

## 1 Context-free grammar for CUTE Lang

This chapter explains what context-free grammar is used in CUTE Lang. To explain efficiently, grammar is explained by syntax diagram.

### 1.1 Syntax diagram representation rules

Representation rules of syntax diagram are on Table 1.

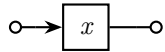
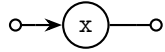
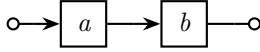
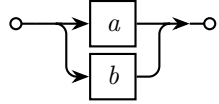
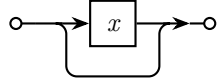
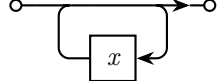
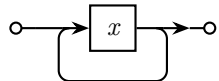
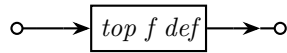
Representation	EBNF Equivalent	Meaning
	$x$	Nonterminal
	$"x"$	Terminal
	$a, b$	Sequence
	$a \mid b$	Selections
	$[ x ]$	Optional
	$\{ x \}$	Zero or more repeat
	$x, \{ x \}$	One or more repeat

Table 1: Representation rules of syntax diagram

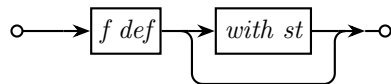
### 1.2 Syntax diagram for context-free grammar

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

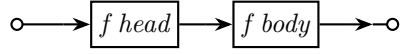
*top def*



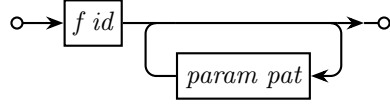
*top f def*



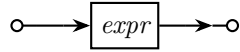
*f def*



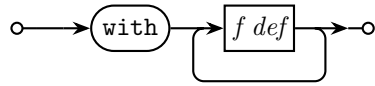
*f head*



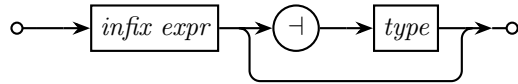
*f body*



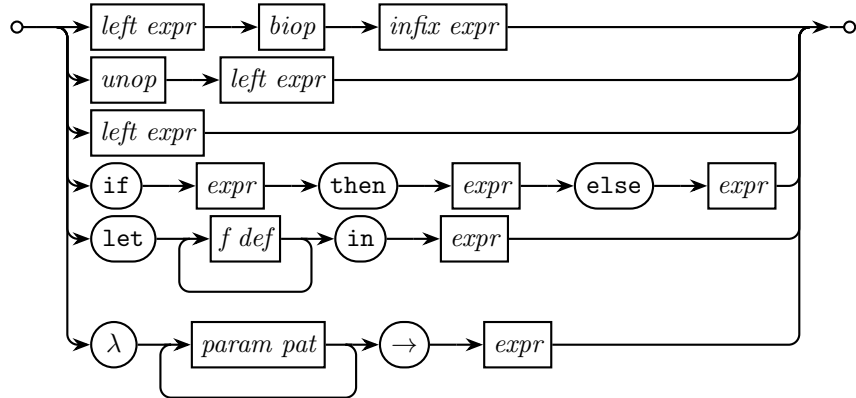
*with st*



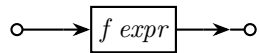
*expr*



*infix expr*



*left expr*



*f expr*

