

# Grammar

## Definition

These lines contain the grammar matching with the Lutin language, that is used in the project.

- 1)  $P \rightarrow BD\ BI$
- 2)  $BD \rightarrow BD\ D\ pv$
- 3)  $BI \rightarrow BI\ I\ pv$
- 4)  $D \rightarrow var\ id\ IDL$
- 5)  $IDL \rightarrow IDL\ vir\ id$
- 6)  $D \rightarrow const\ INI\ INIL$
- 7)  $INIL \rightarrow INIL\ vir\ INI$
- 8)  $INI \rightarrow id\ eg\ num$
- 9)  $I \rightarrow ecrire\ E'$
- 10)  $I \rightarrow id\ aff\ E'$
- 11)  $I \rightarrow lire\ id$
- 12)  $E' \rightarrow E$
- 13)  $E \rightarrow E + T$
- 14)  $E \rightarrow E - T$
- 15)  $E \rightarrow T$
- 16)  $T \rightarrow T * F$
- 17)  $T \rightarrow T / F$
- 18)  $T \rightarrow F$
- 19)  $F \rightarrow (E)$
- 20)  $F \rightarrow id$
- 21)  $F \rightarrow num$
- 22)  $BD \rightarrow \varepsilon$
- 23)  $BI \rightarrow \varepsilon$
- 24)  $IDL \rightarrow \varepsilon$
- 25)  $INIL \rightarrow \varepsilon$

