

[2CEIT701: COMPILER DESIGN]

AIM - Write a Lex program to validate the variable declaration statement using Lex and YACC.

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Practical-6

AIM - Write a Lex program to validate the variable declaration statement using Lex and YACC.

CODE:

LEX FILE

```
% {  
#include "y.tab.h"  
% } %%  
int|float|char {return (DT); } ";"  
{return (SC); }  
"," {return (COMMA); }  
[a-zA-Z_][a-zA-Z0-9]* {return (ID); }  
"\n" {return (NL); }  
%%
```

YACC FILE

```
% {  
% }  
%token DT SC NL COMMA ID  
%name parse  
  
%%  
start:S { printf("Valid Declaration\n"); return 0; }
```

```
S:DT VL SC NL  
VL:VL COMMA ID  
|ID  
;
```

```
%%  
int main(){  
yyparse();  
return 0; }  
yyerror(char *s){ printf("error  
: %s ",s);  
}
```

OUTPUT

```

19012531016@telnetserver:~$ gcc lex.yy.c y.tab.c -ll
/usr/share/bison++/bison.cc: In function 'C yyparse C':
/usr/share/bison++/bison.cc:198:24: warning: implicit declaration of function 'C yyerror C'; did you mean 'C yyerrok C'? [-Wimplicit-function-declaration]
#define YY_@_ERROR yyerror
      ^
/usr/share/bison++/bison.cc:667:4: note: in expansion of macro 'C YY_parse_ERROR C'
  YY_@_ERROR("parser stack overflow");
  ^~~~~~
/usr/share/bison++/bison.cc:180:22: warning: implicit declaration of function 'C yylex C' [-Wimplicit-function-declaration]
#define YY_@_LEX yylex
      ^
/usr/share/bison++/bison.cc:465:25: note: in expansion of macro 'C YY_parse_LEX C'
#define YYLEX      YY_@_LEX()
      ^~~~~~
/usr/share/bison++/bison.cc:730:23: note: in expansion of macro 'C YYLEX C'
  YY_@_CHAR = YYLEX;
      ^~
p6.y: At top level:
p6.y:21:1: warning: return type defaults to 'C int C' [-Wimplicit-int]
yyerror(char *s){

```

```

19012531016@telnetserver:~$ ./a.out
int A;
Valid Declaration
19012531016@telnetserver:~$ ./a.out
float la;
error : parse error 19012531016@telnetserver:~$ ./a.out
float a;
Valid Declaration
19012531016@telnetserver:~$

```