Asciidoctor Diagram

Supported Diagram Types

brought to you with ❤ by barthel

version: e5a92ffc

This document describes and shows all diagram types provided by *Asciidoctor Diagram.*

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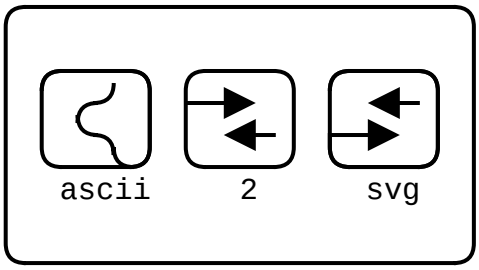
Chapter 1. Introduction and goals

This document should give an overview over all supported diagram types provided by Asciidoctor Diagram[DIAG].

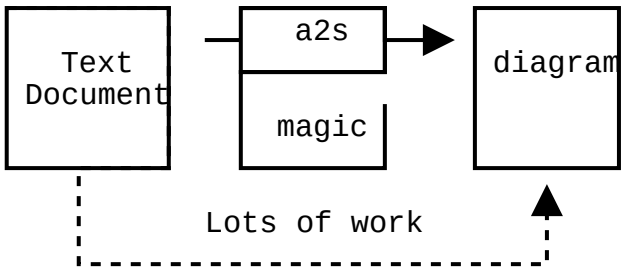
Chapter 2. ASCIIToSVG

> ASCIIToSVG parses ASCII art diagrams, attempting to convert them to an aesthetically pleasing SVG output.
>
> — ASCIIToSVG, https://github.com/asciitosvg/asciitosvg

2.1. Internal diagram source



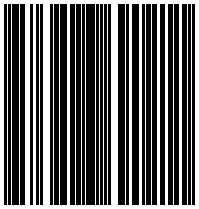
2.2. External diagram source file



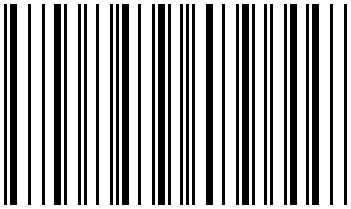
Chapter 3. Barcodes

> The barcode extension provides barcode rendering. Barcode macros can be specified using blocks, inline macros or block macros.
>
> — Asciidoctor Diagrams, https://docs.asciidoctor.org/diagram-extension/latest/#barcode

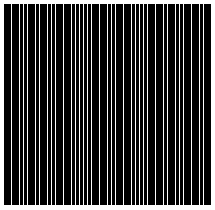
3.1. bookland (ISBN)



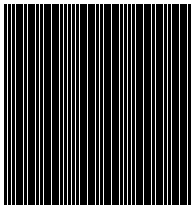
3.2. codabar



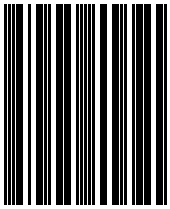
3.3. code25



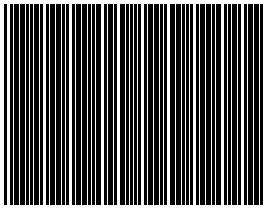
3.4. code25iata



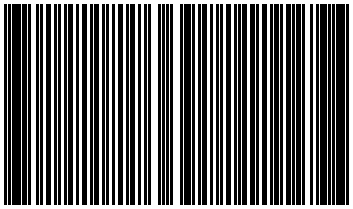
3.5. code25interleaved



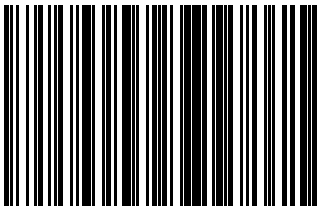
3.6. code39



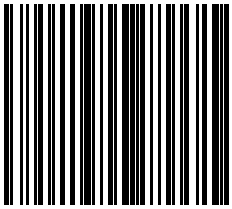
3.7. code93



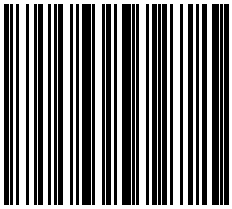
3.8. code128



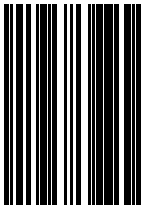
3.9. code128a



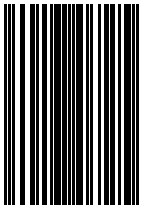
3.10. code128b



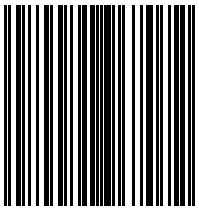
3.11. code128c



3.12. ean8



3.13. ean13

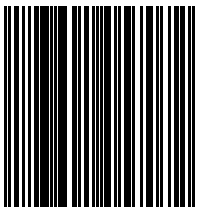


3.14. gs1_128

No valid data because of <FNC1>.

3.15. qrcode

3.16. upca



Chapter 4. Blockdiag

> *blockdiag* and its family generate diagram images from simple text files.
>
> — Takeshi KOMIYA, http://blockdiag.com/en/index.html

blockdiag supports many types of diagrams like

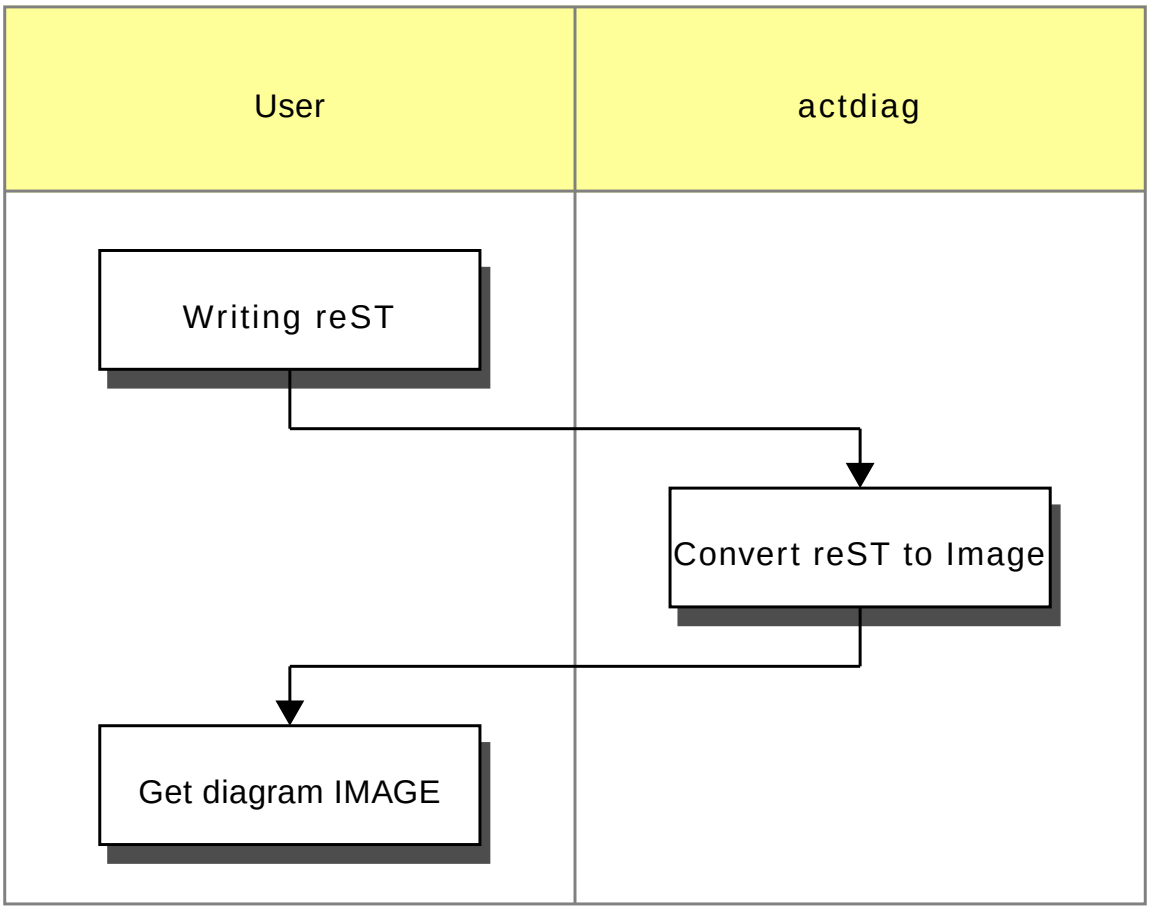
- activity diagram (w/ actdiag) and
- block diagram (w/ blockdiag),
- logical network diagram (w/ nwdiag).
- sequence diagram (w/ seqdiag),

All these tools layouts diagram elements automatically and generates beautiful diagram images from simple text format (similar to graphviz's DOT format).

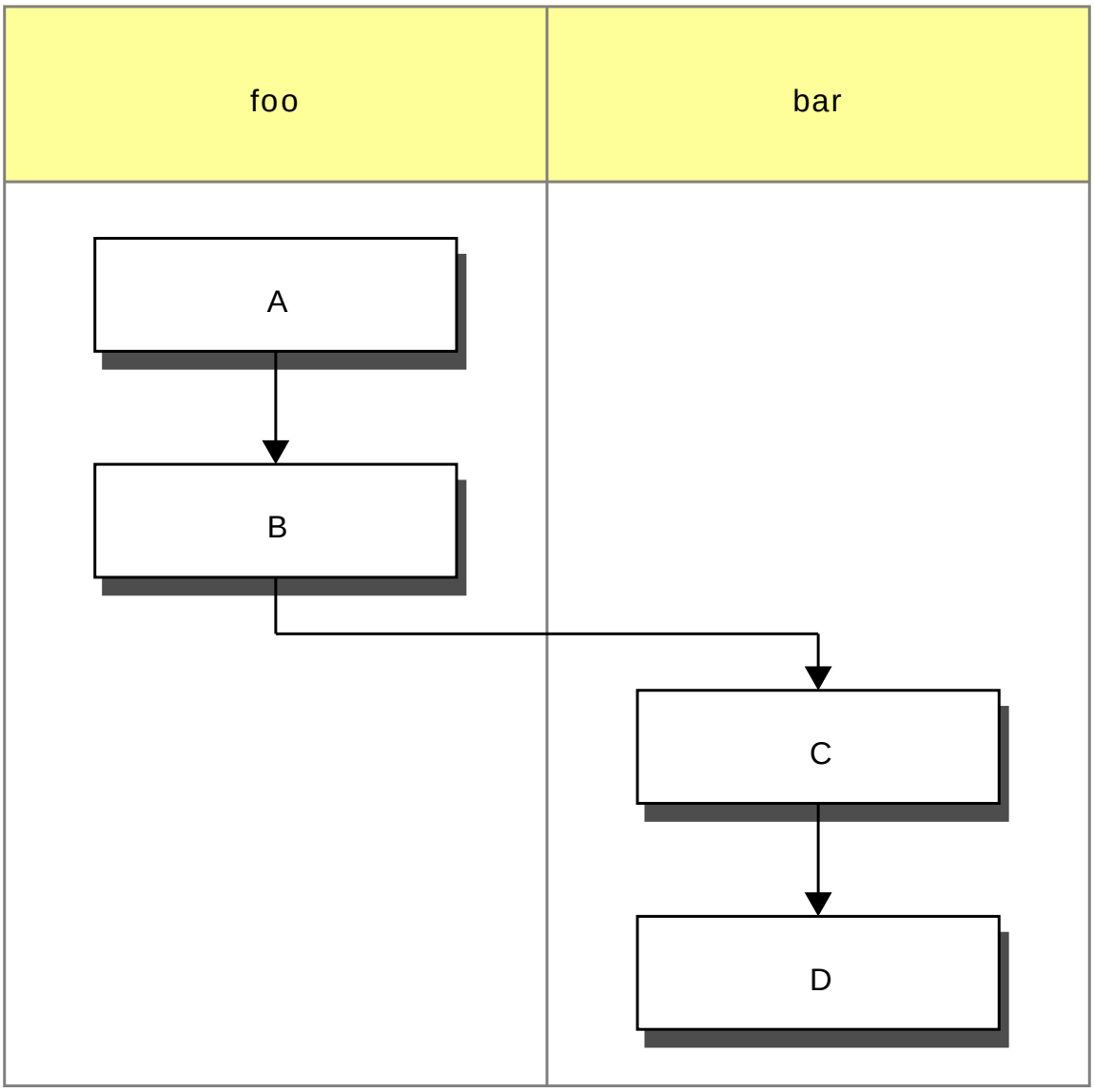
4.1. actdiag

> *actdiag* is a simple activity-diagram image generator and generates activity-diagram images from .diag files (similar to graphviz's DOT files).
>
> — Takeshi KOMIYA, http://blockdiag.com/en/actdiag/index.html

