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API Collection

Units and Measurement

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

Topics

Essentials

`struct Measurement`

A numeric quantity labeled with a unit of measure, with support for unit conversion and unit-aware calculations.

`class NSMeasurement`

A numeric quantity labeled with a unit of measure, with support for unit conversion and unit-aware calculations.

`class Unit`

An abstract class representing a unit of measure.

`class Dimension`

An abstract class representing a dimensional unit of measure.

Conversion

`class UnitConverter`

An abstract class that provides a description of how to convert a unit to and from the base unit of its dimension.

`class UnitConverterLinear`

A description of how to convert between units using a linear equation.

Physical Dimension

```
class UnitArea
```

A unit of measure for area.

```
class UnitLength
```

A unit of measure for length.

```
class UnitVolume
```

A unit of measure for volume.

```
class UnitAngle
```

A unit of measure for planar angle and rotation.

Mass, Weight, and Force

```
class UnitMass
```

A unit of measure for mass.

```
class UnitPressure
```

A unit of measure for pressure.

Time and Motion

```
class UnitAcceleration
```

A unit of measure for acceleration.

```
class UnitDuration
```

A unit of measure for a duration of time.

```
class UnitFrequency
```

A unit of measure for frequency.

```
class UnitSpeed
```

A unit of measure for speed.

Energy, Heat, and Light

`class UnitEnergy`

A unit of measure for energy.

`class UnitPower`

A unit of measure for power.

`class UnitTemperature`

A unit of measure for temperature.

`class UnitIlluminance`

A unit of measure for illuminance.

Electricity

`class UnitElectricCharge`

A unit of measure for electric charge.

`class UnitElectricCurrent`

A unit of measure for electric current.

`class UnitElectricPotentialDifference`

A unit of measure for electric potential difference.

`class UnitElectricResistance`

A unit of measure for electric resistance.

Concentration and Dispersion

`class UnitConcentrationMass`

A unit of measure for concentration of mass.

`class UnitDispersion`

A unit of measure for specific quantities of dispersion.

Fuel Efficiency

`class UnitFuelEfficiency`

A unit of measure for fuel efficiency.

Data Storage

```
class UnitInformationStorage
```

A unit of measure for quantities of information.

Formatting Measurements

```
struct MeasurementFormatUnitUsage
```

A type that provides the generalized usage for a formatted measurement.

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.

☰ Data Formatting

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

☰ Filters and Sorting

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