1 Context-free grammer for CUTE Lang

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

1.1 Syntax diagram representation rules
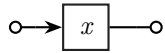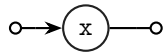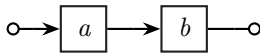
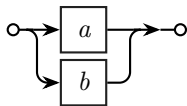Representation rules of syntax diagram are on Table 1.
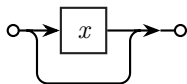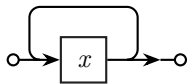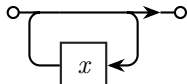
Repesentation	EBNF Equivalent	Meaning
	x	Nonterminal
	"x"	Terminal
	a, b	Sequence
	a | b	Selections
	(x)	Optional
	[x]	Zero or more repeat
	x, [x]	One or more repeat

Table 1: Representation rules of syntax diagram

1.2 Syntax diagram for context-free grammer

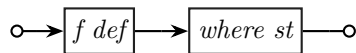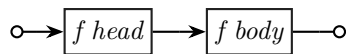Context-free grammer expressed by syntax diagram is the following.
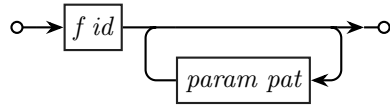
top def

top f def

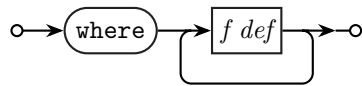**f def**

f head

```
○──▶ [f id] ──────────────────────▶──○
              └──[param pat]◀──┘
```

f body

```
○──▶ [expr] ──○
```

where st

```
○──▶ (where) ──▶ [f def] ──▶──○
                 └────────┘
```

expr

```
○──┬─(if)─▶[expr]─▶(then)─▶[expr]─▶(else)─▶[expr]─┬─○
   ├─(let)─▶[f def]─▶(in)─▶[expr]────────────────┤
   │        └──────┘                              │
   └─[infix expr]────────────────────────────────┘
              └─(::)─▶[type]─┘
```