The "Unknown:"s below indicate that an entry is incomplete.

- either the entry exist in the language, and <u>please tell</u>.
- either the entry doesn't exist in the language, and <u>please tell so</u>. The entry will be marked as such and won't appear as missing anymore.
- Category: Object Oriented, Dynamically typed

#### • Various

nothing needed	breaking lines (useful when end-of-line and/or indentation has a special meaning)
/* */	commenting (nestable)
8	commenting (until end of line)
< > =< >=	comparison
Min / Max	comparison (min / max (binary or more))
== \=	equality / inequality (deep)
System.gcDo	force garbage collection
( )	grouping expressions
Compiler.evalExpression or Compiler.parseOzVirtualString	runtime evaluation
=	variable assignment or declaration (assignment)
local V1 = e V2 = e2 in end	variable assignment or declaration (declaration)

#### Unknown:

documentation comment information about the current line and file tokens (case-sensitivity (keywords, variable identifiers...)) tokens (what is the standard way for <u>scrunching together multiple words</u>) tokens (variable identifier regexp) comparison (returns 3 values (i.e. inferior, equal or superior))

# • Functions

anonymous function
function call
function call (with no parameter)
function definition

proc { F Para1 Para2 } end	function definition (procedures)
no syntax needed(2)	function return value (function body is the result)

#### Unknown:

runtime inspecting the caller information

#### • Control Flow

try a catch exn then end	exception (catching)
raise end	exception (throwing)
if c then end	if_then
if c then b1 elseif c2 then b2 else b3 end	if_then_else

#### Unknown:

```
multiple selection (switch)
loop (forever loop)
loop (while condition do something)
loop (do something until condition)
loop (for each value in a numeric range, 1 increment (see also the entries about ranges))
loop (for each value in a numeric range, 1 decrement)
loop (for each value in a numeric range, free increment)
loop (for "a la C" (while + initialisation))
```

## • Object Oriented & Reflexivity

#### Unknown:

method invocation (with no parameter)
object creation
object cloning
manually call an object's destructor
class declaration
testing class membership
get the type/class corresponding to an object/instance/value
methods available
inheritance
has the method
current instance
accessing parent method

## • Package, Module

#### Unknown:

```
package scope
declare
import
```

## • <u>Strings</u>

& Z	character "z"
== \=	string equality & inequality
Length	string size
" • • •	strings (with no interpolation of variables)
ToUpper / ToLower	upper / lower case character

#### Unknown:

```
strings (with interpolation of variables)
strings (end-of-line (without writing the real CR or LF character))
multi-line
convert something to a string (see also string interpolation)
serialize (marshalling)
unserialize (un-marshalling)
sprintf-like
simple print
string concatenation
duplicate n times
uppercase / lowercase / capitalized string
ascii to character
character to ascii
accessing n-th character
extract a substring
locate a substring
locate a substring (starting at the end)
```

#### • Booleans

false	false value
Not	logical not
Or / And(3)	logical or / and (non short circuit (always evaluates both arguments))
orelse / andthen	logical or / and (short circuit)
true	true value

# • Bags and Lists

	adding an element at the beginning (list cons) (return the new list (no side-effect))	
FoldL	f( f(f(init, e1), e2), en)	
FoldR	f(e1, f(e2, f(en, init)))	
ForAll	for each element do something	

Member	is an element in the list	
Some	is the predicate true for an element	
All	is the predicate true for every element	
forAllInd	iterate with index	
Filter	keep elements (matching)	
Last	last element	
Append	list concatenation	
[ a b c ]	list constructor	
Flatten	list flattening (one level depth)	
Length	list size	
Nth	list/array indexing	
Partition	partition a list: elements matching, elements non matching	
Reverse	reverse	
Sort	sort	
Map	transform a list (or bag) in another one	
Zip	transform two lists in parallel	

#### Unknown:

adding an element at index adding an element at the end first element all but the first element get the first element and remove it get the last element and remove it smallest / biggest element join a list of strings in a string using a glue string remove duplicates

# • <u>Various Data Types</u>

List.number A B Step	range (inclusive inclusive)
•	record (selector)
Assign	reference (pointer) (assigning (when dereferencing doesn't give a lvalue))
NewCell	reference (pointer) (creation)

reference (pointer) (dereference)

### Unknown:

tuple constructor

computable tuple (these are a kind of immutable lists playing a special role in parameter passing) (empty tuple)

computable tuple (these are a kind of immutable lists playing a special role in parameter passing) (1-uple)

computable tuple (these are a kind of immutable lists playing a special role in parameter passing) (using a tuple for a function call)

optional value (null value)

optional value (value)

optional value (null coalescing)

dictionary (constructor)

dictionary (access)

dictionary (has the key ?)

dictionary (remove by key)

dictionary (list of keys)

dictionary (list of values)

dictionary (merge)

#### • Mathematics

Pow	exponentiation (power)
Log	logarithm (base e)
mod	modulo (modulo of -3 / 2 is -1)
~	negation
1000., 1.E3	numbers syntax (floating point)
0b1, 07, 0xf <u>(4)</u>	numbers syntax (integers in base 2, octal and hexadecimal)
1000	numbers syntax (integers)
Sqrt / Exp / Abs	square root / e-exponential / absolute value
Sin / Cos / Tan	trigonometry (basic)
Asin / Acos / Atan	trigonometry (inverse)
/ Round / Floor / Ceil	truncate / round / floor / ceil

#### Unknown:

```
addition / subtraction / multiplication / division random (random number) random (seed the pseudo random generator) operator priorities and associativities logarithm (base 10) bitwise operators
```

# Remarks

- (1) also works for procedures: proc  $\{\$\ A\ B\}$  ... end
- (2) in Matlab, only for anonymous function
- (3) in Oz, simple functions, not operators
- (4) 0b1 new in PHP 5.4

# <u>Pixel</u>

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