1. Typst

Typst is a typesetting system that takes code in and outputs PDFs.

This file is an example of several features you can use in it.

1.1. Math notation

The first example Typst shows you is for writing the Fibonacci sequence's definition through its recurrence relation $F_n = F_{n-1} + F_{n-2}$. That's inline math for you.

You can also do math on its own, centered paragraph:

$$F_n = \left\lfloor \frac{1}{\sqrt{5}} \phi^n \right\rceil, \quad \phi = \frac{1 + \sqrt{5}}{2}$$

1.2. Code blocks

Typst also supports code blocks. The code for the previous formula, for instance, was:

```
$ F_n = round(1 / sqrt(5) phi.alt^n), quad
  phi.alt = (1 + sqrt(5)) / 2 $
```

1.3. Code mode

You can define and use code logic for Typst to evaluate on compile:

```
#let count = 8
#let nums = range(1, count + 1)
#let fib(n) = (
  if n <= 2 { 1 }
  else { fib(n - 1) + fib(n - 2) }
)
```

Using the #count and #nums values just set, we can render the following table:

F_1	F_2	F_3	F_4	F_5	F_6	F_7	F_8
1	1	2	3	5	8	13	21

1.4. Formatting

This **bold text** is created using *asterisks*. *Italics* are made using _underlines_.

- An unordered list
- with a few
- items uses hyphens
- for markers

1. This numbered list
2. uses instead
3. the + sign
4. for each item

1.5. Images

Typst provides *functions* invoked using the # character, which turns on "code mode". One of such functions is #image:

```
#align(center + top)[
  #image("assets/mech-pencil.svg", width: 5%)
]
```

Width can be specified as a percentage, or as in 1cm or 0.7in.

The code above will produce this:

You can wrap an image in a #figure function to add a caption:

Figure 1: This cute icon representing a mechanical pencil is a public domain courtesy of ICOOON MONO

Supported formats as of November 2023 are PNG, JPEG, GIF, and SVG.

By using a #show instruction, I can have all mentions of mechanical pencils ✏ rendered with the icon next to them.

In Figure 1, a label was assigned, which allows linked references to it such as this one. The number of the figure will be automatically resolved.

1.6. Quotes

There is also a #quote function:

> "The caption consists of arbitrary markup. To give markup to a function, we enclose it in square brackets. This construct is called a content block."
>
> — Typst Docs, *Writing in typst*

1.7. Footnotes

Speaking of quotes, footnotes append linked references at the end of the document.[1]

You can use #" " or horizontal spacing to adjust the distance between the superscript number and the text.[2]

They can also be labeled so you may reference them multiple times. This line uses the same reference as the first footnote.[1]

1.8. A math lorem

$$1.62\theta + \sum_{i=0}^{\nabla} \frac{R_n}{10\mathrm{p}} \to p := \begin{pmatrix} x_1 \\ y_2 \\ z_3 \end{pmatrix} \to \ ?$$

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[1] Typst reference, *footnote*

[2] Though I'd rather use a parameter in set footnote.entry(). Also, they are a bit hard to click.