

The Language XLE_LEXICON

BNF-converter

September 9, 2016

This document was automatically generated by the *BNF-Converter*. It was generated together with the lexer, the parser, and the abstract syntax module, which guarantees that the document matches with the implementation of the language (provided no hand-hacking has taken place).

The lexical structure of XLE_LEXICON

Literals

Word literals are recognized by the regular expression $(\langle letter \rangle \mid \langle digit \rangle \mid \text{'_'} \mid \text{'-'})^+$

Reserved words and symbols

The set of reserved words is the set of terminals appearing in the grammar. Those reserved words that consist of non-letter characters are called symbols, and they are treated in a different way from those that are similar to identifiers. The lexer follows rules familiar from languages like Haskell, C, and Java, including longest match and spacing conventions.

The reserved words used in XLE_LEXICON are the following :

ETC XLE

The symbols used in XLE_LEXICON are the following :

;	.	+
'	!	*
=	=c	~
\$	{	}
()	
%	,	@
%stem	^	

Comments

There are no single-line comments in the grammar.
Multiple-line comments are enclosed with " and ".

The syntactic structure of $\text{XLE}_L\text{EXICON}$

Non-terminals are enclosed between \langle and \rangle . The symbols $::=$ (production), $|$ (union) and ϵ (empty rule) belong to the BNF notation. All other symbols are terminals.

$$\begin{aligned}\langle \text{LEXICON} \rangle & ::= \langle \text{ListRULE} \rangle \\ \langle \text{RULE} \rangle & ::= \langle \text{WORD} \rangle \langle \text{RULEDEF} \rangle \\ \langle \text{RULEDEF} \rangle & ::= \langle \text{CAT} \rangle \langle \text{MORPHCODE} \rangle \langle \text{ListSCHEM} \rangle \\ & | \langle \text{RULEDEF} \rangle ; \langle \text{RULEDEF} \rangle \\ & | \langle \text{CAT} \rangle \langle \text{MORPHCODE} \rangle \langle \text{Word} \rangle \\ & | \langle \text{CAT} \rangle \langle \text{MORPHCODE} \rangle \\ & | \text{ETC} \\ \langle \text{ListRULE} \rangle & ::= \epsilon \\ & | \langle \text{RULE} \rangle . \langle \text{ListRULE} \rangle \\ & | \epsilon \\ & | \langle \text{RULE} \rangle \langle \text{ListRULE} \rangle \\ \langle \text{WORD} \rangle & ::= \langle \text{Word} \rangle \\ & | + \langle \text{Word} \rangle \\ & | \langle \text{Word} \rangle + \\ & | \langle \text{Word} \rangle ' \langle \text{Word} \rangle \\ & | + \langle \text{Word} \rangle + \\ \langle \text{CAT} \rangle & ::= \langle \text{Word} \rangle \\ & | ! \langle \text{Word} \rangle \\ \langle \text{MORPHCODE} \rangle & ::= * \\ & | \text{XLE}\end{aligned}$$

$$\begin{aligned}
\langle \text{SCHEM} \rangle & ::= \langle \text{LEFTSCHEMA} \rangle = \langle \text{RIGHTSCHEMA} \rangle \\
& | \langle \text{LEFTSCHEMA} \rangle =_c \langle \text{RIGHTSCHEMA} \rangle \\
& | \sim \langle \text{LEFTSCHEMA} \rangle \\
& | \langle \text{TEMPLATERULE} \rangle \\
& | \langle \text{LEFTSCHEMA} \rangle \$ \{ \langle \text{ListSYMBOL} \rangle \} \\
& | \langle \text{LEFTSCHEMA} \rangle \$ \langle \text{RIGHTSCHEMA} \rangle \\
& | \langle \text{TEMPLATEDISJOINRULE} \rangle \\
& | \{ \langle \text{ListDISJOINTSCHEMA} \rangle \} \\
\langle \text{DISJOINTSCHEMA} \rangle & ::= \langle \text{ListDSCHEM} \rangle \\
\langle \text{DSCHEM} \rangle & ::= \langle \text{LEFTSCHEMA} \rangle = \langle \text{RIGHTSCHEMA} \rangle \\
& | \langle \text{LEFTSCHEMA} \rangle =_c \langle \text{RIGHTSCHEMA} \rangle \\
& | (\langle \text{UP} \rangle \langle \text{SYMBOL} \rangle) \\
& | (\langle \text{DOWN} \rangle \langle \text{SYMBOL} \rangle) \\
\langle \text{ListDISJOINTSCHEMA} \rangle & ::= \epsilon \\
& | \langle \text{DISJOINTSCHEMA} \rangle \\
& | \langle \text{DISJOINTSCHEMA} \rangle | \langle \text{ListDISJOINTSCHEMA} \rangle \\
\langle \text{ListDSCHEM} \rangle & ::= \epsilon \\
& | \langle \text{DSCHEM} \rangle \langle \text{ListDSCHEM} \rangle \\
\langle \text{LEFTSCHEMA} \rangle & ::= \langle \text{UP} \rangle \\
& | \langle \text{DOWN} \rangle \\
& | (\langle \text{UP} \rangle \langle \text{SYMBOL} \rangle) \\
& | (\langle \text{UP} \rangle \langle \text{SYMBOL} \rangle \langle \text{SYMBOL} \rangle) \\
& | (\langle \text{UP} \rangle \langle \text{SYMBOL} \rangle \langle \text{SYMBOL} \rangle \langle \text{SYMBOL} \rangle) \\
& | (\langle \text{DOWN} \rangle \langle \text{SYMBOL} \rangle) \\
& | \% \langle \text{Word} \rangle \\
& | (\% \langle \text{SYMBOL} \rangle \langle \text{SYMBOL} \rangle) \\
& | (\% \langle \text{SYMBOL} \rangle \langle \text{SYMBOL} \rangle \langle \text{SYMBOL} \rangle) \\
\langle \text{RIGHTSCHEMA} \rangle & ::= \langle \text{SYMBOL} \rangle \\
& | ' \langle \text{SYMBOL} \rangle ' \\
& | \langle \text{DOWN} \rangle \\
& | (\langle \text{UP} \rangle \langle \text{SYMBOL} \rangle) \\
\langle \text{TEMPLATEDISJOINRULE} \rangle & ::= \{ \langle \text{ListTEMPLATERULEORHS} \rangle \} \\
\langle \text{TEMPLATERULEORHS} \rangle & ::= \langle \text{TEMPLATERULE} \rangle
\end{aligned}$$