4.1.1. Internal diagram source



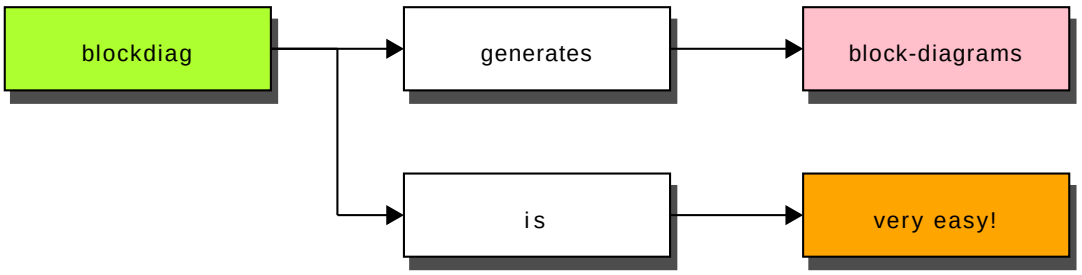
4.1.2. External diagram source file



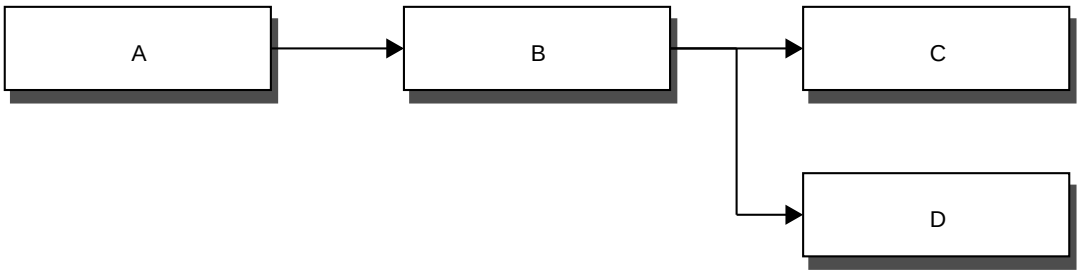
4.2. blockdiag

> *blockdiag* generates block-diagram images from .diag files (similar to graphviz's DOT files).
>
> — Takeshi KOMIYA, http://blockdiag.com/en/blockdiag/index.html

4.2.1. Internal diagram source



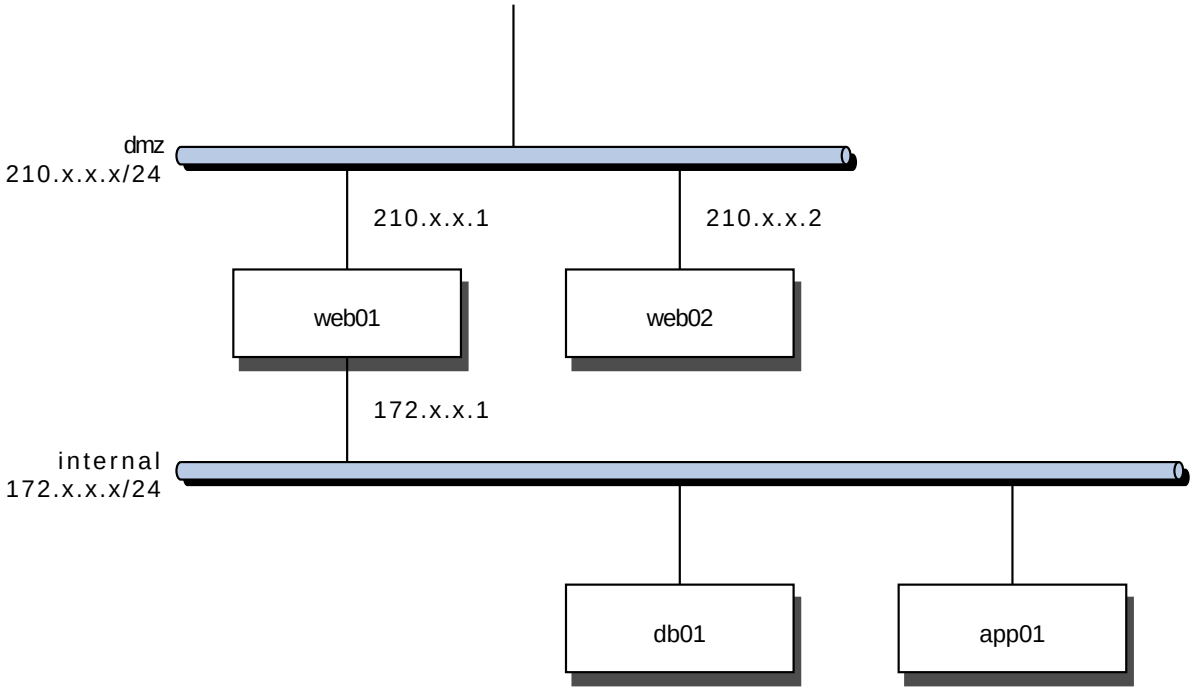
4.2.2. External diagram source file



4.3. nwdiag

> *nwdiag* generates network-diagram images from .diag files (similar to graphviz's DOT files).
>
> — Takeshi KOMIYA, http://blockdiag.com/en/nwdiag/index.html

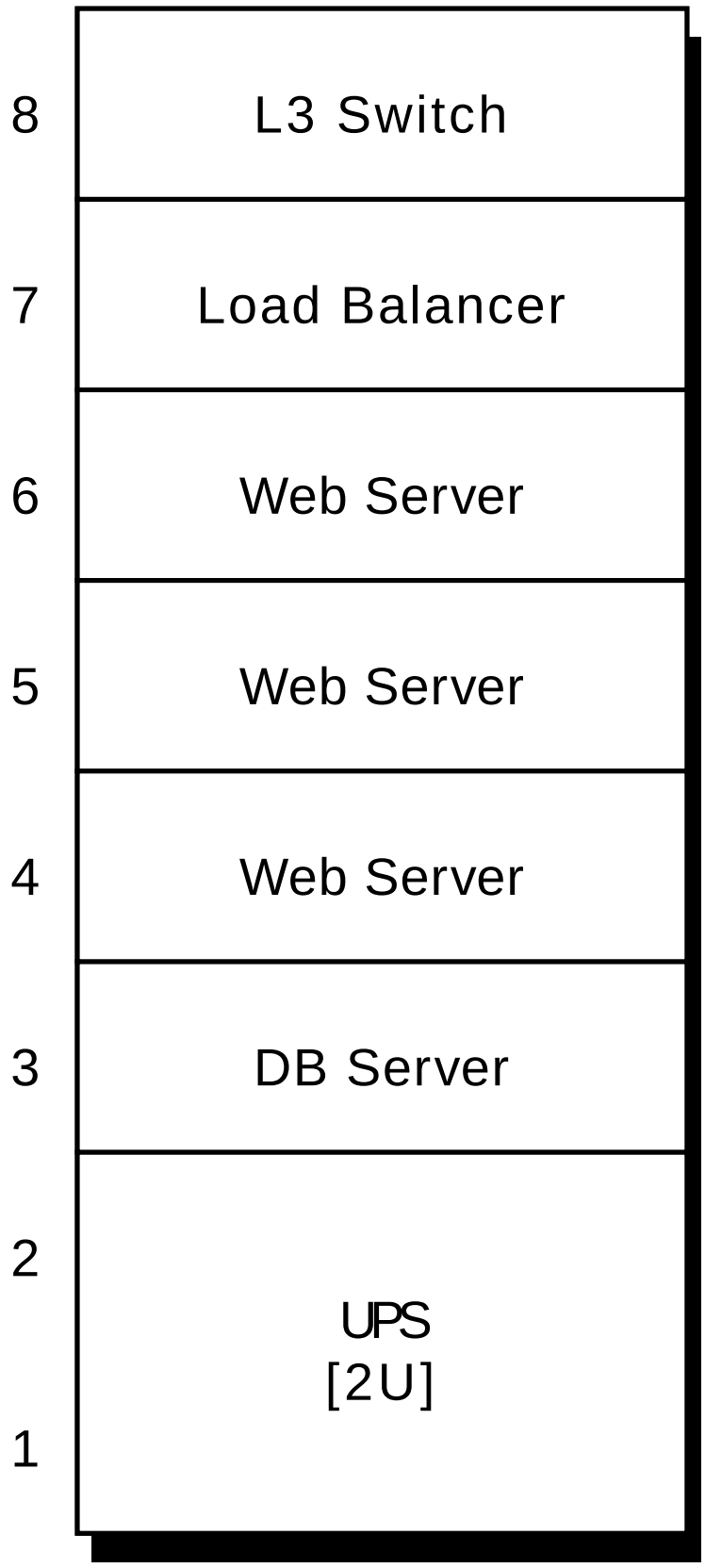
4.3.1. Internal diagram source



And, `nwdiag` package includes more scripts called `rackdiag` and `packetdiag`.

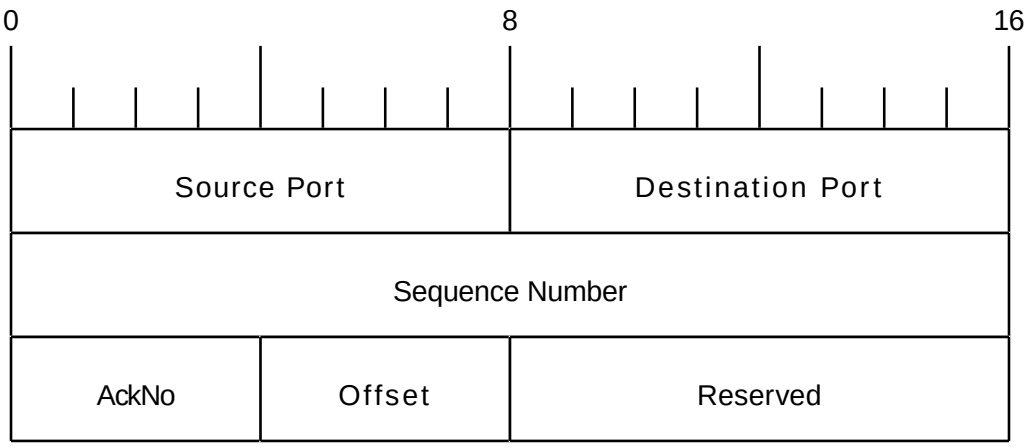
4.3.2. rackdiag

`rackdiag` generates rack-structure diagram images:

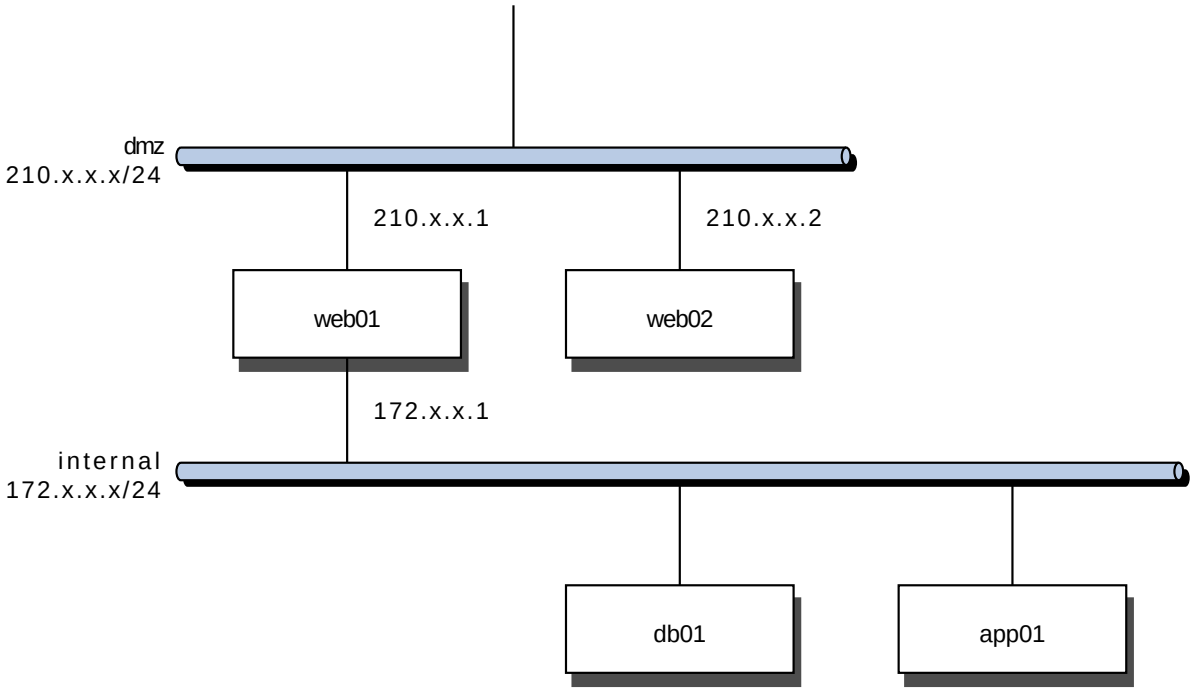

8
L3 Switch
7
Load Balancer
6
Web Server
5
Web Server
4
Web Server
3
DB Server
2
UPS
[2U]
1

4.3.3. packetdiag

`packetdiag` generates packet header diagram images:



