Funcons-beta: Datatypes *

The PLanCompS Project

`Datatypes.cbs` | PLAIN | PRETTY

Datatypes

[*Type* datatype-values
Funcon datatype-value
Funcon datatype-value-id
Funcon datatype-value-elements]

A datatype value consists of an identifier and a sequence of values.

'Datatype T ::= ...' declares the type T to refer to a fresh value constructor in types, and asserts $T <:$ datatype-values.

Each constructor funcon 'F(_:T_1,...,_:T_n)' of the datatype declaration generates values in T of the form datatype-value("F", $V_1, \cdots, V_n$) from $V_1 : T_1, \ldots, V_n : T_n$.

Note that a computation X cannot be directly included in datatype values: it is necessary to encapsulate it in abstraction(X).

'Datatype T', followed by declarations of constructor funcons for 'T', allows specification of GADTs.

Built-in Type datatype-values

Built-in Funcon datatype-value(_ : identifiers, _ : values*) : datatype-values

Funcon datatype-value-id(_ : datatype-values) : ⇒ identifiers
Rule datatype-value-id(datatype-value(I : identifiers, _* : values*)) ⇝ I

Funcon datatype-value-elements(_ : datatype-values) : ⇒ values*
Rule datatype-value-elements(datatype-value(_ : identifiers, V^* : values*)) ⇝ V^*

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