

Languages-beta: IMP-2 *

The PLaNCompS Project

IMP-2.cbs | PLAIN | PRETTY

Language "IMP"

2 Boolean expressions

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

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

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

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

Rule $eval\text{-}bool[AExp_1 <= AExp_2] =$
`is-less-or-equal(eval-arith[AExp1], eval-arith[AExp2])`

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

Rule $eval\text{-}bool[BExp_1 \&\& BExp_2] =$
`if-true-else(eval-bool[BExp1], eval-bool[BExp2], false)`

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

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