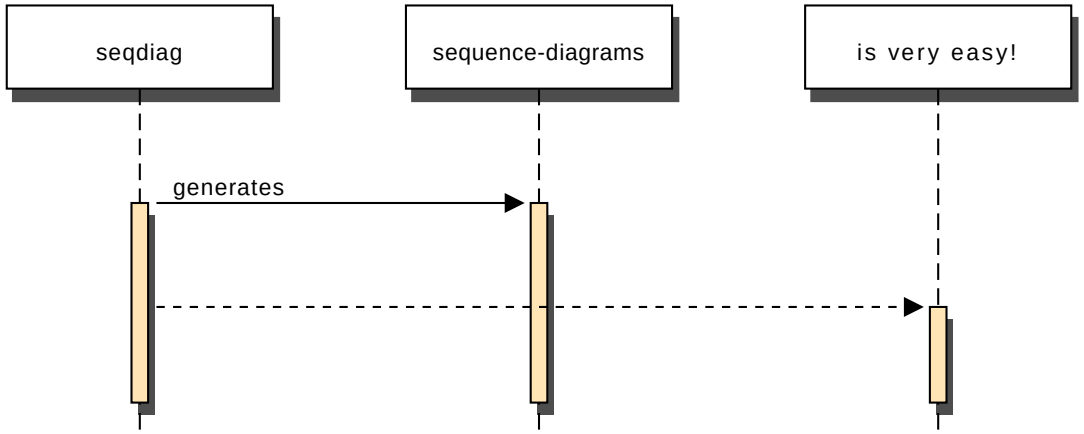
4.3.4. External diagram source file



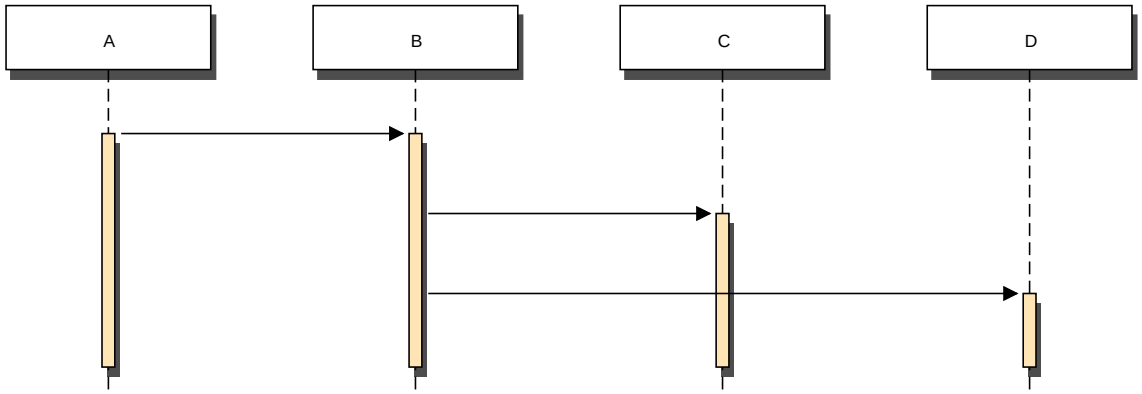
4.4. seqdiag

> *seqdiag* generates sequence-diagram images from .diag files (similar to graphviz's DOT files).
>
> — Takeshi KOMIYA, http://blockdiag.com/en/seqdiag/index.html

4.4.1. Internal diagram source



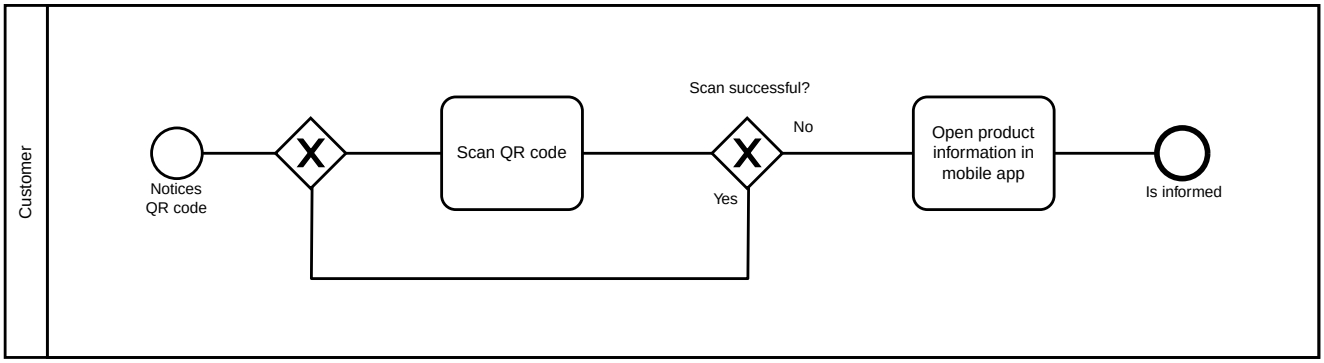
4.4.2. External diagram source file



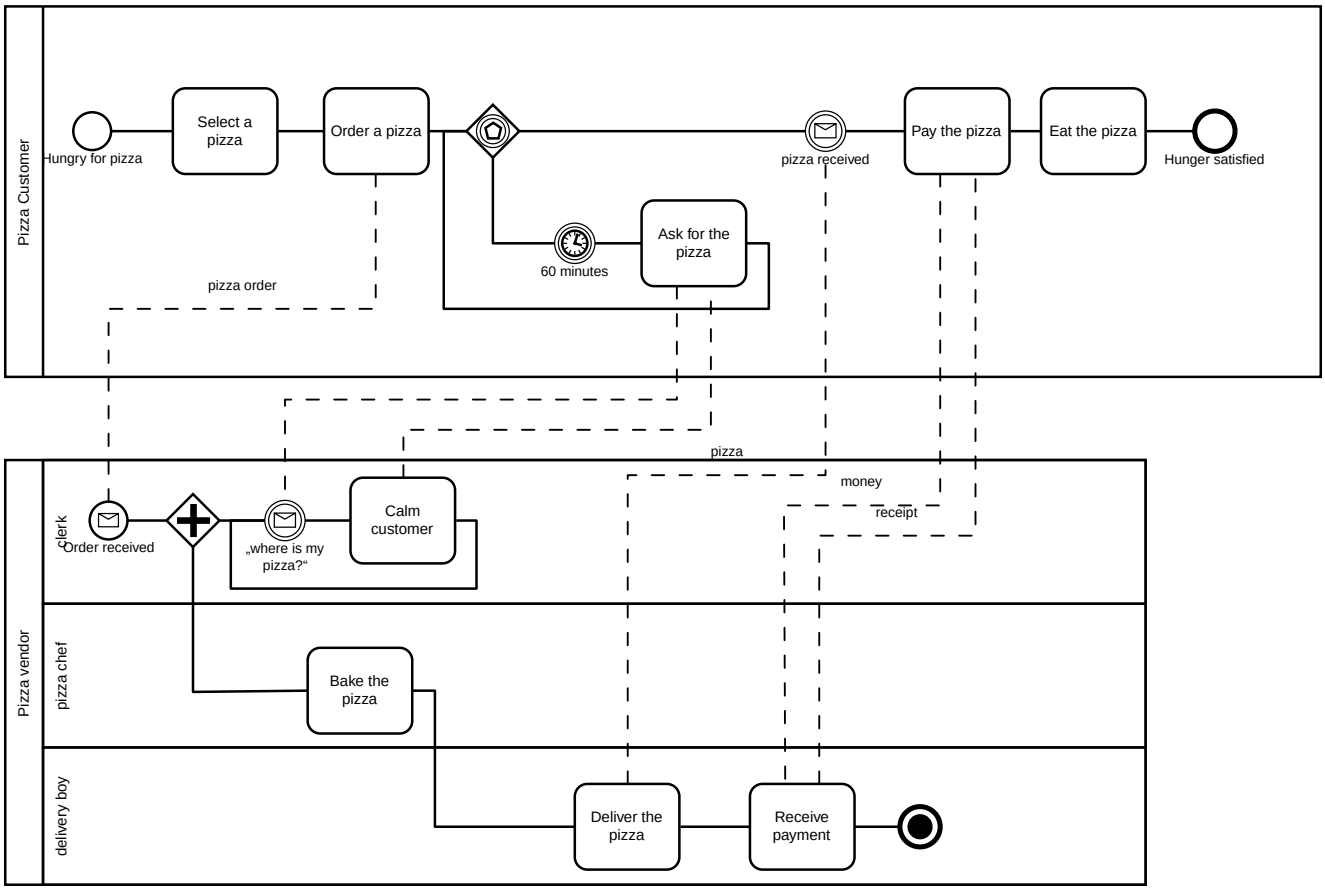
Chapter 5. BPMN

> **BPMN everywhere, for everyone**
>
> Create, embed and extend BPMN diagrams.
>
> — bpmn.io, https://bpmn.io/toolkit/bpmn-js/

5.1. Internal diagram source



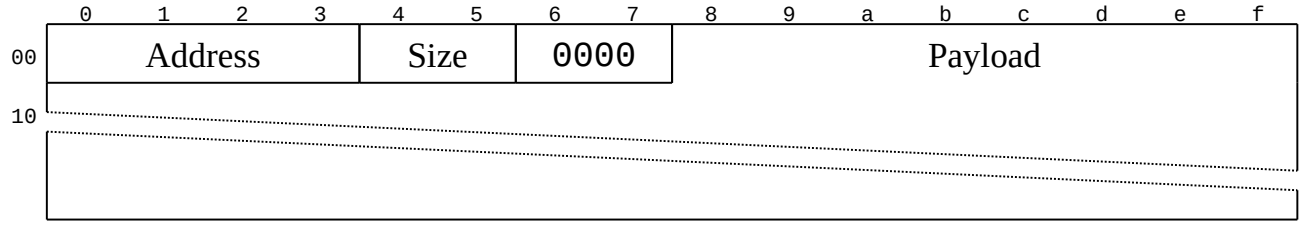
5.2. External diagram source file



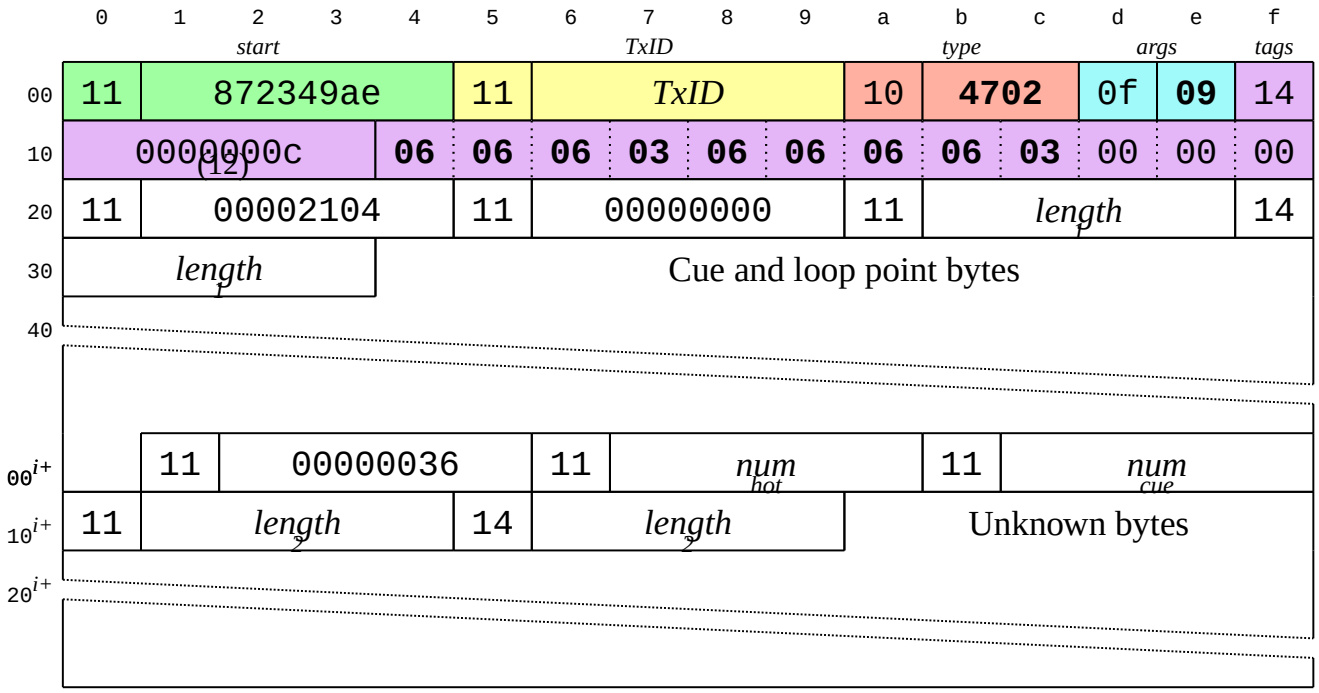
Chapter 6. Bytefield

> Generating byte field diagrams.
>
> — bytefield, https://github.com/Deep-Symmetry/bytefield-svg

