Program 2

**prac2.l:**

%{  
#include "prac2.tab.h"  
%}  
  
%%  
[0-9]+ {yylval=atoi(yytext); return NUMBER;}  
[a-zA-Z][a-zA-Z0-9\_]\* {return ID;}  
\n {return NL;}  
. {return yytext[0];}  
%%

**prac 2.y:\**

%token NUMBER ID NL  
%left '+' '-'  
%left '\*' '/'  
%%  
stmt : exp NL{printf("Valid expression");  
exit(0);}  
;  
exp : exp '+' exp   {printf("+");}  
| exp '-' exp       {printf("-");}  
| exp '\*' exp       {printf("\*");}  
| exp '/' exp       {printf("/");}  
| '('exp')'  
| NUMBER            {printf("%d",$1);}  
;  
%%  
  
int yyerror(char \*msg)  
{  
printf("Invalid Expression\n");  
exit(0);  
}  
  
main()  
{  
printf("Enter Expression: ");  
yyparse();  
}

**prac 2b.l:**

 %{  
#include "prac2b.tab.h"  
%}  
  
%%  
"if" {return IF;}  
"else" {return ELSE;}  
[0-9]+ {yylval=atoi(yytext); return NUMBER;}  
[a-zA-Z][a-zA-Z0-9\_]\* {return ID;}  
\n {return N;}  
. {return yytext[0];}  
%%

**prac 2b.y:**

%token NUMBER ID N IF ELSE  
%left '+' '-'  
%left '\*' '/'  
%%  
stmt : IF'('condition')'N'{'exp'}'N ELSE N'{'exp'}'

{printf("\nValid expression");  
exit(0);}  
;  
exp : exp '+' exp    
| exp '-' exp        
| exp '\*' exp        
| exp '/' exp        
| exp '=' exp        
| '('exp')'  
| NUMBER            {printf("%d",$1);}  
;  
  
condition : exp "==" exp  
| exp '>' exp  
| exp '<' exp  
| exp "!=" exp  
;  
%%  
  
int yyerror(char \*msg)  
{  
printf("Invalid Expression\n");  
exit(0);  
}  
  
main()  
{  
yyparse();  
}