$$\begin{aligned}
\langle \text{TEMPLATERULE} \rangle & ::= \text{@} \langle \text{TEMPLATE} \rangle \\
& | \text{@} (\langle \text{SYMBOL} \rangle) \\
& | \text{@} (\langle \text{SYMBOL} \rangle \% \langle \text{SYMBOL} \rangle \langle \text{SYMBOL} \rangle) \\
& | \text{@} (\langle \text{SYMBOL} \rangle \text{@} \langle \text{SYMBOL} \rangle) \\
& | \text{@} (\langle \text{SYMBOL} \rangle \{ \langle \text{ListTEMPLATERULEORHS} \rangle \}) \\
& | \text{@} \langle \text{SYMBOL} \rangle \\
\langle \text{TEMPLATE} \rangle & ::= (\langle \text{SYMBOL} \rangle \langle \text{SYMBOL} \rangle) \\
& | (\langle \text{SYMBOL} \rangle \langle \text{SYMBOL} \rangle \langle \text{SYMBOL} \rangle) \\
& | (\langle \text{SYMBOL} \rangle \% \text{stem}) \\
\langle \text{SYMBOL} \rangle & ::= \langle \text{Word} \rangle \\
\langle \text{UP} \rangle & ::= \text{^} \\
\langle \text{DOWN} \rangle & ::= \text{!} \\
\langle \text{ListWORD} \rangle & ::= \epsilon \\
& | \langle \text{WORD} \rangle \langle \text{ListWORD} \rangle \\
\langle \text{ListCAT} \rangle & ::= \epsilon \\
& | \langle \text{CAT} \rangle \langle \text{ListCAT} \rangle \\
\langle \text{ListMORPHCODE} \rangle & ::= \epsilon \\
& | \langle \text{MORPHCODE} \rangle \langle \text{ListMORPHCODE} \rangle \\
\langle \text{ListSCHEM} \rangle & ::= \epsilon \\
& | \langle \text{SCHEM} \rangle \langle \text{ListSCHEM} \rangle \\
\langle \text{ListLEFTSCHEMA} \rangle & ::= \epsilon \\
& | \langle \text{LEFTSCHEMA} \rangle \langle \text{ListLEFTSCHEMA} \rangle \\
\langle \text{ListRIGHTSCHEMA} \rangle & ::= \epsilon \\
& | \langle \text{RIGHTSCHEMA} \rangle \langle \text{ListRIGHTSCHEMA} \rangle \\
\langle \text{ListTEMPLATERULEORHS} \rangle & ::= \epsilon \\
& | \langle \text{TEMPLATERULEORHS} \rangle \\
& | \langle \text{TEMPLATERULEORHS} \rangle | \langle \text{ListTEMPLATERULEORHS} \rangle \\
\langle \text{ListSYMBOL} \rangle & ::= \epsilon \\
& | \langle \text{SYMBOL} \rangle \langle \text{ListSYMBOL} \rangle \\
\langle \text{ListUP} \rangle & ::= \epsilon \\
& | \langle \text{UP} \rangle \langle \text{ListUP} \rangle \\
\langle \text{ListDOWN} \rangle & ::= \epsilon \\
& | \langle \text{DOWN} \rangle \langle \text{ListDOWN} \rangle
\end{aligned}$$