6.1. Internal diagram source



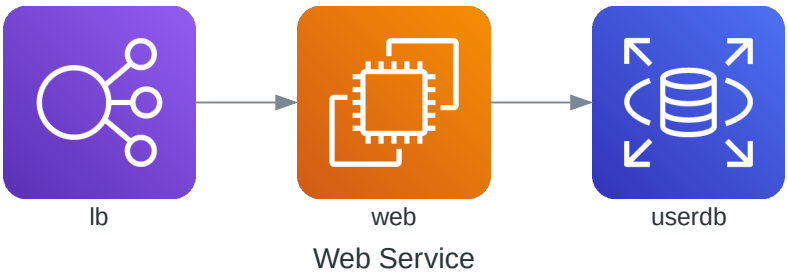
6.2. External diagram source file



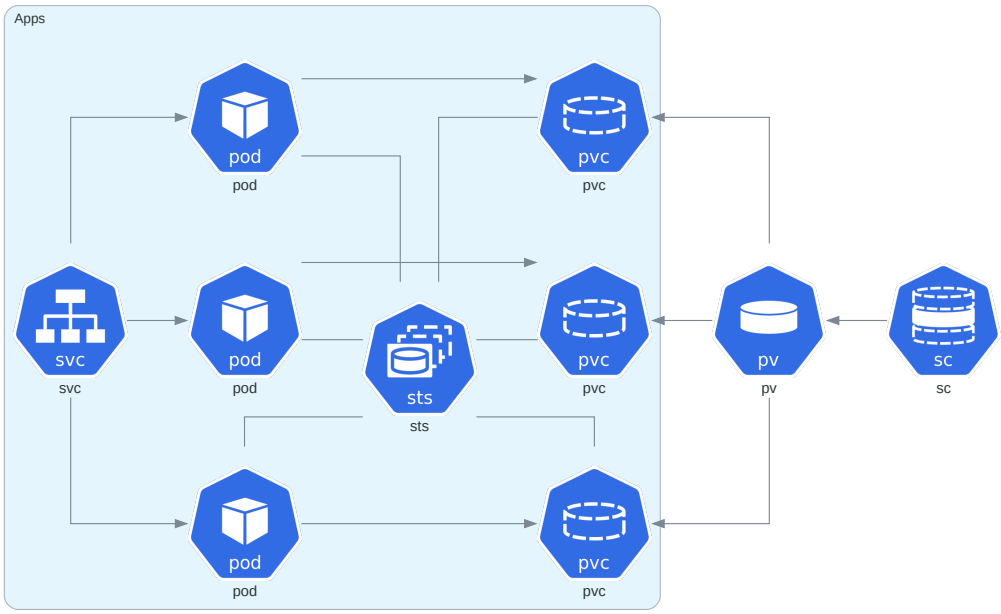
Chapter 7. Diagrams as (Python) Code

> **Diagrams** — Diagram as Code
>
> Diagrams lets you draw the cloud system architecture in Python code.
>
> It was born for prototyping a new system architecture without any design tools. You can also describe or visualize the existing system architecture as well.
>
> — Diagrams, https://diagrams.mingrammer.com/

7.1. Internal diagram source



7.2. External diagram source file

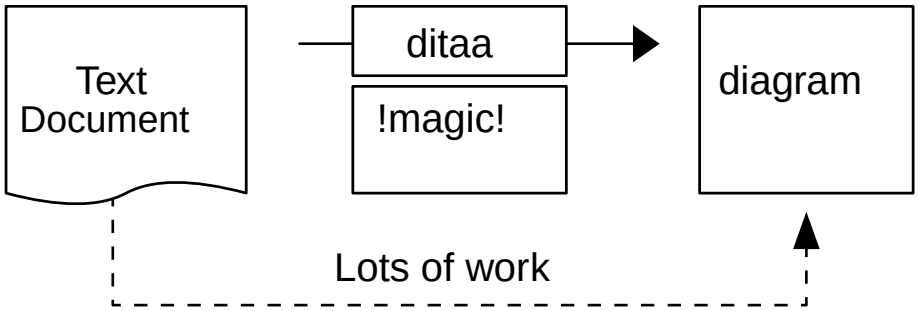


Stateful Architecture

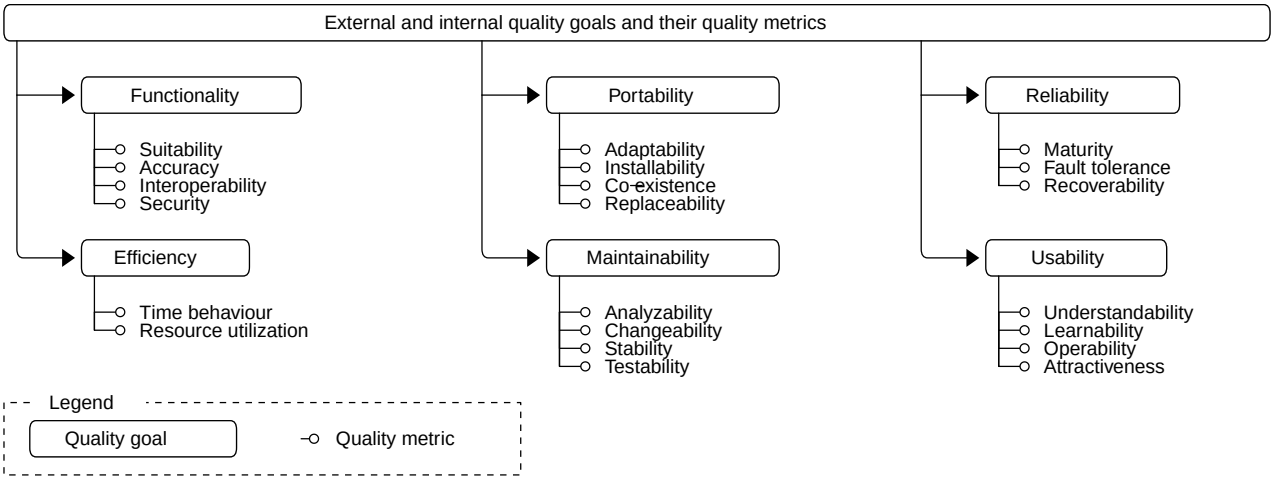
Chapter 8. Ditaa

> Ditaa is a small command-line utility written in Java, that can convert diagrams drawn using ascii art into proper bitmap graphics.
>
> — ditaa, http://ditaa.sourceforge.net/

8.1. Internal diagram source



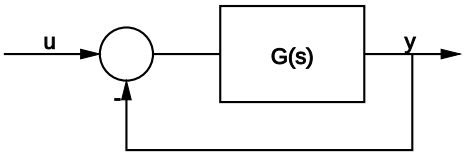
8.2. External diagram source file



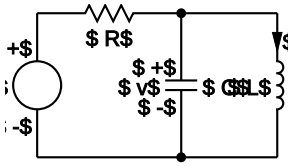
Chapter 9. Dpic

> Dpic is an implementation of the pic "little language" for creating line drawings and illustrations for documents, web pages, and other uses.
>
> — J. D. Aplevich, https://gitlab.com/aplevich/dpic

9.1. Internal diagram source



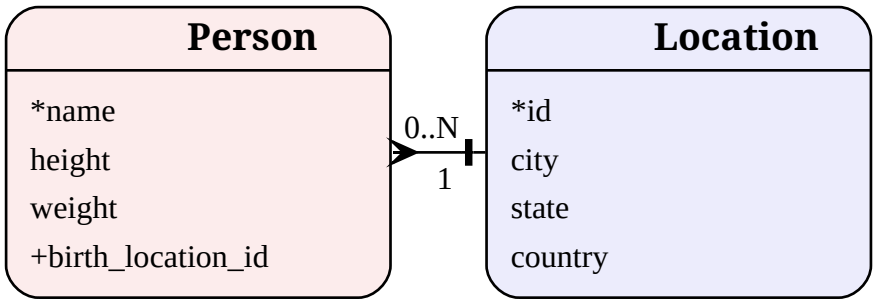
9.2. External diagram source file



Chapter 10. ERD

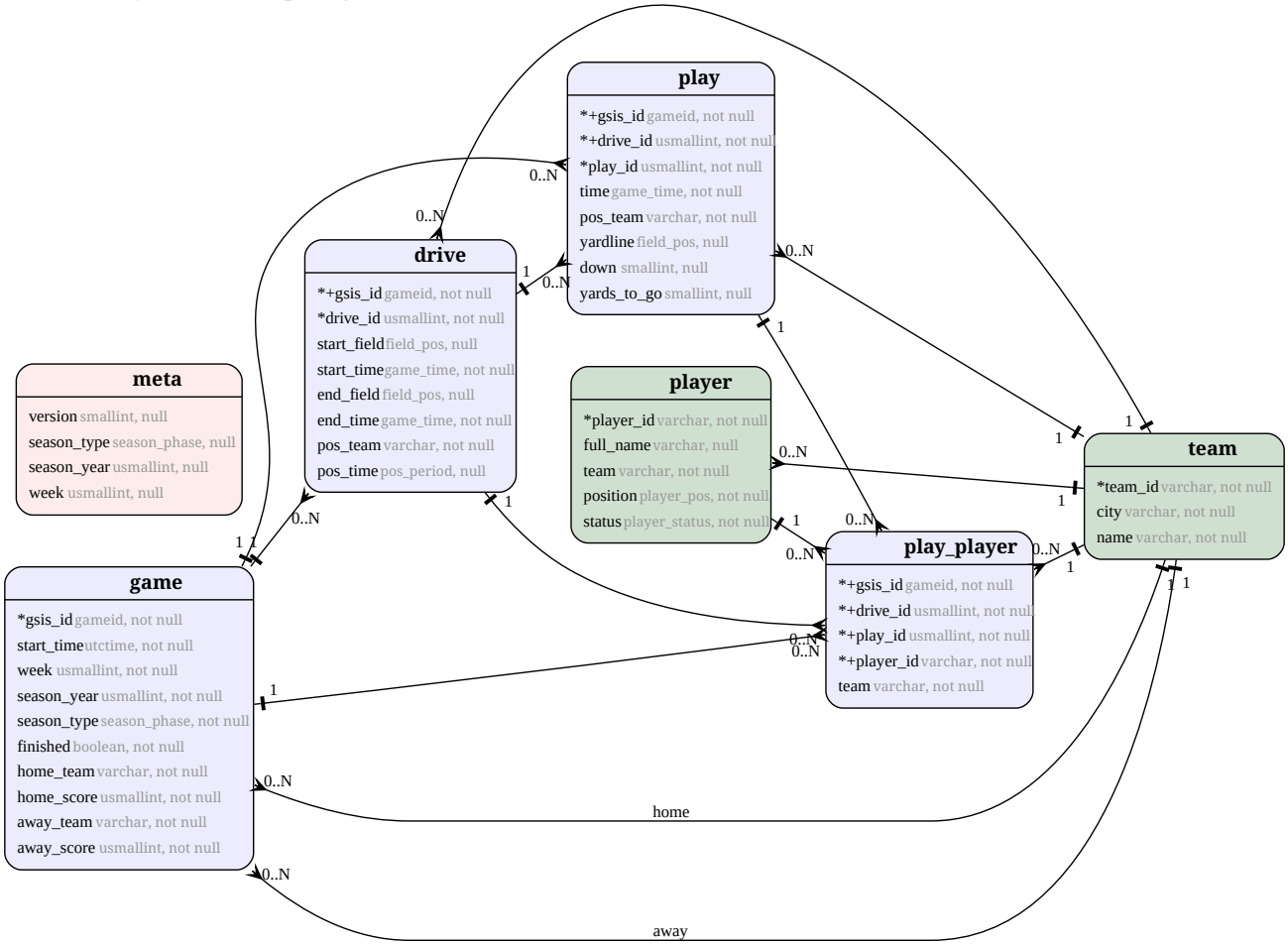
> Translates a plain text description of a relational database schema to a graphical entity-relationship diagram.
>
> — erd, https://github.com/kaishuu0123/erd-go