## Indications

### Nonterminal symbols

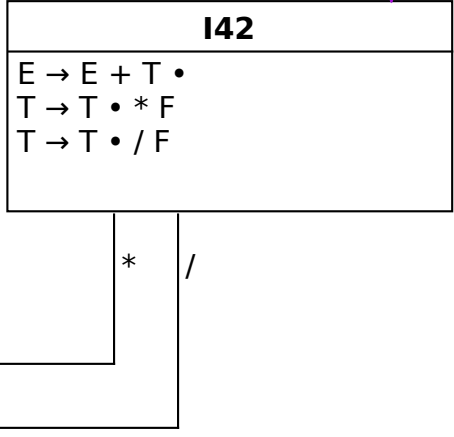
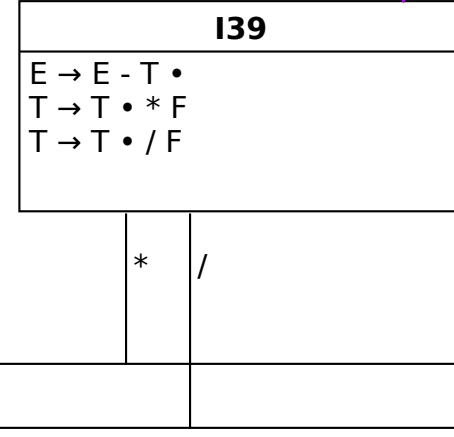
