

1 Context-free grammar for CUTE Lang

This chapter explains what context-free grammar is used in CUTE Lang.

1.1 Syntax diagram

To explain efficiently, grammar is explained by syntax diagram first.

Syntax diagram representation rules

Representation rules for our syntax diagram are on Table 1.

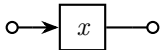
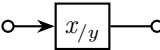
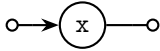
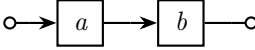
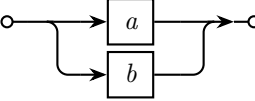
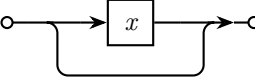
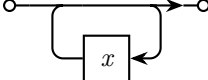
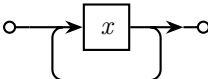
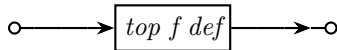
Representation	EBNF Equivalent	Meaning
	x	Nonterminal
	$x - y$	Nonterminal except y
	"x"	Terminal
	a, b	Sequence
	$a \mid b$	Selections
	$[x]$	Optional
	$\{ x \}$	Zero or more repeat
	$x, \{ x \}$	One or more repeat

Table 1: Representation rules of syntax diagram

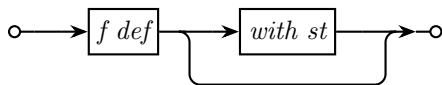
Syntax diagram for context-free grammar

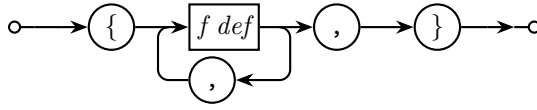
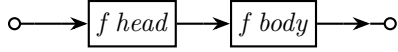
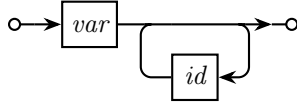
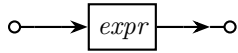
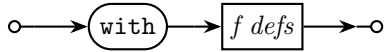
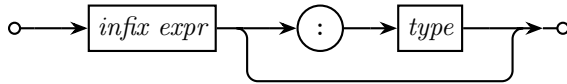
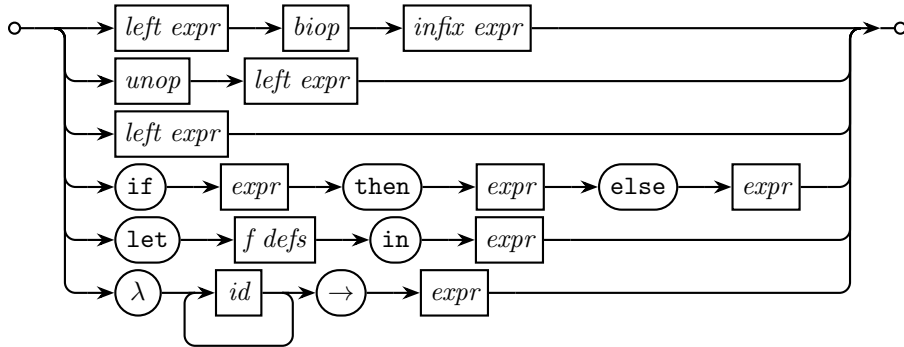
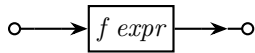
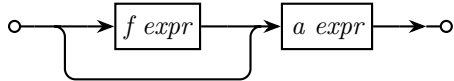
Context-free grammar expressed by syntax diagram is the following.

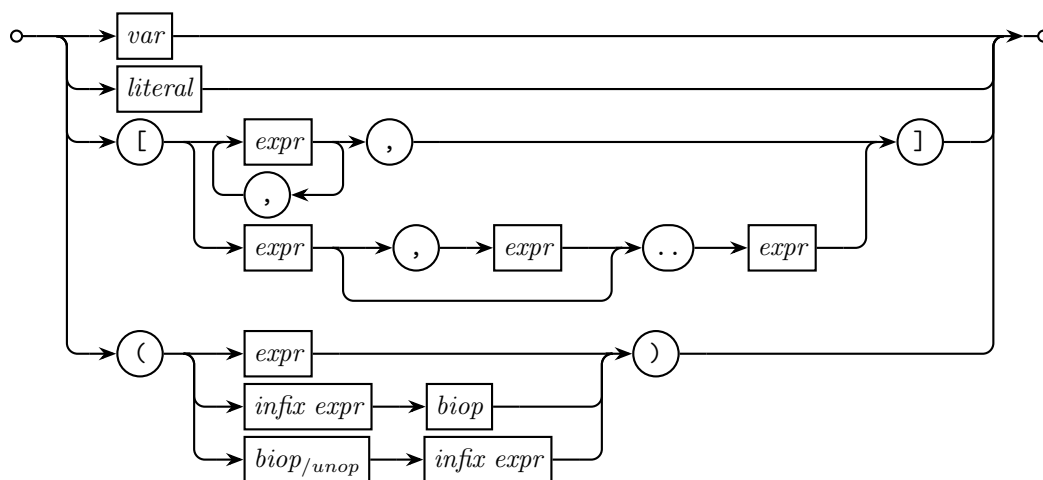
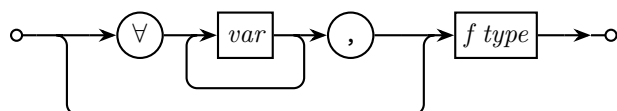
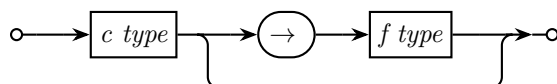
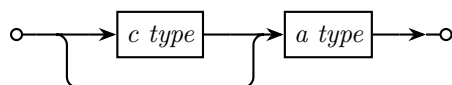
top def



top f def



f defs*f def**f head**f body**with st**expr**infix expr**left expr**f expr*

a expr*type**f type**c type**a type*