10.1. Internal diagram source



10.2. External diagram source file

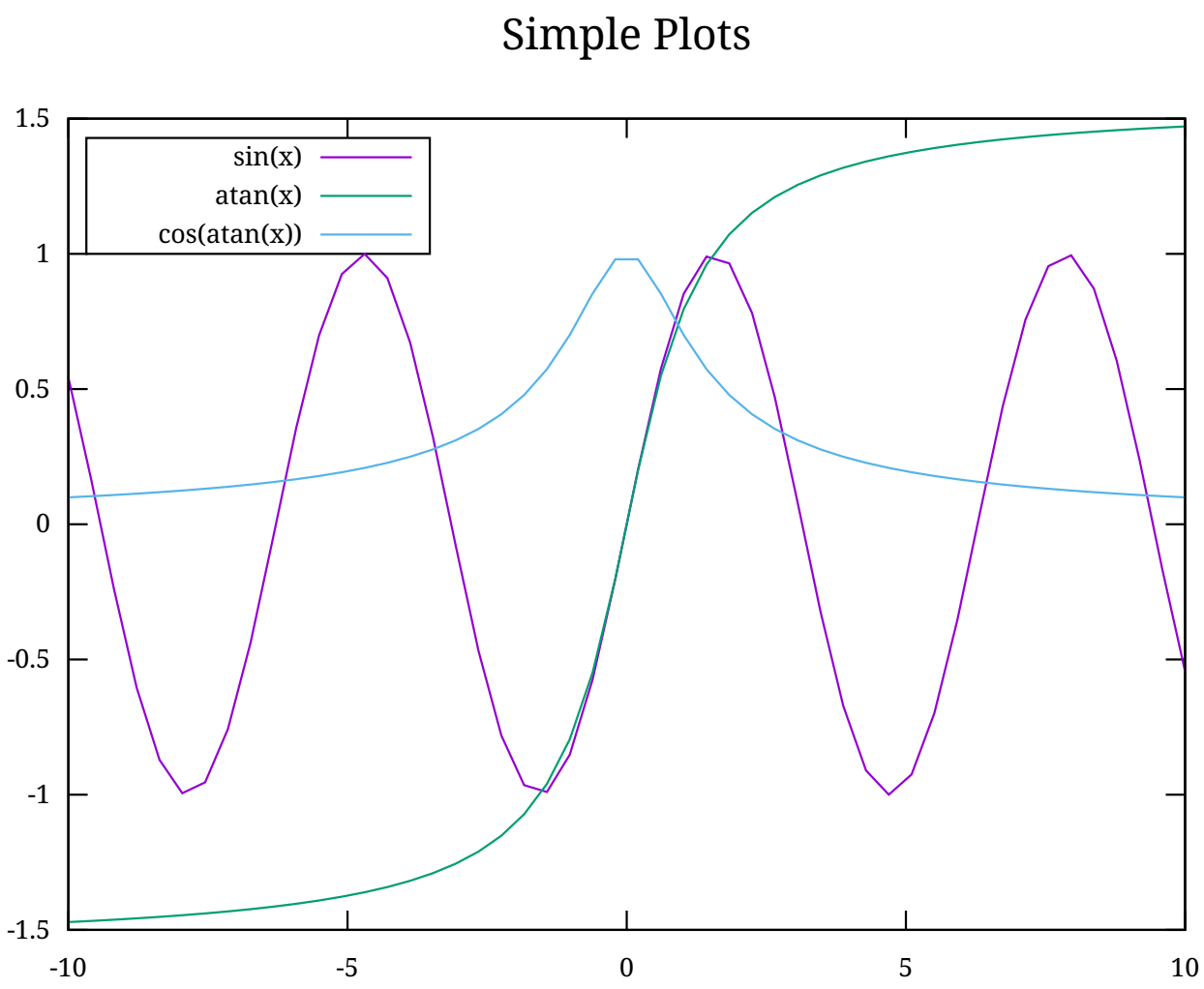
nfldb Entity-Relationship diagram (condensed)



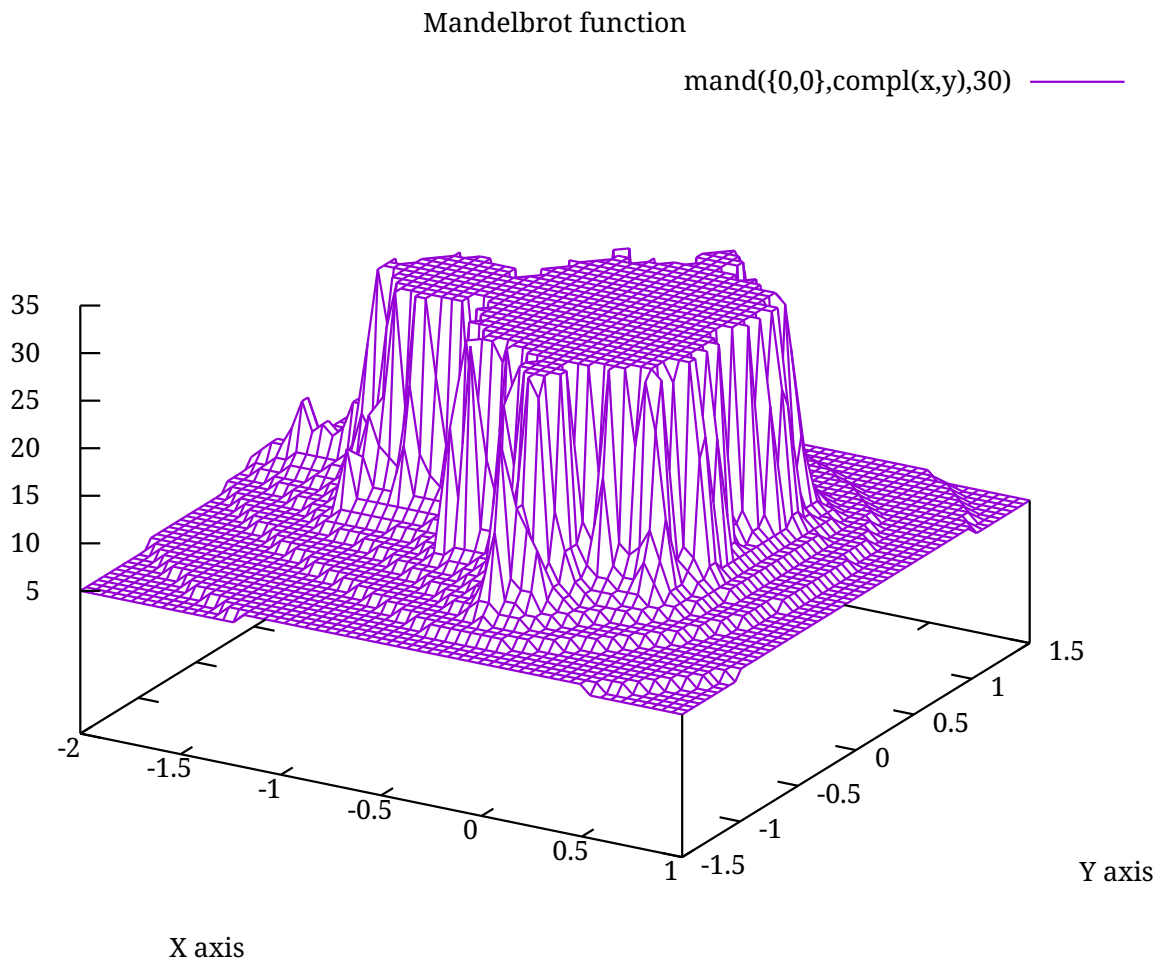
Chapter 11. Gnuplot

> Gnuplot is a portable command-line driven graphing utility originally created to allow scientists and students to visualize mathematical functions and data interactively, but has grown to support many non-interactive uses such as web scripting.
>
> — Gnuplot, http://gnuplot.info/

11.1. Internal diagram source



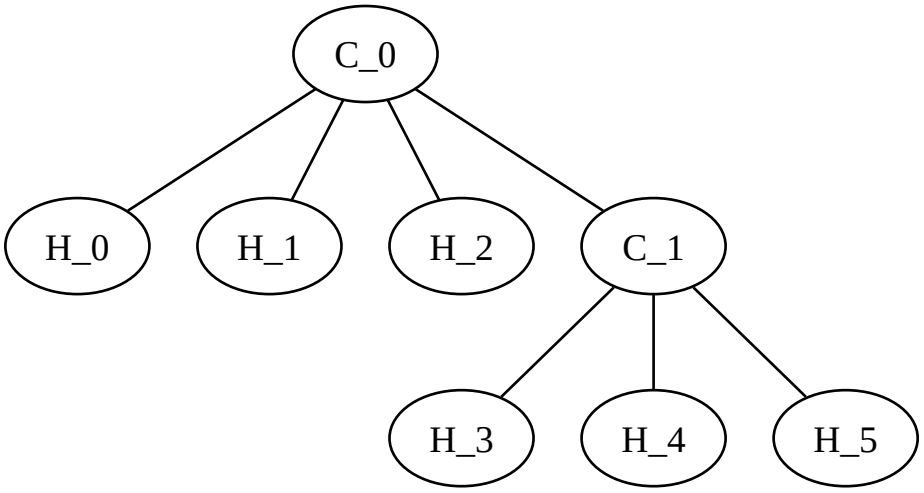
11.2. External diagram source file


Mandelbrot function
mand({0,0},compl(x,y),30)
35
30
25
20
15
10
5
-2
-1.5
-1
-0.5
0
0.5
1
X axis
-1.5
-1
-0.5
0
0.5
1
1.5
Y axis

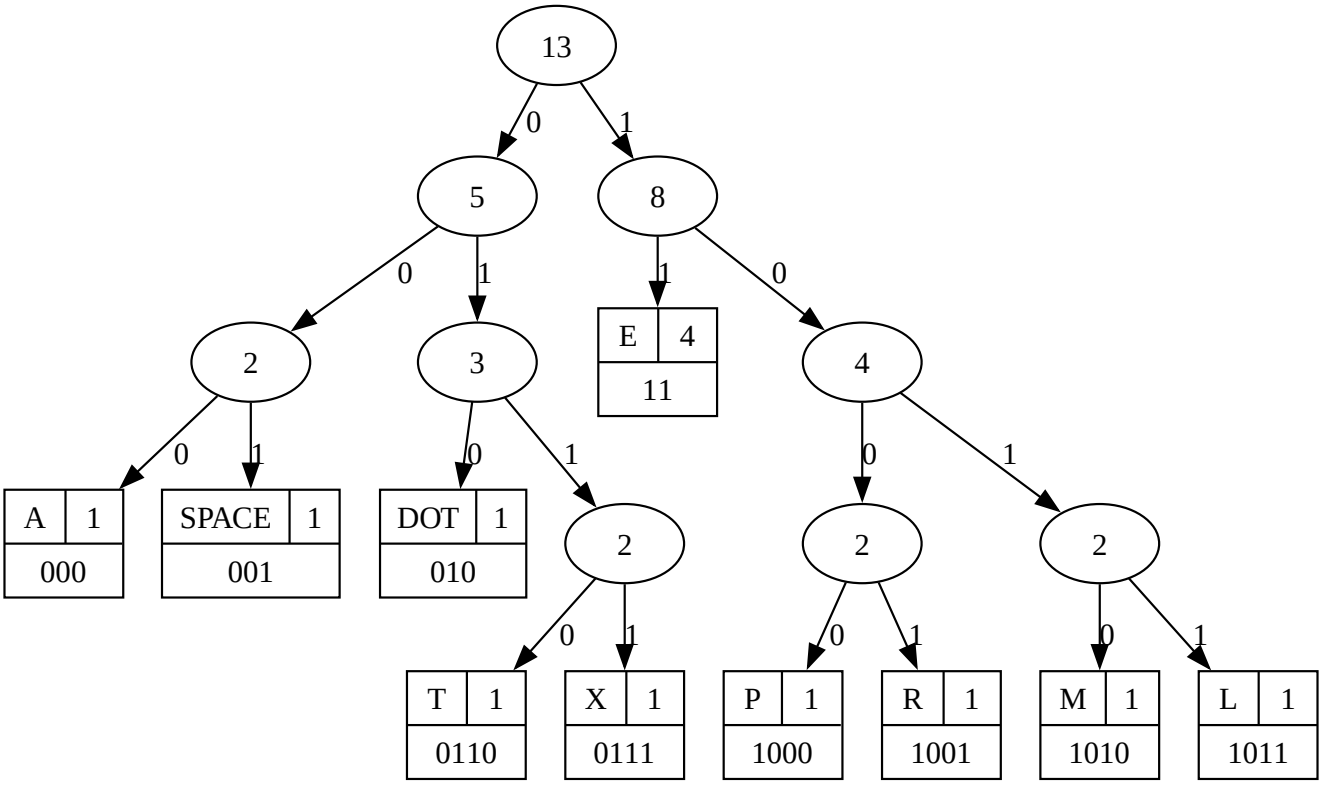
Chapter 12. graphviz

> Graphviz is open source graph visualization software. Graph visualization is a way of representing structural information as diagrams of abstract graphs and networks. It has important applications in networking, bioinformatics, software engineering, database and web design, machine learning, and in visual interfaces for other technical domains.
>
> — graphviz, https://graphviz.gitlab.io/