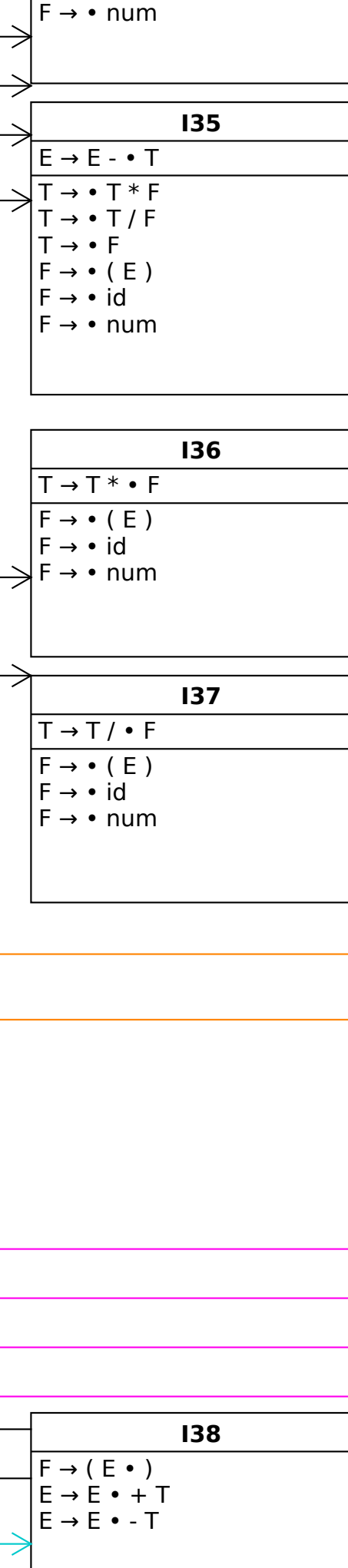
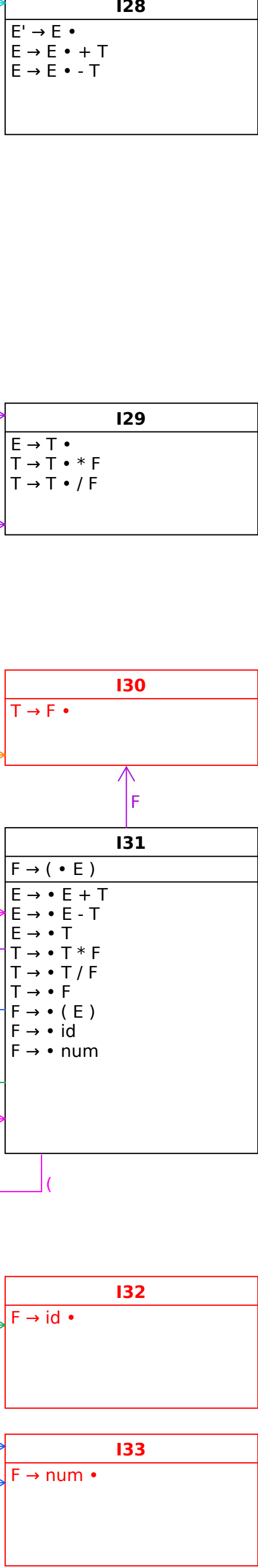
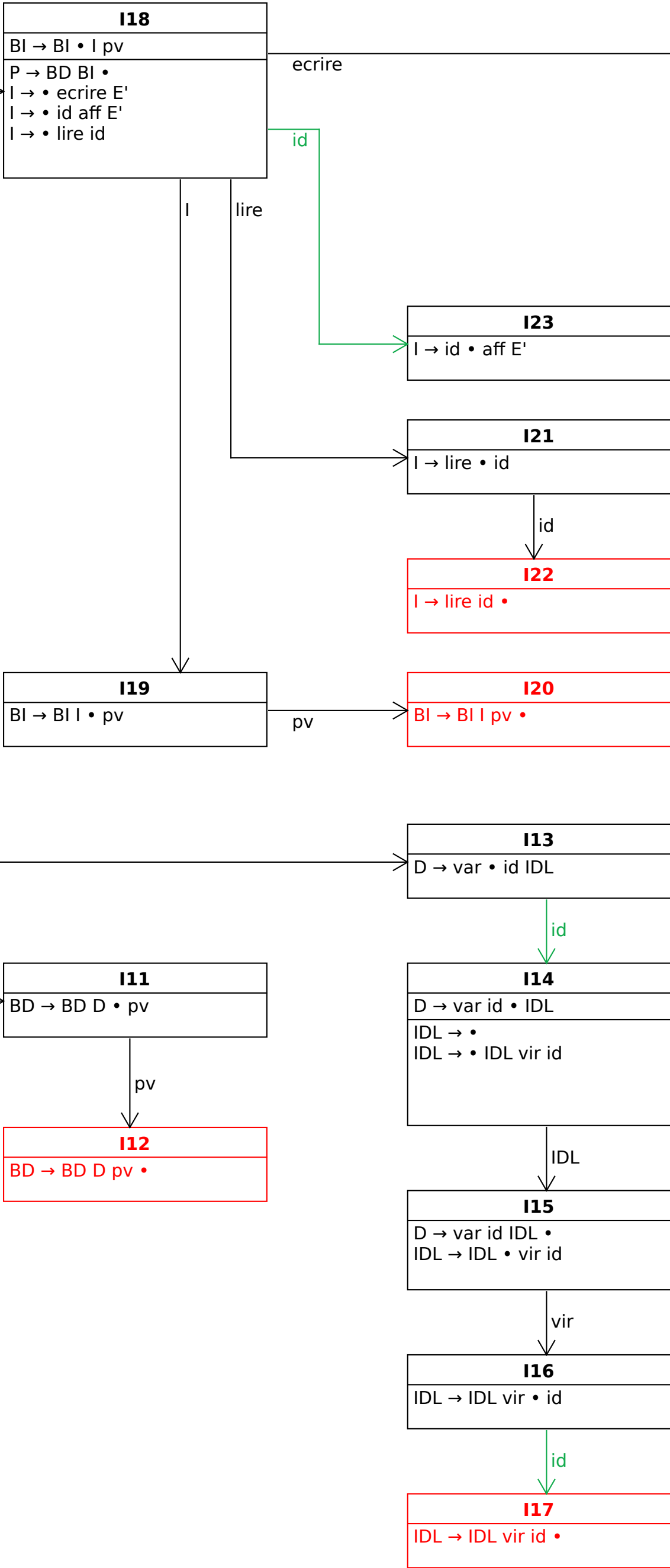
