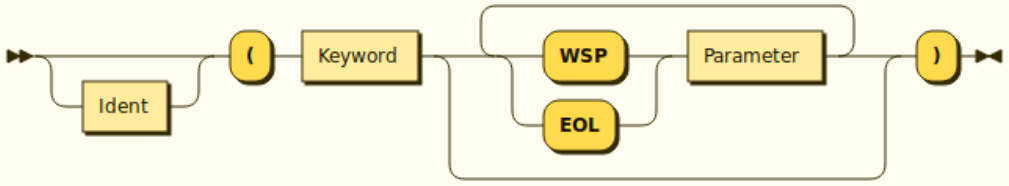
Kicad V6 S-Expression Syntax

This is a trial to define the proposed S-expression or DSN format dialect by EBNF

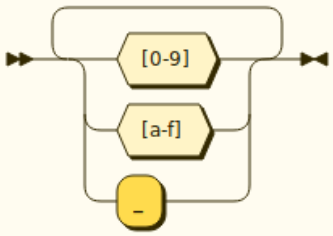
S-Expression:




```
S-Expression
        ::= Ident? '(' Keyword ( ( 'WSP' | 'EOL' ) Parameter )* ')'
```

Expressions use mandatory delimiting brackets for easy parsing contributed by Dick Hollenbeck. Indents are recommended to improve human readability. Expression starts with a keyword what may be followed by several parameters. Parameters are separated by whitespace.

keyword:




```
keyword  ::= [0-9a-f_]+
```

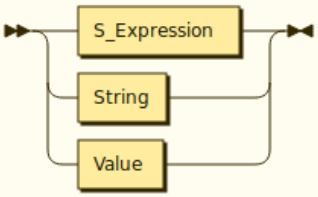
As a replacement for capital letters, underscore may be used to improve human readability of keywords (key_words / KeyWords)

Parameters sequence order become arbitrary by recursion what requires the use of another S-expression for next parameter. This improves human readability as the parameter values are practically explained by its meaningful preceding keyword. Determination of expression is done by string or value.

Comments are supported as separate lines indented at the same level as the current keyword delimiter and begin with the # character. In line comments are not allowed.
(why ??? - as # is not allowed in keywords and strings have quotes, everything between # and EOL could be easy parsed as comments)

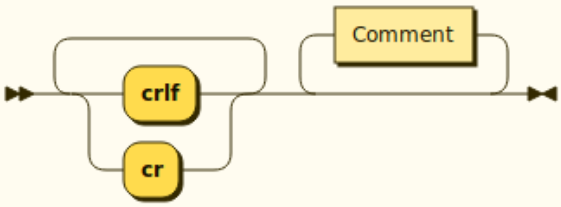
Long S-expressions may wrap the line by EOL, why they may contain any extra lines of comments.

Parameter:



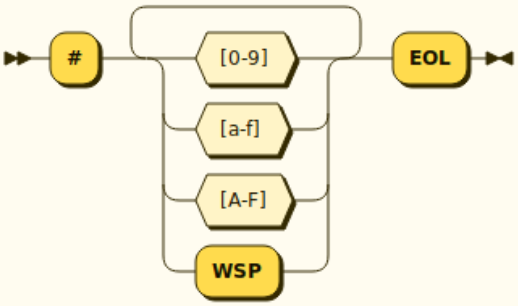

```
Parameter
        ::= S_Expression
          | String
          | Value
```

EOL:




```
EOL      ::= ( 'crlf' | 'cr' )+ Comment*
```

Comment:




```
Comment  ::= '#' ( [0-9a-fA-F] | 'WSP' )+ 'EOL'
```