

Unstable-Languages-beta: IMPPP-Funcons-Index *

The P_LanCompS Project

IMPPP-Funcons-Index.cbs | PLAIN | PRETTY

OUTLINE

Computations

- Normal computation
 - Flowing
 - Giving
 - Binding
 - Generating
 - Storing
 - Interacting
 - Input
 - Output
- Abnormal computation
 - Terminating abruptly
 - Failing

Values

- Value Types
- Primitive values
 - Booleans
 - Integers
 - The null value
- Composite values
 - Sequences of values
 - Tuples
 - Lists
 - Strings
 - Sets
 - Maps
- Abstraction values
 - Generic abstractions
 - Thunks
 - Functions

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

Computations

Normal computation

Flowing

```
[ Funcon left-to-right
  Alias l-to-r
  Funcon sequential
  Alias seq
  Funcon effect
  Funcon if-true-else
  Alias if-else
  Funcon while-true
  Alias while
  Funcon atomic ]
```

Giving

```
[ Entity given-value
  Funcon give
  Funcon given
  Funcon no-given
  Funcon left-to-right-filter ]
```

Binding

```
[ Type environments
  Alias envs
  Datatype identifiers
  Alias ids
  Funcon initialise-binding
  Funcon bind-value
  Alias bind
  Funcon bound-value
  Alias bound
  Funcon scope
  Funcon collateral ]
```

Generating

```
[ Type atoms
  Funcon fresh-atom ]
```

Storing

```
[ Entity   store
  Funcon  initialise-storing
  Funcon  allocate-variable
    Alias  alloc
  Funcon  allocate-initialised-variable
    Alias  alloc-init
  Funcon  assign
  Funcon  assigned
  Funcon  un-assign ]
```

Interacting

Input

```
[ Funcon  read ]
```

Output

```
[ Funcon  print ]
```

Abnormal computation

Terminating abruptly

```
[ Entity   abrupted
  Funcon  handle-abrupt ]
```

Failing

```
[ Funcon  finalise-failing
  Funcon  fail
  Funcon  else
  Funcon  checked
  Funcon  check-true ]
```

Values

Value Types

```
[ Type   values
  Alias  vals
  Funcon is-value
    Alias is-val
  Funcon when-true
    Alias when
    Type  ground-values
    Alias ground-vals
  Funcon is-equal
    Alias is-eq ]
```

Primitive values

Booleans

```
[ Datatype  booleans
  Alias     bools
  Funcon    true
  Funcon    false
  Funcon    not
  Funcon    and ]
```

Integers

```
[ Type      integers
  Alias      ints
  Type      positive-integers
  Alias      pos-ints
  Type      natural-numbers
  Alias      nats
  Funcon     natural-successor
  Alias      nat-succ
  Funcon     natural-predecessor
  Alias      nat-pred
  Funcon     integer-add
  Alias      int-add
  Funcon     integer-divide
  Alias      int-div
  Funcon     integer-negate
  Alias      int-neg
  Funcon     integer-is-less-or-equal
  Alias      is-less-or-equal
  Funcon     integer-is-greater
  Alias      is-greater
  Funcon     decimal-natural
  Alias      decimal ]
```

The null value

```
[ Datatype  null-type
  Funcon    null-value
  Alias     null ]
```

Composite values

Sequences of values

```
[ Funcon    length
  Funcon    index
  Funcon    first
  Funcon    second ]
```

Tuples

```
[ Datatype  tuples
  Funcon    tuple-elements ]
```

Lists

```
[ Datatype  lists
  Funcon    list-elements
  Funcon    list-cons
  Alias     cons
  Funcon    list-head
  Alias     head
  Funcon    list-tail
  Alias     tail
  Funcon    list-append ]
```

Strings

```
[ Type      strings
  Funcon    string-append ]
```

Sets

```
[ Type      sets
  Funcon    is-in-set
  Funcon    is-subset
  Funcon    set-unite
  Funcon    set-intersect
  Funcon    set-difference
  Funcon    some-element ]
```

Maps

```
[ Type      maps
  Funcon    map
  Funcon    map-lookup
  Alias     lookup
  Funcon    map-domain
  Alias     dom
  Funcon    map-override
  Funcon    map-unite
  Funcon    map-delete ]
```

Abstraction values

Generic abstractions

```
[ Type      abstractions
  Funcon    abstraction
  Funcon    closure ]
```

Thunks

```
[ Datatype  thunks  
  Funcon   thunk ]
```

Functions

```
[ Funcon   apply  
  Funcon   supply ]
```