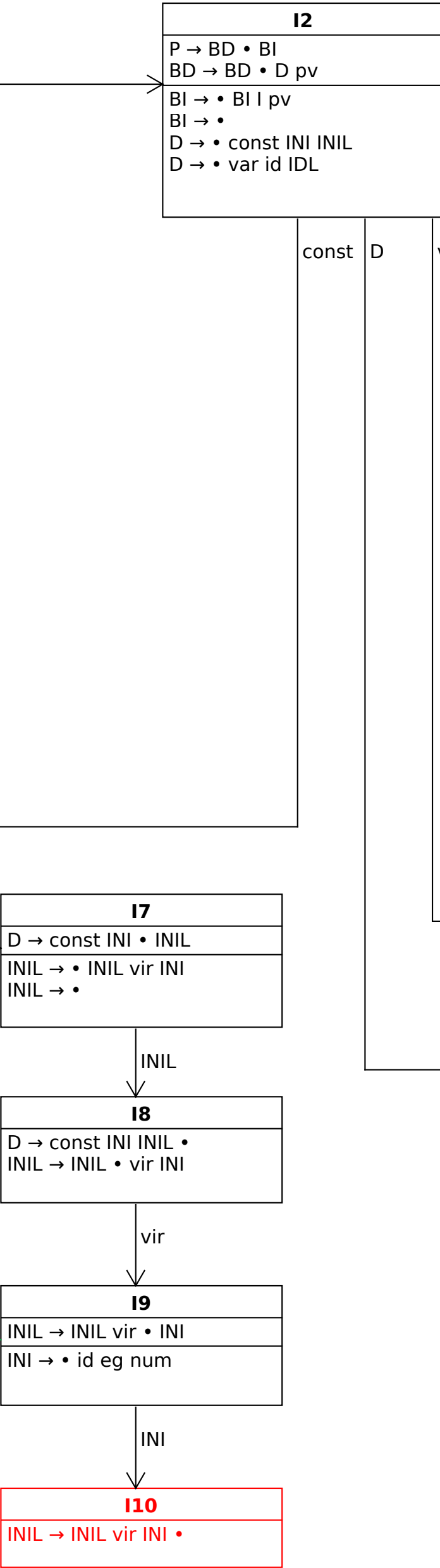
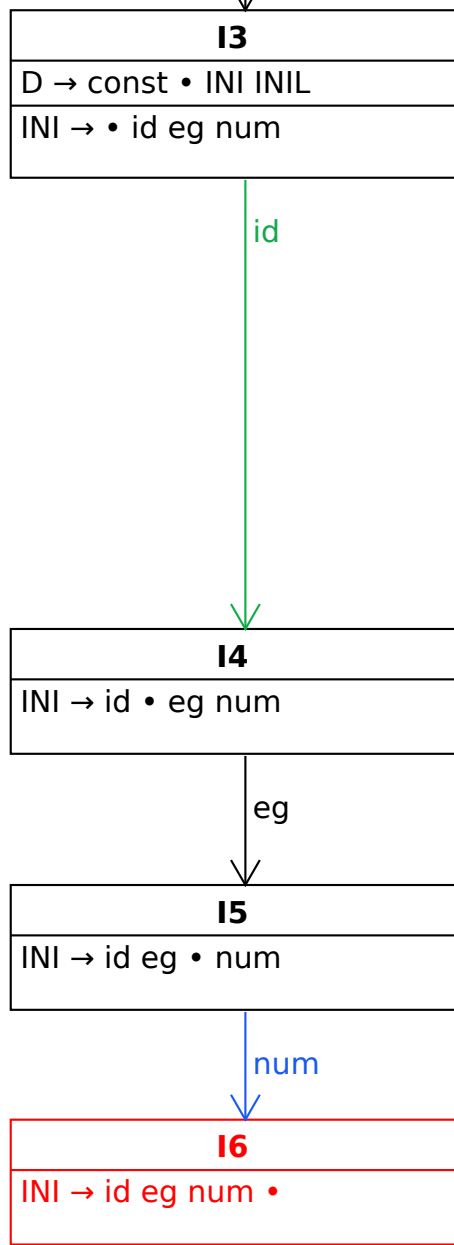
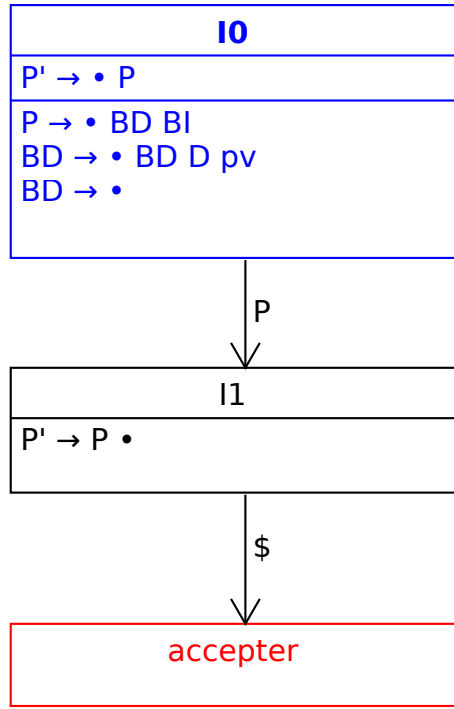
#### Symbol Meaning

