

# Unstable-Languages-beta: IMPPP-1 \*

The P<sub>L</sub>anCompS Project

IMPPP-1.cbs | PLAIN | PRETTY

## OUTLINE

### 1 Values

Integers  
Strings  
Identifiers

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*Language* “IMPPP”

## 1 Values

### Integers

*Syntax*  $N : \text{int} ::= \text{'-'}? \_ \text{decimal}$

*Lexis*  $D : \text{decimal} ::= (\text{'0'} - \text{'9'})^+$

*Semantics*  $\text{int-val}[\_ : \text{int}] : \Rightarrow \text{integers}$

*Rule*  $\text{int-val}[D] = \text{decimal-natural}(\text{"D"})$

*Rule*  $\text{int-val}[\text{'-'} D] = \text{integer-negate}(\text{int-val}[D])$

### Strings

*Syntax*  $S : \text{string} ::= \text{'"}\_ \text{string-chars}\_ \text{'"}$

*Lexis*  $\text{SCS} : \text{string-chars} ::= (\sim \text{'"})^*$

*Semantics*  $\text{string-val}[\_ : \text{string}] : \Rightarrow \text{strings}$

*Rule*  $\text{string-val}[\text{'"} \text{SCS} \text{'"}] = \text{"SCS"}$

### Identifiers

*Lexis*  $I : \text{id} ::= (\text{'A'} - \text{'Z'} \mid \text{'a'} - \text{'z'} \mid \text{'_'}) (\text{'0'} - \text{'9'} \mid \text{'A'} - \text{'Z'} \mid \text{'a'} - \text{'z'} \mid \text{'_'})^*$

*Semantics*  $\text{id}[\_ : \text{id}] : \Rightarrow \text{ids}$

*Rule*  $\text{id}[I] = \text{"I"}$

*Lexis*  $\text{keyword} ::= \text{'else'} \mid \text{'false'} \mid \text{'if'} \mid \text{'halt'} \mid \text{'join'} \mid \text{'print'} \mid \text{'read'} \mid \text{'spawn'} \mid \text{'true'} \mid \text{'while'}$

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\*Suggestions for improvement: [plancomps@gmail.com](mailto:plancomps@gmail.com).  
Reports of issues: <https://github.com/plancomps/CBS-beta/issues>.