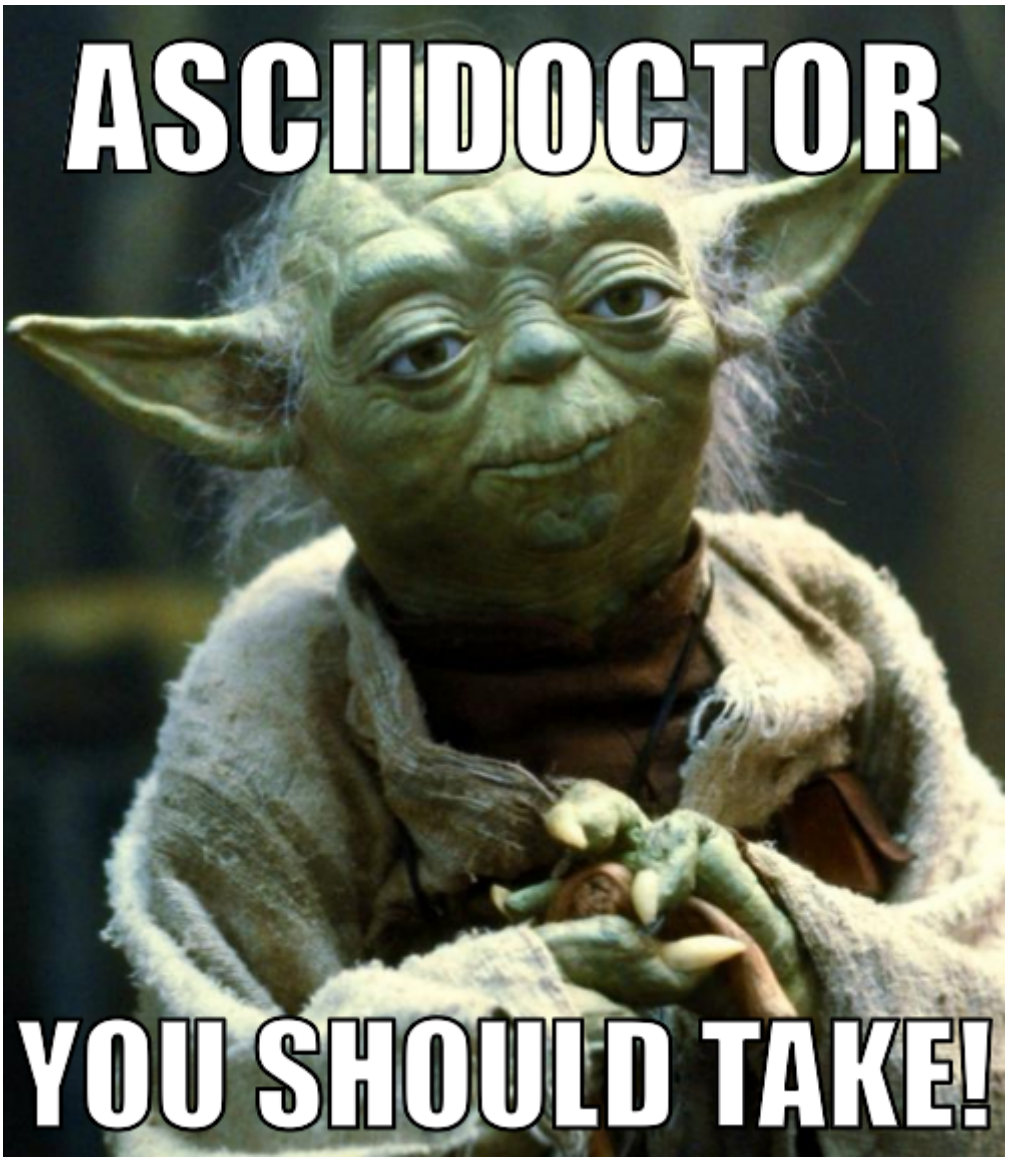
12.1. Internal diagram source



12.2. External diagram source file


13
0
1
5
8
0
1
1
0
2
3
E
4
11
4
0
1
0
1
0
1
A
1
000
SPACE
1
001
DOT
1
010
2
2
2
0
1
0
1
0
1
T
1
0110
X
1
0111
P
1
1000
R
1
1001
M
1
1010
L
1
1011

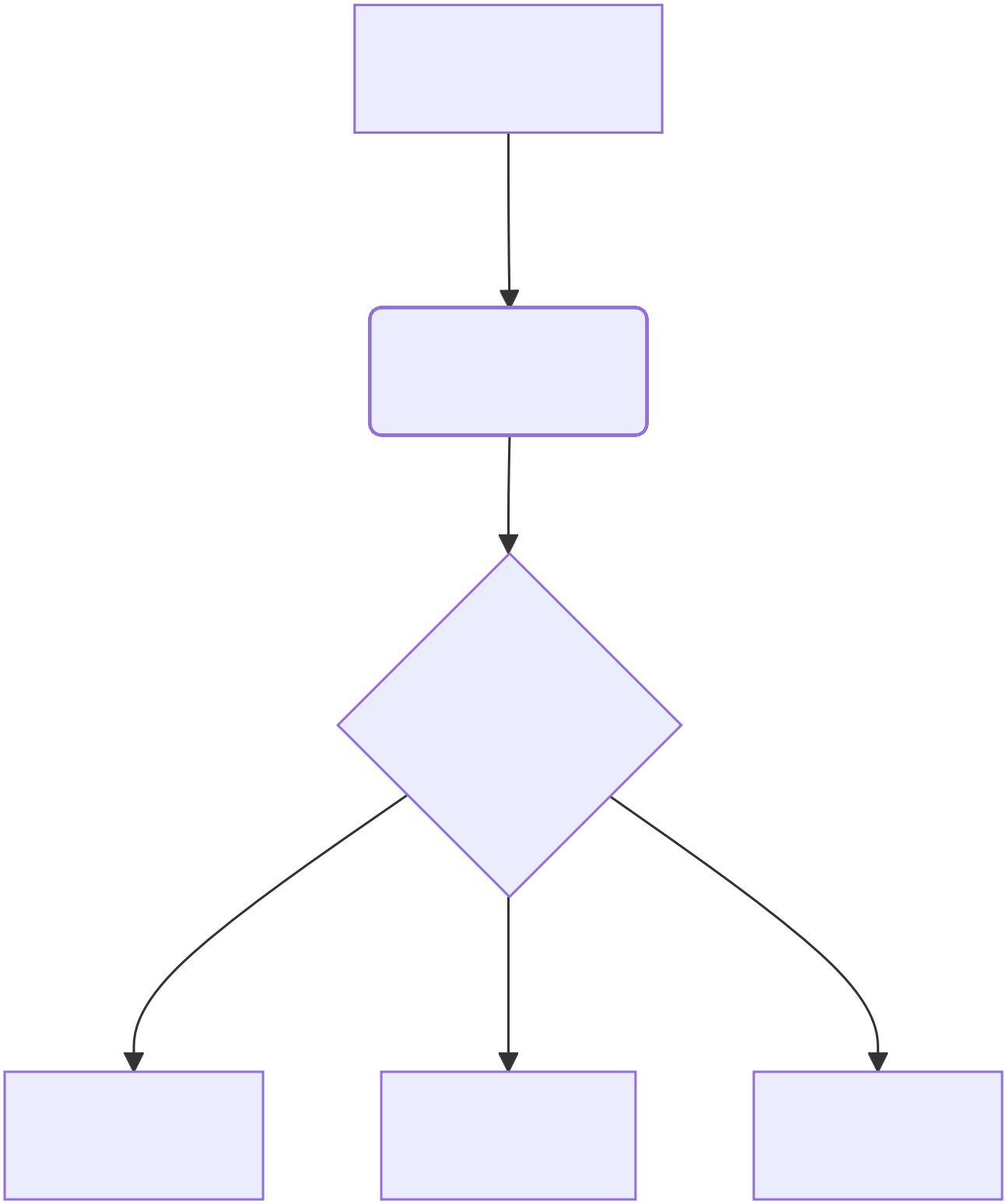
Chapter 13. meme



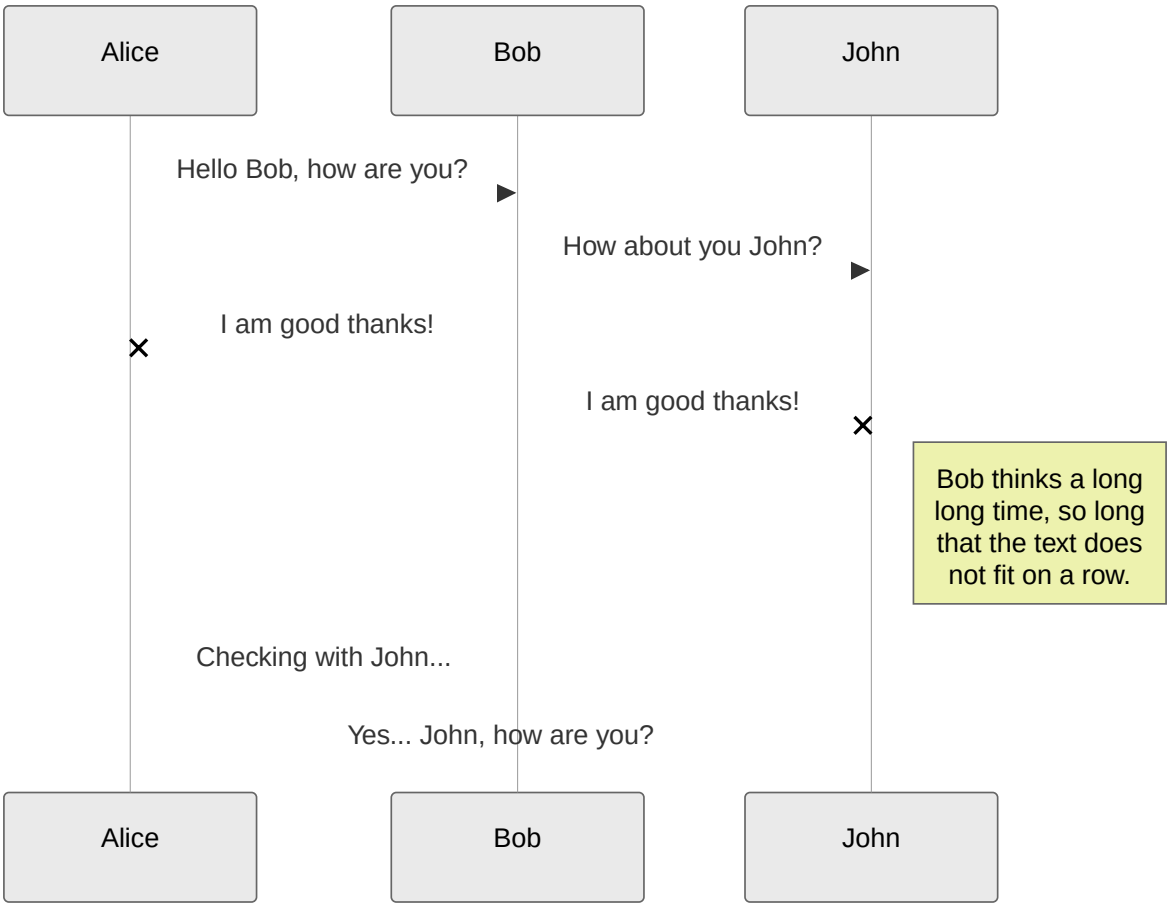
Chapter 14. mermaid

> I had a forward slash defined in the label of a diagram node.
>
> ```
> graph LR
>     M[Main\n/]
> ```
>
> This could be rendered successfully by other mermaid engines, like the one that renders the preview in the vscode plugin. But caused `mmdc` to crash with
>
> ```
> Error: Evaluation failed: Error: Diagram error not found.
>     at pptr://__puppeteer_evaluation_script__:45:17
>     at ExecutionContext._ExecutionContext_evaluate (...)
>     at process.processTicksAndRejections (...)
>     at async ExecutionContext.evaluate (...)
>     at async CDPJSHandle.evaluate (...)
>     at async CDPElementHandle.$eval (...)
>     at async renderMermaid (...)
>     at async parseMMD (...)
>     at async run (...)
>     at async cli (...)
> ```
>
> However, as soon as I add double quotes
>
> ```
> graph LR
>     M["Main\n/"]
> ```
>
> everything works fine. So this is rather an issue to handle in `mermaid-js/mermaid-cli` (if at all).
>
> — gibso (@github), https://github.com/barthel/docker-asciidoctor/pull/3

14.1. Internal diagram source



14.2. External diagram source file


Alice
Bob
John
Hello Bob, how are you?
How about you John?
I am good thanks!
I am good thanks!
Bob thinks a long long time, so long that the text does not fit on a row.
Checking with John...
Yes... John, how are you?
Alice
Bob
John

Chapter 15. mscgen

> *Mscgen* is a small program that parses Message Sequence Chart descriptions and produces PNG, SVG, EPS or server side image maps (ismaps) as the output. Message Sequence Charts (MSCs) are a way of representing entities and interactions over some time period and are often used in combination with SDL.
>
> — mscgen, http://www.mcternan.me.uk/mscgen/

15.1. Internal diagram source

The `mscgen` backend is currently not supported.

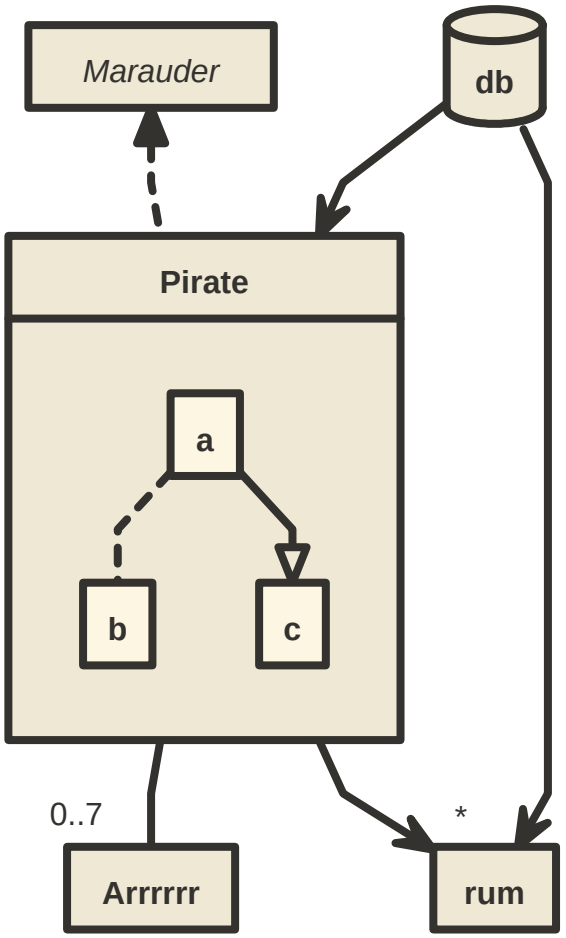
15.2. External diagram source file

The `mscgen` backend is currently not supported.

