

```

%union      // what types will be used further
{
    struct _polynomial poly;
    struct _monomial   mono;
    int                num;
    char *              str;
}
%type <str> variable
%type <poly> polynomial
%type <mono> monomial
%token <num> DIGIT
%token <str> LETTER PRINT
%left '+' '-'
%left '*'
%right UMINUS
%right '^'
%start list
%%      // follows grammatics
list    :
        // empty
        | list '\n'
        | list '\r'
        | list begin
        ;

begin   :
        variable '=' polynomial '\n' |
        PRINT variable '\n'          |
        PRINT polynomial '\n'        ;

polynomial :
        '(' polynomial ')'
        | polynomial '+' polynomial
        | polynomial '-' polynomial
        | polynomial '*' polynomial
        | '-' polynomial %prec UMINUS
        | polynomial '^' DIGIT
        | monomial
        | variable
        ;

monomial :
        DIGIT
        | LETTER
        | DIGIT LETTER
        | LETTER '^' DIGIT
        | DIGIT LETTER '^' DIGIT
        ;

variable :
        '$' LETTER
        ;

%%      // end's grammatics

```