`theofig`

`figure` implementation of theorem environments

A Typst package for creation and customization
of theorem environments built on top of `std.figure`.

`github.com/Danila-Bain/typst-theorems`

Version 0.0.1

Guide

Reference

Usage examples

Importing everything with * is recommended:

```
#import "@preview/theofig:0.0.1": *
```

```
== Basic usage
#theorem[
  #lorem(5)
] <theorem-1>

#theorem[Lorem][#lorem(10)]

#proof[It follows directly from @theorem-1.]
```

Basic usage

Theorem 1. Lorem ipsum dolor sit amet.

Theorem 2 (Lorem). Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.

Proof. It follows directly from Theorem 1. ■

```
== Default environments
#theorem[#lorem(5)]

#lemma[#lorem(5)]

#statement[#lorem(5)]

#remark[#lorem(5)]

#corollary[#lorem(5)]

#example[#lorem(5)]

#definition[#lorem(5)]

#algorithm[#lorem(5)]

#proof[#lorem(5)]

#problem[#lorem(5)]

#solution[#lorem(5)]
```

Default environments

Theorem 1. Lorem ipsum dolor sit amet.

Lemma 1. Lorem ipsum dolor sit amet.

Statement 1. Lorem ipsum dolor sit amet.

Remark 1. Lorem ipsum dolor sit amet.

Corollary. Lorem ipsum dolor sit amet.

Example 1. Lorem ipsum dolor sit amet.

Definition 1. Lorem ipsum dolor sit amet.

Algorithm 1. Lorem ipsum dolor sit amet.

Proof. Lorem ipsum dolor sit amet. ■

Problem 1. Lorem ipsum dolor sit amet.

Solution. Lorem ipsum dolor sit amet.

```
== Custom numbering

#definition[Default.]

#definition(numbering: none)[No numbering.]

#definition[Equivalent to @def-2.]<def-1>

#definition(number: <def-1>, numbering: "1'")[
  Equivalent to @def-1.
]<def-2>

#definition(number: 100)[
  This is @def-100.
]<def-100>

#definition(number: 5, numbering: "A")[
  This is @def-3.
]<def-3>

#definition(number: $e^pi$)[
  This is @def-exp
]<def-exp>

#definition[Back to default.]
```

Custom numbering

Definition 1. Default.

Definition. No numbering.

Definition 2. Equivalent to Definition 2'.

Definition 2'. Equivalent to Definition 2.

Definition 100. This is Definition 100.

Definition E. This is Definition E.

Definition e^π. This is Definition e^π

Definition 3. Back to default.

```
== Ways to specify numbering

#definition[Default @def-a-1.]<def-a-1>

#show figure-where-kind-in(
  theofig-kinds
): set figure(numbering: "I")
#definition[Show rule @def-a-2.]<def-a-2>

#let definition = definition.with(numbering: "A")
#definition[Redefined @def-a-3.]<def-a-3>

#definition(numbering: numbering.with("(i)"))[
  Argument @def-a-4.
]<def-a-4>
```

Ways to specify numbering

Definition 1. Default Definition 1.

Definition II. Show rule Definition II.

Definition C. Redefined Definition C.

Definition (iv). Argument Definition (iv).

```
== Different styles

#theorem[Default. #lorem(16)]

#show figure.where(kind: "definition"): it => {
  show figure.caption: emph
  show figure.caption: strong.with(delta: -300)
  it
}
#definition[Italic caption. #lorem(16)]

#show figure.where(kind: "lemma"): it => {
  show figure.caption: underline.with(offset: 1.5pt)
  show figure.caption: strong.with(delta: -300)
  it
}
#lemma[Underline caption. #lorem(16)]

#show figure.where(kind: "proposition"): it => {
  show: emph
  show figure.caption: emph
  show figure.caption: smallcaps
  show figure.caption: strong.with(delta: -300)
  it
}
#proposition[Italic body, smallcaps caption. #lorem(12)]


#show figure.where(kind: "corollary"): it => {
  show figure.caption: strong.with(delta: -300)
  show figure.caption: set text(tracking: 3pt)
  it
}
#corollary[Sparse caption. #lorem(16)]

#show figure.where(kind: "statement"): block.with(
  stroke: 1pt, radius: 3pt, inset: 5pt,
)
#statement[Block. #lorem(16)]

#show figure.where(kind: "solution"): block.with(
  stroke: (left: 1pt), inset: (right: 0pt, rest: 5pt)
)
#solution[Line to the left. #lorem(16)]
```

Different styles

Theorem 1. Default. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et.

Definition 1. Italic caption. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et.

Lemma 1. Underline caption. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et.

Proposition 1. *Italic body, smallcaps caption. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor.*

Corollary. Sparse caption. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et.

Statement 1. Block. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et.

Solution. Line to the left. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et.

```
== Show rules to specify a style

// apply to one
#show figure.where(kind: "theorem"): smallcaps
// apply to some
#show figure-where-kind-in(
  ("solution", "problem")
): emph
// apply to all
#show figure-where-kind-in(theofig-kinds): set figure(
  numbering: "I",
)
// apply to all except some
#show figure-where-kind-in(
  theofig-kinds, except: ("proof",),
): set text(blue)

#definition[#lorem(10)]
#theorem[#lorem(10)]
#proof[#lorem(10)]
#problem[#lorem(10)]
#solution[#lorem(10)]
```

Show rules to specify a style

Definition I. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.

Theorem I. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.

Proof. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do. ■

Problem I. *Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.*

Solution. *Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.*

```
== Languages support
#solution[]
```

Languages support

Solution.

Styling

Numbering

Limitations

Main functions