]        { return FLOAT; }

[a-zA-Z][a-zA-Z0-9]*(_[a-zA-Z0-9]+)* { return NAME; }

. {return 0;}

```

```

$ yacc -d ch3-01.y
$ lex ch3-01.l
$ gcc lex.yy.c y.tab.c -ly -lfl -o 40747031s_hw15
$ ./40747031s_hw15 < code.txt
Complie Success
$ ./40747031s_hw15 < error_code.txt
syntax error
$ █

```