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API Collection

# Filters and Sorting

Use predicates, expressions, and sort descriptors to examine elements in collections and other services.

## Topics

### Filtering

`struct Predicate`

A logical condition used to test a set of input values for searching or filtering.

`struct PredicateError`

An error thrown while evaluating a predicate.

`struct Predicate Codable Configuration`

A specification of the expected types and key paths found in an archived predicate.

`protocol Predicate Codable Key Path Providing`

A type that provides the expected key paths found in an archived predicate.

`protocol Predicate Expression`

A component expression that makes up part of a predicate.

`protocol Standard Predicate Expression`

A component expression that makes up part of a predicate, and that's supported by the standard predicate type.

`enum Predicate Expressions`

The expressions that make up a predicate.

```
struct PredicateBindings
```

A mapping from a predicates's input variables to their values.

```
class NSPredicate
```

A definition of logical conditions for constraining a search for a fetch or for in-memory filtering.

```
class NSExpression
```

An expression for use in a comparison predicate.

```
class NSComparisonPredicate
```

A specialized predicate for comparing expressions.

```
class NSCompoundPredicate
```

A specialized predicate that evaluates logical combinations of other predicates.

## Sorting

```
class NSSortDescriptor
```

An immutable description of how to order a collection of objects according to a property common to all the objects.

```
enum ComparisonResult
```

Constants that indicate sort order.

```
struct SortDescriptor
```

A serializable description of how to sort numerics and strings.

```
protocol SortComparator
```

A comparison algorithm for a specified type.

```
struct ComparableComparator
```

A comparator that compares types according to their conformance to the comparable protocol.

```
struct KeyPathComparator
```

A comparator that uses another sort comparator to provide the comparison of values at a key path.

```
enum SortOrder
```

The orderings that you can perform sorts with.

## See Also

### Fundamentals

#### ☰ Numbers, Data, and Basic Values

Work with primitive values and other fundamental types used throughout Cocoa.

#### ☰ Strings and Text

Create and process strings of Unicode characters, use regular expressions to find patterns, and perform natural language analysis of text.

#### ☰ Collections

Use arrays, dictionaries, sets, and specialized collections to store and iterate groups of objects or values.

#### ☰ Dates and Times

Compare dates and times, and perform calendar and time zone calculations.

#### ☰ Units and Measurement

Label numeric quantities with physical dimensions to allow locale-aware formatting and conversion between related units.

#### ☰ Data Formatting

Convert numbers, dates, measurements, and other values to and from locale-aware string representations.