subpar

Create sub figures easily.

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https://github.com/tingerrr/subpar

Subpar provides easy to use sub figures with sensible default numbering and an easy-to-use no-setup API.

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Part I.
Manifest

Subpar aims to be:
- simple to use
    - ‣ importing a function and using it should be all that is needed
    - ‣ setup required to make the package work should be avoided
- unsurprising
    - ‣ parameters should have sensible names and behave as one would expect
    - ‣ deviations from this must be documented and easily accesible to Typst novices
- interoperable
    - ‣ subpar should be easy to use with other packages by default or provide sufficient configuration to allow this in other ways
- minimal
    - ‣ it should only provide features which are specifically used for sub figures

If you think its behvior is surprising, you believe you found a bug or think its defaults or parameters are not sufficient for your use case, please open an issue at GitHub:tingerrr/subpar. Contributions are also welcome!

Part II.
Guide

II.1. Labeling

Currently to refer to a super figure the label must be explicitly passed to `subpar` using `label: <...>`.

II.2. Grid Layout

The default `subpar` function provides only the style rules to make sub figures correctly behave with respect to numbering. To arrange them in a specific layout, you can use any other Typst function, a common choice would be `grid`.

```
#import "@preview/subpar:0.1.0": subpar

#subpar(
  grid(
    columns: (1fr,) * 3,
    [#figure(image("image1.png"), caption: [An image]) <a>],
    [#figure(image("image2.png"), caption: [Another image]) <b>],
    figure(image("image2.png"), caption: [A third unlabeled image]),
  )
  caption: [A figure composed of three sub figures.],
  label: <fig>,
)

We can refer to @fig, @fig1 and @fig2.
```

Because this quickly gets cumbersome, subpar provides a default grid layout wrapper called `subpar-grid`. It provides good defaults like `gutter: 1em` and hides options which are undesireable for sub figure layouts like `fill` and `stroke`. You can pass labeled sub figures as arrays of the figure and its label.

```
#import "@preview/subpar:0.1.0": subpar-grid

#subpar-grid(
  columns: (1fr,) * 3,
  caption: [A figure composed of three sub figures.],
  label: <fig>,
  (figure(image("image1.png"), caption: [An image]), <a>),
  (figure(image("image2.png"), caption: [Another image]), <b>),
  figure(image("image2.png"), caption: [A third unlabeled image]),
)

We can refer to @fig, @fig1 and @fig2.
```

II.3. Numbering

`subpar` and `subpar-grid` take three different numberings:

numbering The numbering used for the sub figures when displayed or referenced.

numbering-sub The numbering used for the sub figures when displayed.

numbering-sub-ref The numbering used for the sub figures when referenced.

Similarly to a normal figure, these can be functions to allow for numbering them.

II.4. Supplements

Currently, supplements for super figures propagate down to super figures, this ensures that the supplement in a reference will not confuse a reader, but it will cause reference issues in multilingual documents (see subpar#4).

```
Hello Typst!
```
(a) Typst Code

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

(b) Lorem

Figure 1: A figure containing two super figures.

When refering the the super figure we see "Figure 1", when refering to the sub figure of a different kind, we still see the same supplement "Figure 1a".

To turn this behavior off, set `propagate-supplement` to `false`, this will also resolve the issues from subpar#4.

```
Hello Typst!
```
(a) Typst Code

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

(b) Lorem

Figure 2: A figure containing two super figures.

Now when refering the the super figure we see still see "Figure 2", but when refering to the sub figure of a different kind, we the inferred supplement "Listing 2a".

Part III.
Reference

```
#subpar()                    #subpar-grid()
```

```
#subpar(
  ⟨kind⟩: image,
  ⟨numbering⟩: "1",
  ⟨numbering-sub⟩: "(a)",
  ⟨numbering-sub-ref⟩: "1a",
  ⟨supplement⟩: auto,
  ⟨propagate-supplement⟩: true,
  ⟨caption⟩: none,
  ⟨placement⟩: none,
  ⟨gap⟩: 0.65em,
  ⟨outlined⟩: true,
  ⟨outlined-sub⟩: false,
  ⟨label⟩: none,
  ⟨show-sub⟩: auto,
  ⟨show-sub-caption⟩: auto,
  ⟨body⟩
) ⟶  content
```

Creates a figure which may contain other figures, a *super*figure. For the meaning of parameters take a look at the regular figure documentation.

Argument

⟨kind⟩: image   `str` | `function`

The image kind which should be used, this is mainly relevant for introspection and defaults to `image`. This cannot be automatically resovled like for normal figures and must be set.

Argument

⟨numbering⟩: "1"   `str` | `function`

This is the numbering used for this super figure.

Argument

⟨numbering-sub⟩: "(a)"   `str` | `function`

This is the numbering used for the sub figures.

Argument

⟨numbering-sub-ref⟩: "1a"   `str` | `function`

This is the numbering used for *references* to the sub figures. If this is a function, it receives both the super and sub figure numbering respectively.