P	Program
BD	Declaration Block
BI	Instruction Block
D	Declaration
I	Instruction

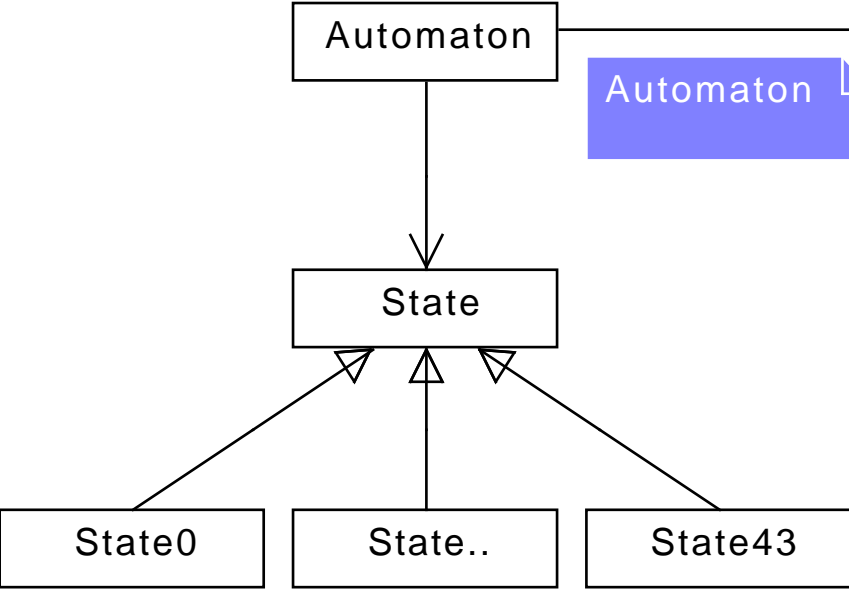
IDL	IDentifiers List
INI	INItializer
INIL	INItialisers List
E/E'	Expression ( '+' / '-' term)
T	Term ( '/' / '*' term)
F	Final

