

PROGRAM

LEX

```
% {  
#include<stdio.h>  
#include "y.tab.h"  
% }  
  
%%  
  
[a-z_A-Z]+([0-9]|[a-z_A-Z])* return VARIABLE;  
  
[0-9]+ return DIGIT;  
  
[*,+;,] return yytext[0];  
  
"(" return yytext[0];  
  
")" return yytext[0];  
  
"=" return yytext[0];  
  
[\n] return 0;  
  
[\\t,' '];  
  
. {  
    printf("%s",yytext);  
    yyerror();  
}  
  
%%  
  
yywrap()  
{  
    return 1;  
}
```

YACC

```
% {
#include<stdio.h>
#include<stdlib.h>
int yylex();
int flag = 1;
% }

%token DIGIT VARIABLE

%%

S: V='B'; ;

B: A '*' T '*' A
  | T '*' A
  | A '*' T
  ;

A: A '*' V
  | V
  ;

T: '(' V '+' V ')'
  ;

V: DIGIT
  | VARIABLE
  ;

%%

int main()
{
    printf("\nEnter the input: ");
    yyparse();
    if(flag==1)
        printf("\nInput Accepted");
}

int yyerror()
{
```

```
printf("\nInput Rejected");  
flag = 0;  
exit(0);  
}
```

OUTPUT

```
E:\Semester 7\Compiler Design Lab\Practice>bison -dy st.y  
E:\Semester 7\Compiler Design Lab\Practice>flex st.l  
E:\Semester 7\Compiler Design Lab\Practice>gcc lex.yy.c y.tab.c -w  
E:\Semester 7\Compiler Design Lab\Practice>a  
Enter the input: val1 = (val2 + val3) * val4 * val5;  
Input Accepted  
E:\Semester 7\Compiler Design Lab\Practice>a  
Enter the input: c = a * b * ( d + e ) * f ;  
Input Accepted  
E:\Semester 7\Compiler Design Lab\Practice>a  
Enter the input: a = (c + d) * (c + d) ;  
Input Rejected  
E:\Semester 7\Compiler Design Lab\Practice>
```