

[2CEIT701: COMPILER DESIGN]

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

Submitted By: Kashyap raval
Enrollment number: 19012531016
Class: CEIT-B
Batch: AI



Department of Computer Engineering (AI)

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 'yyyparse':
/usr/share/bison++/bison.cc:198:24: warning: implicit declaration of function 'yyerror'; did you mean 'yyerrok'? [-Wimplicit-function-declaration]
#define YY_ERROR yyerror
^
/usr/share/bison++/bison.cc:667:4: note: in expansion of macro 'YY_parse_ERROR'
YY_ERROR("parser stack overflow");
^
/usr/share/bison++/bison.cc:180:22: warning: implicit declaration of function 'yylex'; [-Wimplicit-function-declaration]
#define YY_LEX yylex
^
/usr/share/bison++/bison.cc:465:25: note: in expansion of macro 'YY_parse_LEX'
#define YYLEX YY_LEX()
^
/usr/share/bison++/bison.cc:730:23: note: in expansion of macro 'YYVLEX'
YY_CHAR = YYLEX;
^
p6.y: At top level:
p6.y:21:1: warning: return type defaults to 'int' [-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:~$
```