1b) Write YACC program to evaluate arithmetic expression involving operators: +, -, *, and /

```
%{
    #include "lex.yy.c"
%}
%token NUM
%left '+' '-'
%left '*' '/'
%%
stmt: exp           { printf("Value of expression = %d\n",$$); }
    ;
exp: exp '+' exp        { $$=$1+$3; }
  | exp '-' exp        { $$=$1-$3; }
  | exp '*' exp         { $$=$1*$3; }
  | exp '/' exp        { if( $3==0 )
                    { printf("Divide by zero error!\n");
                      yyerror();
                    }
                   else
                     $$=$1/$3;
               }
  | '(' exp ')'        { $$=$2; }
  | NUM             { $$=$1; }
  ;
%%
main()
{
    printf("Enter expression: ");
    yyparse();
    return;
```

```
}
int yyerror()
{
    printf("Invalid expression\n");
    exit(0);
}


%{ /*Lexpgm*/
    #include "y.tab.h"
    extern int yylval;
%}
%%
[0-9]+        { yylval=atoi(yytext);  return NUM; }
[\+\-\*\/()]  return( yytext[0] );
\n            return(0);
.             yyerror();
%%
```

Enter expression: 5+(6*5)/(3+2)-8

Value of expression = 3