## Terminal symbols

Symbol	Meaning	Regular Expression
+	'+' character	+
-	'-' character	-
*	'*' character	*
/	'/' character	/
(	'(' character	(
)	')' character	)
pv	semicolon	;
id	identifier (variable name)	[ a-zA-Z_ ] [ a-zA-Z0-9_ ]*
var	'var' keyword	var
vir	comma	,
const	'const' keyword	const
eg	'=' character	=
aff	':=' characters	:=
num	number	[ 0-9 ]+(,[ 0-9 ]+ )?
ecrire	'ecrire' keyword	ecrire
lire	'lire' keyword	lire



[illegible]



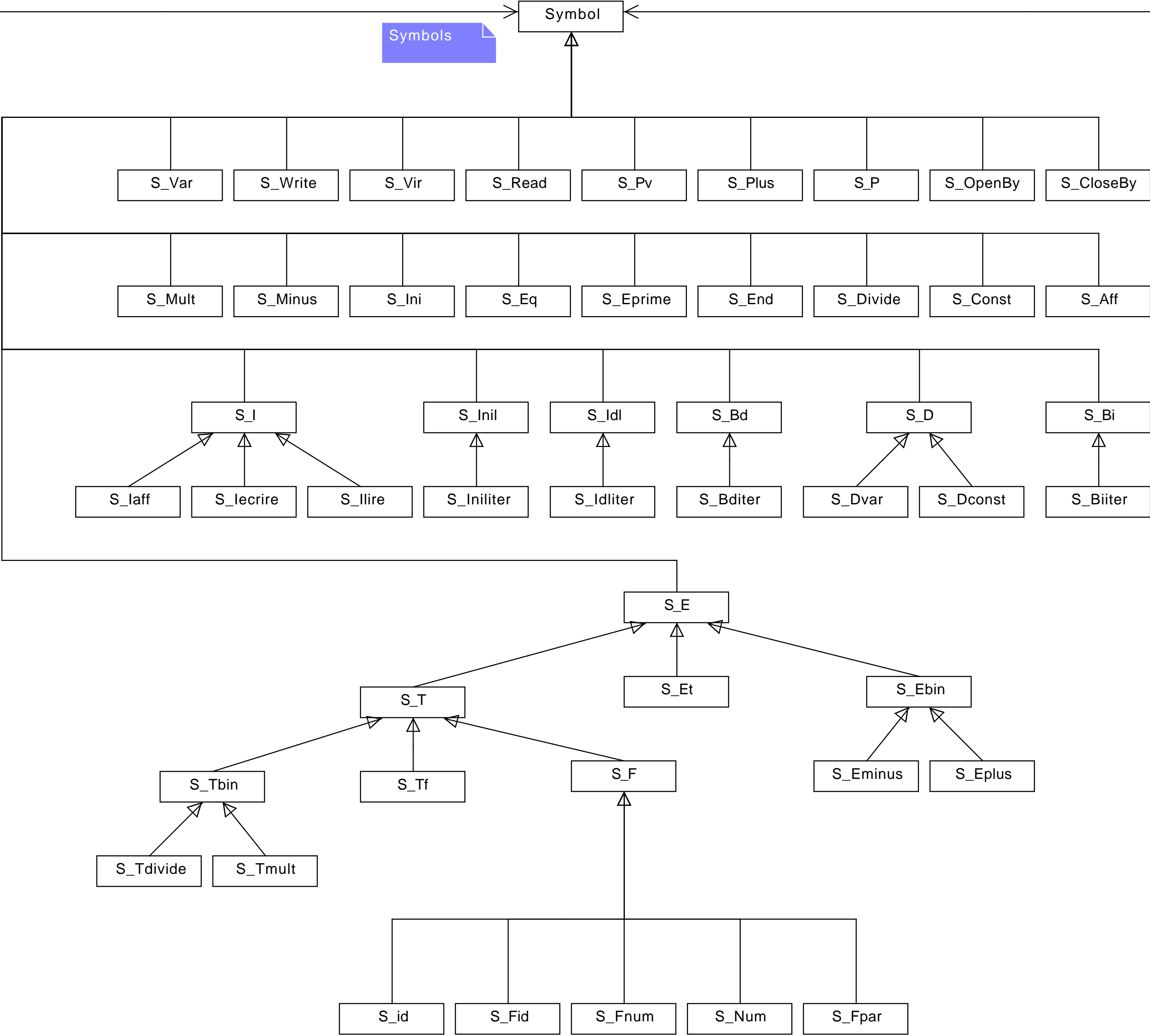
Automaton

Lexer

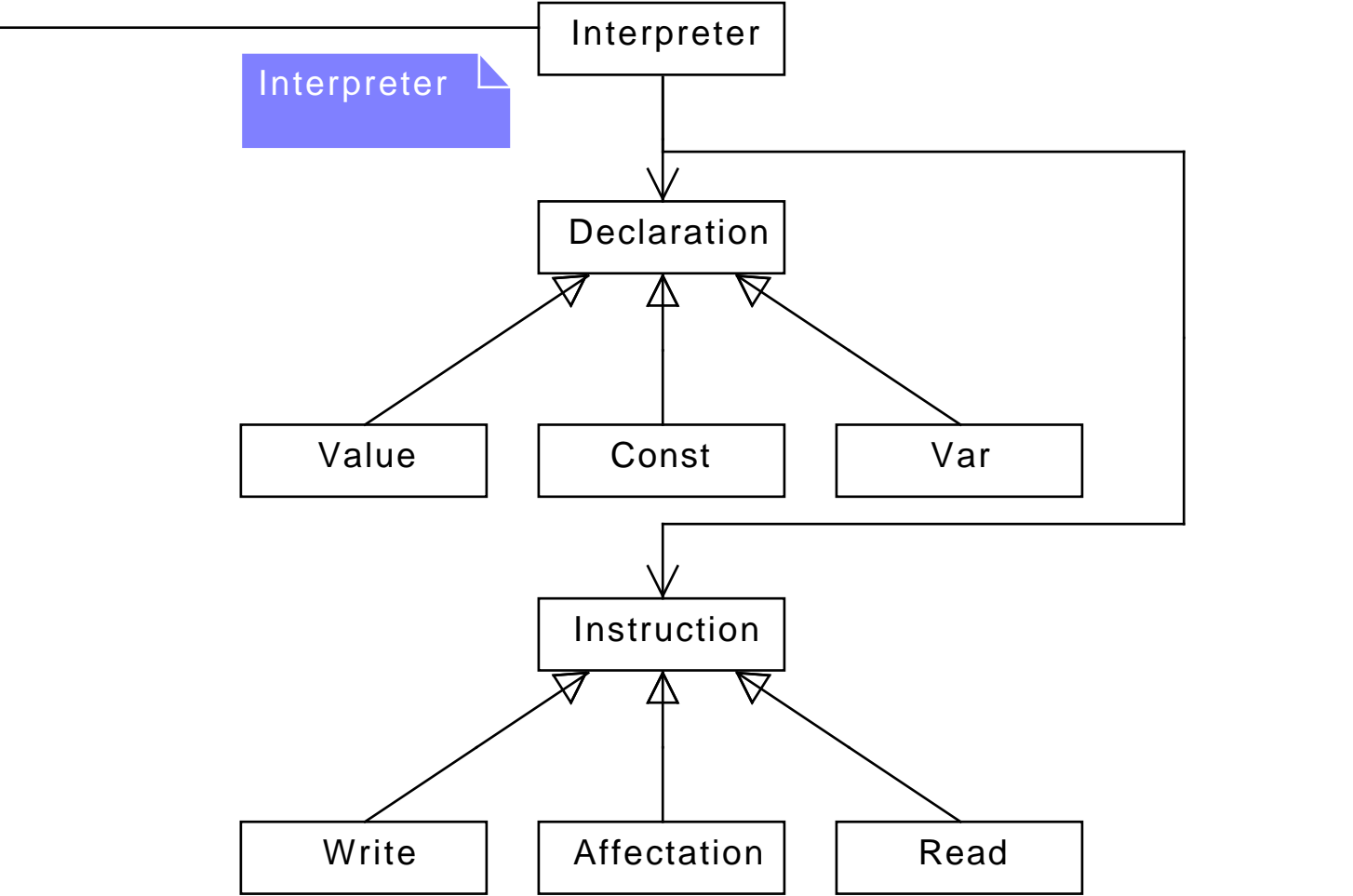
Lexer  
matchError

Utilitaires

ArgsManager  
Printer  
Loader



Symbols



Interpreter

Exceptions

