

# The ALEXANDRIA+ Reference Manual

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A conservative set of extensions to Alexandria utilities, version 1.1.0

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## Copying

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# 1 Systems

The main system appears first, followed by any subsystem dependency.

## 1.1 alexandria+

A conservative set of extensions to Alexandria utilities.

**Author** Steven Nunez <steve@symbolics.tech>

**Home Page**  
<https://github.com/symbolics/alexandria+>

**License** MS-PL

**Long Description**  
Utilities not in Alexandria, UIOP or OSICAT.

**Version** 1.1.0

**Dependency**  
alexandria (system).

**Source** [alexandria+.asd], page 5.

**Child Components**

- [pkgdcl.lisp], page 5 (file).
- [lists.lisp], page 5 (file).
- [types.lisp], page 5 (file).
- [numbers.lisp], page 6 (file).
- [control-flow.lisp], page 6 (file).





## 2 Files

Files are sorted by type and then listed depth-first from the systems components trees.

### 2.1 Lisp

#### 2.1.1 alexandria+/alexandria+.asd

**Source** [alexandria+.asd], page 5.

**Parent Component**

[alexandria+], page 3 (system).

**ASDF Systems**

[alexandria+], page 3.

#### 2.1.2 alexandria+/pkgdcl.lisp

**Source** [alexandria+.asd], page 5.

**Parent Component**

[alexandria+], page 3 (system).

**Packages** [alexandria+], page 7.

#### 2.1.3 alexandria+/lists.lisp

**Source** [alexandria+.asd], page 5.

**Parent Component**

[alexandria+], page 3 (system).

**Public Interface**

- [alist], page 10 (type).
- [alist-keys], page 9 (function).
- [alist-values], page 9 (function).
- [alistp], page 9 (function).
- [defprop], page 9 (macro).
- [plist], page 10 (type).
- [plist-keys], page 9 (function).
- [plist-values], page 10 (function).
- [plistp], page 10 (function).

#### 2.1.4 alexandria+/types.lisp

**Source** [alexandria+.asd], page 5.

**Parent Component**

[alexandria+], page 3 (system).

**Public Interface**

- [percentage], page 10 (type).
- [probability], page 10 (type).

### 2.1.5 alexandria+/numbers.lisp

**Source** [alexandria+.asd], page 5.

**Parent Component**  
[alexandria+], page 3 (system).

**Public Interface**  
[multf], page 9 (macro).

### 2.1.6 alexandria+/control-flow.lisp

**Source** [alexandria+.asd], page 5.

**Parent Component**  
[alexandria+], page 3 (system).

**Public Interface**  
[unlessf], page 9 (macro).

## 3 Packages

Packages are listed by definition order.

### 3.1 alexandria+

**Source**      [pkgdcl.lisp], page 5.

**Use List**

- alexandria.
- common-lisp.

**Used By List**

- data-frame.
- num-utils.arithmetic.
- num-utils.quadrature.
- special-functions.

**Public Interface**

- [alist], page 10 (type).
- [alist-keys], page 9 (function).
- [alist-values], page 9 (function).
- [alistp], page 9 (function).
- [defprop], page 9 (macro).
- [multf], page 9 (macro).
- [percentage], page 10 (type).
- [plist], page 10 (type).
- [plist-keys], page 9 (function).
- [plist-values], page 10 (function).
- [plistp], page 10 (function).
- [probability], page 10 (type).
- [unlessf], page 9 (macro).



## 4 Definitions

Definitions are sorted by export status, category, package, and then by lexicographic order.

### 4.1 Public Interface

#### 4.1.1 Macros

**defprop** (*symbol value indicator*) [Macro]

Gives SYMBOL an INDICATOR property of VALUE.

After this is done (CL:GET symbol indicator) returns VALUE

**Package** [alexandria+], page 7.

**Source** [lists.lisp], page 5.

**multf** (*place coefficient*) [Macro]

Multiply place by COEFFICIENT.

**Package** [alexandria+], page 7.

**Source** [numbers.lisp], page 6.

**unlessf** (*place value-form*) [Macro]

When PLACE is NIL, evaluate VALUE-FORM and save it there.

**Package** [alexandria+], page 7.

**Source** [control-flow.lisp], page 6.

#### 4.1.2 Ordinary functions

**alist-keys** (*alist*) [Function]

Returns a list of the keys in ALIST.

**Package** [alexandria+], page 7.

**Source** [lists.lisp], page 5.

**alist-values** (*alist*) [Function]

Returns a list of the values in ALIST.

**Package** [alexandria+], page 7.

**Source** [lists.lisp], page 5.

**alistp** (*value*) [Function]

Returns T if VALUE is an ALIST.

**Package** [alexandria+], page 7.

**Source** [lists.lisp], page 5.

**plist-keys** (*plist*) [Function]

Return the keys of PLIST

**Package** [alexandria+], page 7.

**Source** [lists.lisp], page 5.

**plist-values** (*plist*) [Function]

Return the values of PLIST

**Package** [alexandria+], page 7.

**Source** [lists.lisp], page 5.

**plistp** (*value* &*key* *allow-symbol-keys*) [Function]

Returns VALUE if it is a properly formed PLIST, NIL otherwise.

If ALLOW-SYMBOL-KEYS is not nil, keys may be either symbols or keywords

**Package** [alexandria+], page 7.

**Source** [lists.lisp], page 5.

### 4.1.3 Types

**alist** () [Type]

Type designator for ALIST. Implemented as a SATISFIES type, hence not recommended for performance intensive use. Main usefulness as a type designator of the expected type in a TYPE-ERROR.

**Package** [alexandria+], page 7.

**Source** [lists.lisp], page 5.

**percentage** () [Type]

A number between 0 and 100

**Package** [alexandria+], page 7.

**Source** [types.lisp], page 5.

**plist** () [Type]

Type designator for PLIST. Implemented as a SATISFIES type, hence not recommended for performance intensive use. Main usefulness as a type designator of the expected type in a TYPE-ERROR.

**Package** [alexandria+], page 7.

**Source** [lists.lisp], page 5.

**probability** () [Type]

A number between 0 and 1

**Package** [alexandria+], page 7.

**Source** [types.lisp], page 5.

## Appendix A Indexes

### A.1 Concepts

(Index is nonexistent)

## A.2 Functions

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