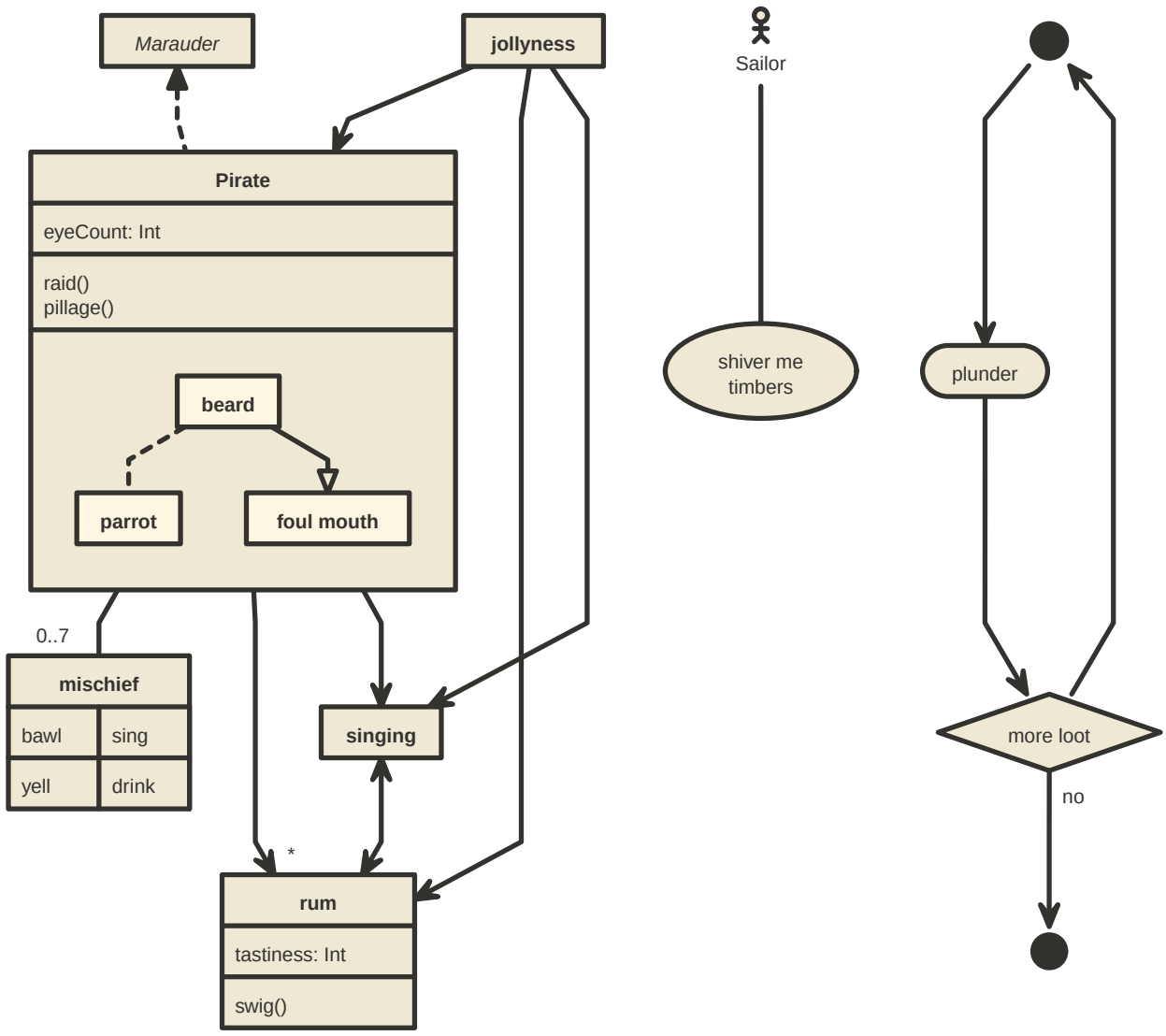
Chapter 16. Nomnoml

> Nomnoml is a tool for drawing UML diagrams based on a simple syntax. It tries to keep its syntax visually as close as possible to the generated UML diagram without resorting to ASCII drawings.
>
> — Daniel Kallin, https://github.com/skanaar/nomnoml

16.1. Internal diagram source



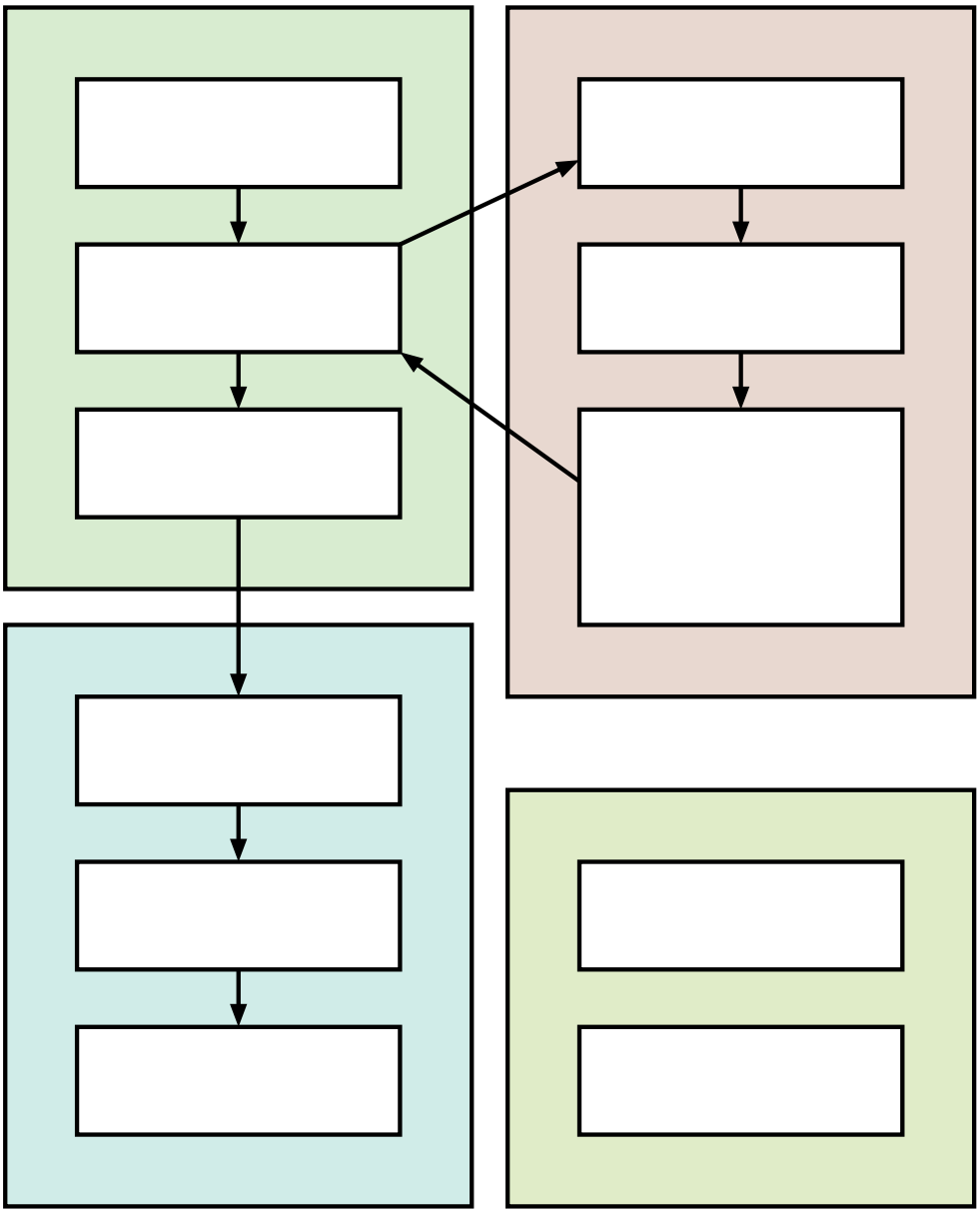
16.2. External diagram source file


Marauder
jollyness
Pirate
eyeCount: Int
raid()
pillage()
beard
parrot
foul mouth
0..7
mischief
bawl
sing
yell
drink
singing
*
rum
tastiness: Int
swig()
Sailor
shiver me timbers
plunder
more loot
no

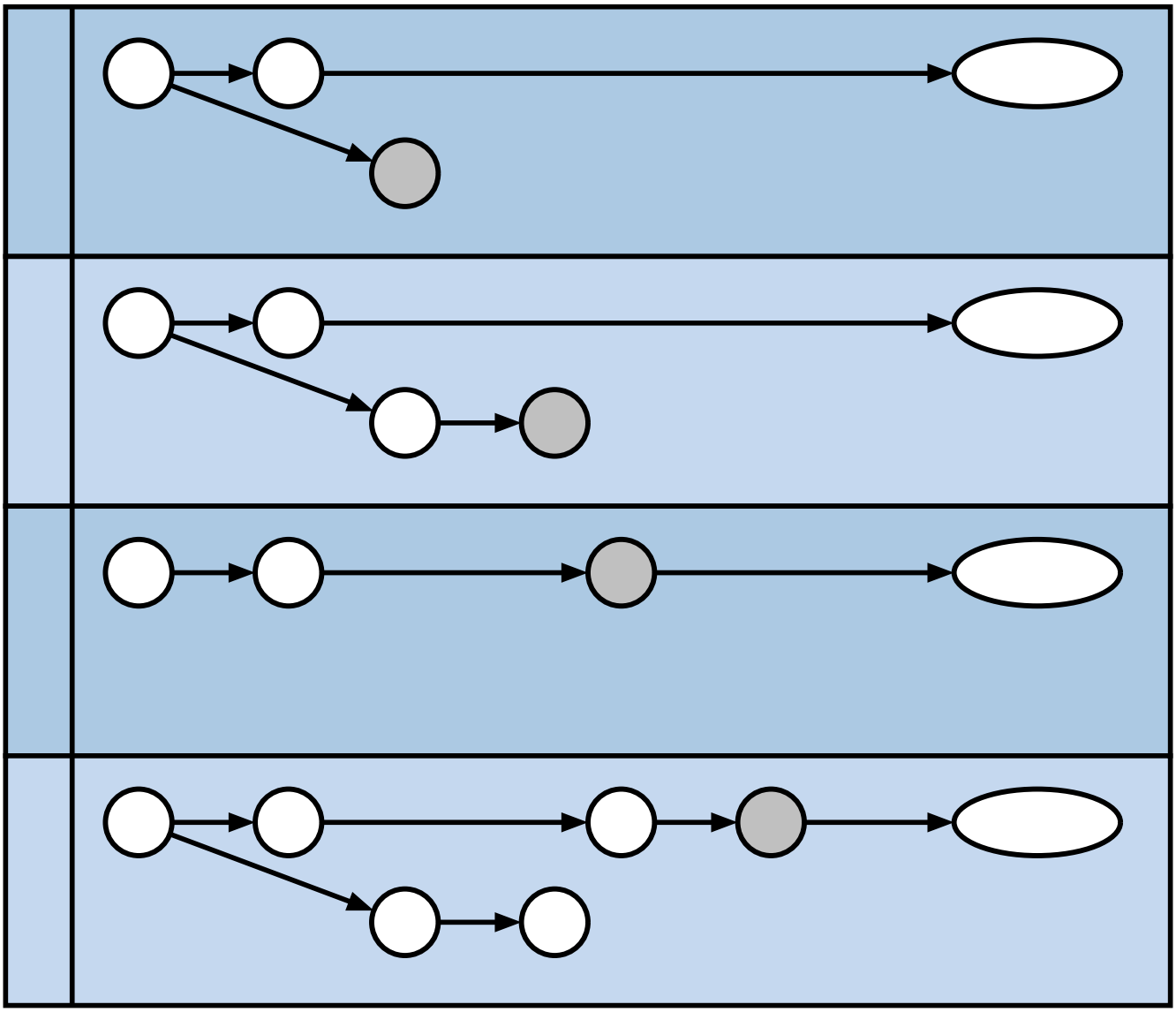
Chapter 17. Pikchr

> Pikchr (pronounced "picture") is a PIC-like markup language for diagrams in technical documentation. Pikchr is designed to be embedded in fenced code blocks of Markdown or similar mechanisms of other documentation markup languages.
>
> — Pikchr, https://pikchr.org/home/doc/trunk/homepage.md