Argument

⟨supplement⟩: auto   `content` | `function` | `auto` | `none`

The supplement used for this super figure *and* the sub figures when referenced.

---- Argument ----

⟨propagate-supplement⟩: true   `bool`

Whether the super figure's supplement should propagate down to its sub figures.

---- Argument ----

⟨caption⟩: none   `content`

The caption of this super figure.

---- Argument ----

⟨placement⟩: none   `alignment` | `auto` | `none`

The float placement of this super figure.

---- Argument ----

⟨gap⟩: 0.65em   `length`

The gap between this super figure's caption and body.

---- Argument ----

⟨outlined⟩: true   `bool`

Whether this super figure should appear in an outline of figures.

---- Argument ----

⟨outlined-sub⟩: false   `bool`

Whether the sub figures should appear in an outline of figures.

---- Argument ----

⟨label⟩: none   `label`

The label to attach to this super figure.

---- Argument ----

⟨show-sub⟩: auto   `function` | `auto`

A show rule override for sub figures. Recevies the sub figure.

---- Argument ----

⟨show-sub-caption⟩: auto   `function` | `auto`

A show rule override for sub figure's captions. Receives the realized numbering and caption element.

```
#subpar-grid(
  ⟨columns⟩: auto,
  ⟨rows⟩: auto,
  ⟨gutter⟩: 1em,
  ⟨column-gutter⟩: auto,
  ⟨row-gutter⟩: auto,
```

⟨**align**⟩: **bottom**,
⟨**inset**⟩: **(:)**,
⟨**kind**⟩: **image**,
⟨**numbering**⟩: **"1"**,
⟨**numbering-sub**⟩: **"(a)"**,
⟨**numbering-sub-ref**⟩: **"1a"**,
⟨**supplement**⟩: **auto**,
⟨**propagate-supplement**⟩: **true**,
⟨**caption**⟩: **none**,
⟨**placement**⟩: **none**,
⟨**gap**⟩: **0.65em**,
⟨**outlined**⟩: **true**,
⟨**outlined-sub**⟩: **false**,
⟨**label**⟩: **none**,
⟨**show-sub**⟩: **auto**,
⟨**show-sub-caption**⟩: **auto**,
..⟨**args**⟩
) → `content`

Provides a convenient wrapper around #`subpar`() which puts sub figures in a grid.

Argument

⟨columns⟩: auto   `auto` | `int` | `relative` | `fraction` | `array`

Corresponds to the grid's `columns` parameter.

Argument

⟨rows⟩: auto   `auto` | `int` | `relative` | `fraction` | `array`

Corresponds to the grid's `rows` parameter.

Argument

⟨gutter⟩: 1em   `auto` | `int` | `relative` | `fraction` | `array`

Corresponds to the grid's `gutter` parameter.

Argument

⟨column-gutter⟩: auto   `auto` | `int` | `relative` | `fraction` | `array`

Corresponds to the grid's `column-gutter` parameter.

Argument

⟨row-gutter⟩: auto   `auto` | `int` | `relative` | `fraction` | `array`

Corresponds to the grid's `row-gutter` parameter.

Argument

⟨align⟩: bottom   `auto` | `array` | `alignment` | `function`

Corresponds to the grid's `align` parameter.

Argument

⟨inset⟩: (:)   `relative` | `array` | `dictionary` | `function`

Corresponds to the grid's `inset` parameter.

Argument

⟨kind⟩: `image`   `str` │ `function`

Corressponds to the super figure's `kind`.

Argument

⟨numbering⟩: `"1"`   `str` │ `function`

Corressponds to the super figure's `numbering`.

Argument

⟨numbering-sub⟩: `"(a)"`   `str` │ `function`

Corressponds to the super figure's `numbering-sub`.

Argument

⟨numbering-sub-ref⟩: `"1a"`   `str` │ `function`

Corressponds to the super figure's `numbering-sub-ref`.

Argument

⟨supplement⟩: `auto`   `content` │ `function` │ `auto` │ `none`

Corressponds to the super figure's `supplement`.

Argument

⟨propagate-supplement⟩: `true`   `bool`

Corressponds to the super figure's `propagate-supplement`.

Argument

⟨caption⟩: `none`   `content`

Corressponds to the super figure's `caption`.

Argument

⟨placement⟩: `none`   `alignment` │ `auto` │ `none`

Corressponds to the super figure's `placement`.

Argument

⟨gap⟩: `0.65em`   `length`

Corressponds to the super figure's `gap`.

Argument

⟨outlined⟩: `true`   `bool`

Corressponds to the super figure's `outlined`.

Argument

⟨outlined-sub⟩: `false`   `bool`

Corressponds to the super figure's `outlined-sub`.

Argument

⟨`label`⟩: `none`   `label` | `none`

Corressponds to the super figure's `label`.

Argument

⟨`show-sub`⟩: `auto`   `function`

Corressponds to the super figure's `show-sub`.

Argument

⟨`show-sub-caption`⟩: `auto`   `function`

Corressponds to the super figure's `show-sub-caption`.

#**sub-figure-counter**

The counter used for sub figures.

Part IV.
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