

Unstable-Languages-beta: IMPPP-3 *

The PLaNCompS Project

IMPPP-3.cbs | PLAIN | PRETTY

Language "IMPPP"

3 Boolean expressions

Syntax $BExp : bexp ::=$ `false`
| `true`
| `aexp <= aexp`
| `! bexp`
| `bexp && bexp`
| `(bexp)`

Semantics $eval\text{-}bool[_ : bexp] : \Rightarrow \text{booleans}$

Rule $eval\text{-}bool[\text{false}] = \text{false}$

Rule $eval\text{-}bool[\text{true}] = \text{true}$

Rule $eval\text{-}bool[AExp_1 <= AExp_2] =$
 $is\text{-}less\text{-}or\text{-}equal\ left\text{-}to\text{-}right(eval\text{-}arith[AExp_1], eval\text{-}arith[AExp_2])$

Rule $eval\text{-}bool[! BExp] = not(eval\text{-}bool[BExp])$

Rule $eval\text{-}bool[BExp_1 \&\& BExp_2] =$
 $if\text{-}true\text{-}else(eval\text{-}bool[BExp_1], eval\text{-}bool[BExp_2], false)$

Rule $eval\text{-}bool[(BExp)] = eval\text{-}bool[BExp]$

*Suggestions for improvement: plancomps@gmail.com.
Reports of issues: <https://github.com/plancomps/CBS-beta/issues>.