

# Unstable-Funcons-beta: Indexing \*

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

Indexing.cbs | PLAIN | PRETTY

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## Value indexing

```
[ Entity value-index
  Funcon initialise-index
  Funcon allocate-index
  Funcon lookup-index ]
```

The following funcons support indexing of values by natural numbers. They could be enhanced to ensure that each value has at most one index, and to allow finding the index of a value.

```
Entity ⟨_, value-index(_ : ground-values*)⟩ →
       ⟨_, value-index(_ : ground-values*)⟩
```

```
Funcon initialise-index : ⇒ null-type
Rule ⟨initialise-index, value-index(_)⟩ → ⟨null-value, value-index( )⟩
```

```
Funcon allocate-index(_ : ground-values) : ⇒ natural-numbers
Rule ⟨allocate-index(V : ground-values), value-index(V*)⟩ →
     ⟨length(V*, V), value-index(V*, V)⟩
```

```
Funcon lookup-index(_ : natural-numbers) : ⇒ ground-values
Rule ⟨lookup-index(N : natural-numbers), value-index(V*)⟩ →
     ⟨index(N, V*), value-index(V*)⟩
Assert lookup-index(allocate-index(V : ground-values)) → V
```

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