Funcons-beta: Interacting

The PLanCompS Project

`Funcons-beta/Computations/Normal/Interacting/Interacting.cbs`*

Interacting

Output

[*Entity* standard-out
Funcon print]

Entity _ $\xrightarrow{\text{standard-out!}(\_ : \text{values}^*)}$ _

This entity represents the sequence of values output by a particular transition, where the empty sequence ( ) represents the lack of output. Composition of transitions concatenates their output sequences.

Funcon print(_ : values*) : ⇒ null-type

print(X^*) evaluates the arguments X^* and emits the resulting sequence of values on the standard-out channel. print( ) has no effect.

Rule print(V^* : values*) $\xrightarrow{\text{standard-out!}(V^*)}$ null-value

Input

[*Entity* standard-in
Funcon read]

Entity _ $\xrightarrow{\text{standard-in?}(\_ : \text{values}^*)}$ _

*Suggestions for improvement: `plancomps@gmail.com`.
Issues: `https://github.com/plancomps/CBS-beta/issues`.

This entity represents the sequence of values input by a particular transition, where the empty sequence ( ) represents that no values are input. The value null-value represents the end of the input.

Composition of transitions concatenates their input sequences, except that when the first sequence ends with null-value, the second seqeunce has to be just null-value.

Funcon read : $\Rightarrow$ values

read inputs a single value from the standard-in channel, and returns it. If the end of the input has been reached, read fails.

Rule $\mathsf{read} \xrightarrow{\mathsf{standard\text{-}in?}(V : \sim \mathsf{null\text{-}type})} V$

Rule $\mathsf{read} \xrightarrow{\mathsf{standard\text{-}in?}(\mathsf{null\text{-}value})} \mathsf{fail}$