

Mool⁻ syntax

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(class declarations)	$D ::= \text{class } C\{\vec{F}; M_c; \vec{M}\}$
(field declaration)	$F ::= t f$
(constructor declaration)	$M_c ::= \text{inv } b [\text{req } b] \text{ init } b t C(t' x) \{e\}$
(method declarations)	$M ::= \text{req } b \text{ ens } b y t m(t' x) \{e\}$
(method qualifiers)	$y ::= \epsilon \mid \text{sync}$
(values)	$v ::= \text{unit} \mid n \mid \text{true} \mid \text{false} \mid \text{null}$
(local value references)	$r ::= d \mid \text{this}$
(global value references)	$w ::= r \mid r.f$
(calls)	$c ::= \text{new } C(e) \mid r.m(e) \mid r.f.m(e)$
(arithmetic operations)	$a ::= n \mid w \mid c \mid a + a \mid a - a$ $\mid a * a \mid a/a$
(boolean operations)	$b ::= \text{true} \mid \text{false} \mid w \mid c \mid a == a \mid a != a$ $\mid a <= a \mid a >= a \mid a < a \mid a > a$ $\mid b \&\& b \mid b \parallel b \mid !b$
(expressions)	$e ::= v \mid a \mid b$ $\mid c \mid w$
(statements)	$s ::= e \mid s; s'$ $\mid r.f = e \mid t d = e \mid d = e$ $\mid \text{if } (b) s' \text{ else } s'' \mid \text{while } (b)\{s'\}$ $\mid \text{spawn}\{s\}$
(types)	$t ::= \text{void} \mid \text{int} \mid \text{bool} \mid C[u]$

The syntax, operational semantics and type system of our revision of Mool can be seen in <https://arxiv.org/abs/1604.06245>.