17.1. Internal diagram source



17.2. External diagram source file

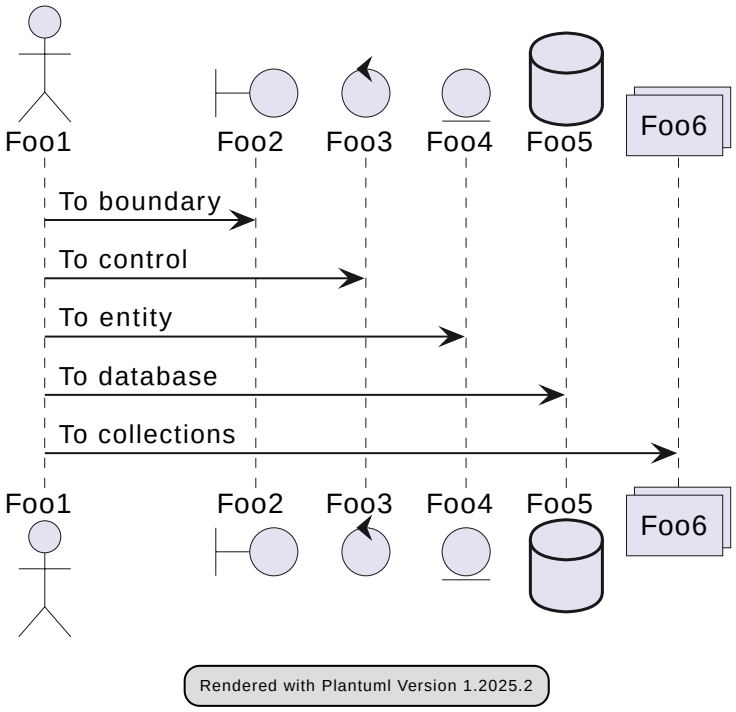


Chapter 18. PlantUML

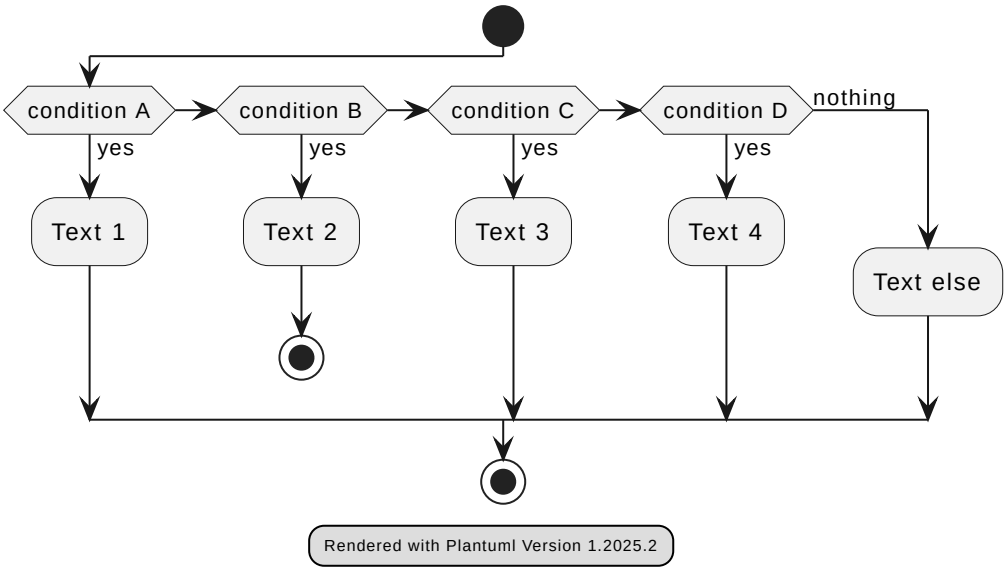
> *PlantUML* is a component that allows to quickly write :
>
> - Sequence diagram
> - Usecase diagram
> - Class diagram
> - Activity diagram (here is the legacy syntax)
> - Component diagram
> - State diagram
> - Object diagram
> - Deployment diagram
> - Timing diagram
>
> The following non-UML diagrams are also supported:
>
> - Network
> - Wireframe graphical interface
> - Archimate diagram
> - Specification and Description Language (SDL)
> - Ditaa diagram
> - Gantt diagram
> - MindMap diagram
> - Work Breakdown Structure diagram
> - Mathematic with AsciiMath or JLaTeXMath notation
> - Entity Relationship diagram
>
> Diagrams are defined using a simple and intuitive language.
>
> — PlantUML, https://plantuml.com/

18.1. PlantUML

18.1.1. Internal diagram source



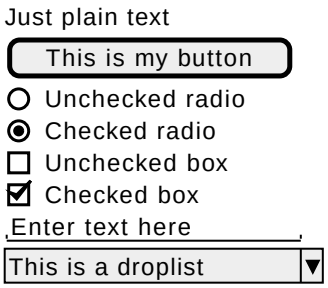
18.1.2. External diagram source file



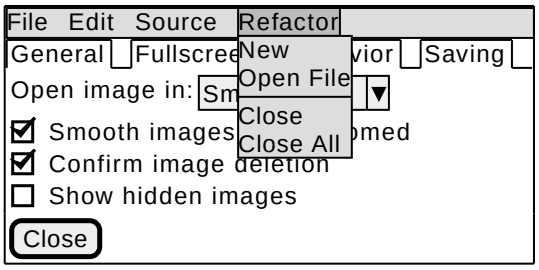
18.2. Salt

> *Salt* is a subproject included in PlantUML that may help you to design graphical interface.
>
> — PlantUML, https://plantuml.com/salt

18.2.1. Internal diagram source



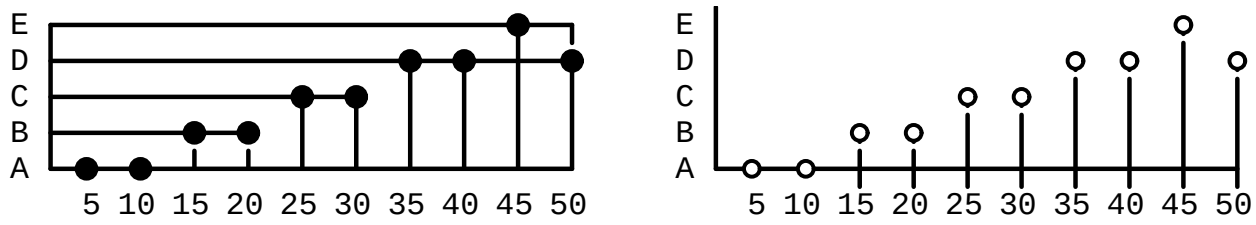
18.2.2. External diagram source file



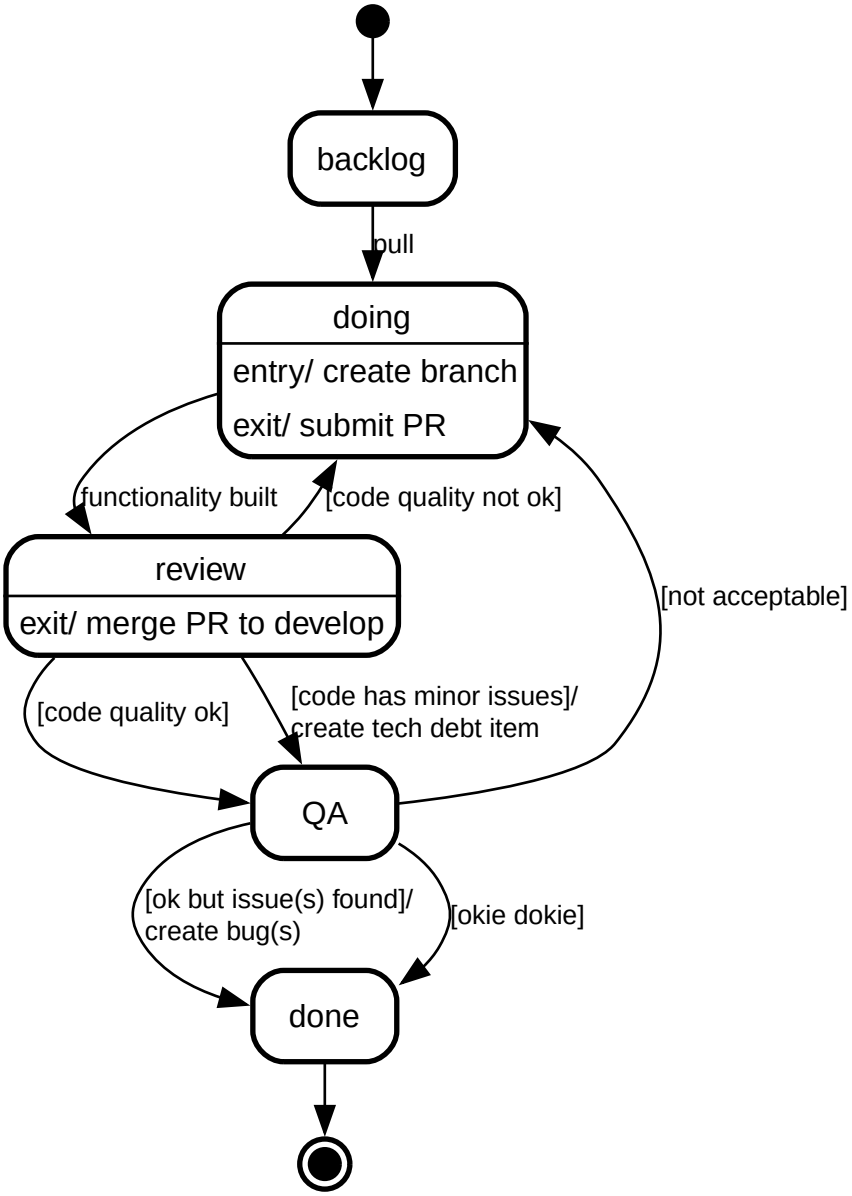
Chapter 19. state-machine-cat (smcat)

> **State Machine cat**
>
> write beautiful state charts
>
> — Sander Verweij, https://github.com/sverweij/state-machine-cat

19.1. Internal diagram source



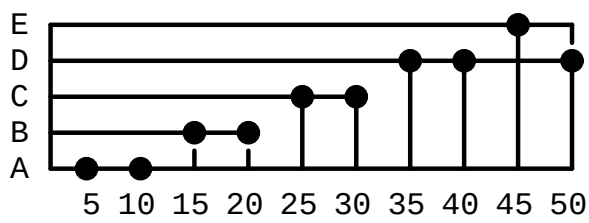
19.2. External diagram source file

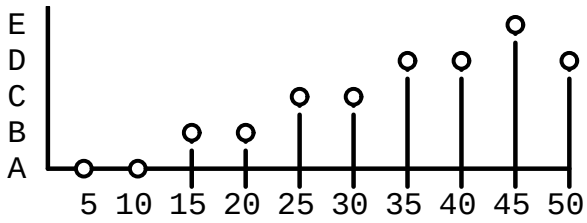

backlog
pull
doing
entry/ create branch
exit/ submit PR
functionality built
[code quality not ok]
review
exit/ merge PR to develop
[not acceptable]
[code quality ok]
[code has minor issues]/
create tech debt item
QA
[ok but issue(s) found]/
create bug(s)
[okie dokie]
done

Chapter 20. Svgbob

> Svgbob can create a nice graphical representation of your text diagrams.
>
> — Jovansonlee Cesar, https://github.com/ivanceras/svgbob/

20.1. Internal diagram source



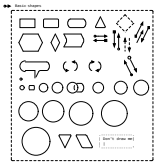


20.2. External diagram source file

It uses a combination of characters
available readily available on your keyboards.

What can it do?

- Basic shapes

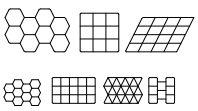


- Quad logo variables

- Even unicode arrow characters are supported

- Circle, quarter arcs, half circles, ¾ quarter arcs

- Grids



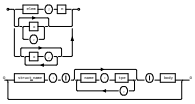
- Graphics Images

- CJK characters

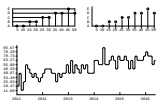
- Sequence Diagrams

- Flow diagrams

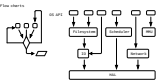
- Railroad diagrams



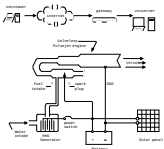
- Statistical charts



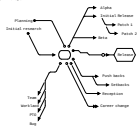
- Flow charts



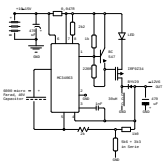
- Block diagrams



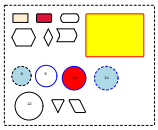
- Mindmaps



- It can do complex stuff such as circuit diagrams



- Latest addition: Styling of tagged shapes



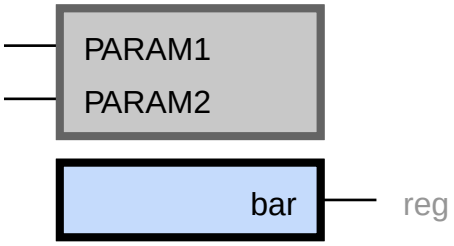
Advantages

- Plain text format
- Easy to learn, mostly backward compatible and future proof.
- Upgrades gracefully
  Even when not using a graphical renderer, it would still looks good
- Can be used in any text editor, even in non-source mode.
- Easiest to use. Anyone knows how to edit text.

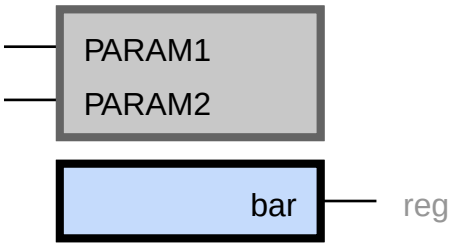
Chapter 21. Symbolator

> Symbolator is a component diagramming tool for VHDL and Verilog. It will parse HDL source files, extract components or modules and render them as an image.
>
> — Kevin Thibedeau, https://kevinpt.github.io/symbolator

21.1. Internal diagram source



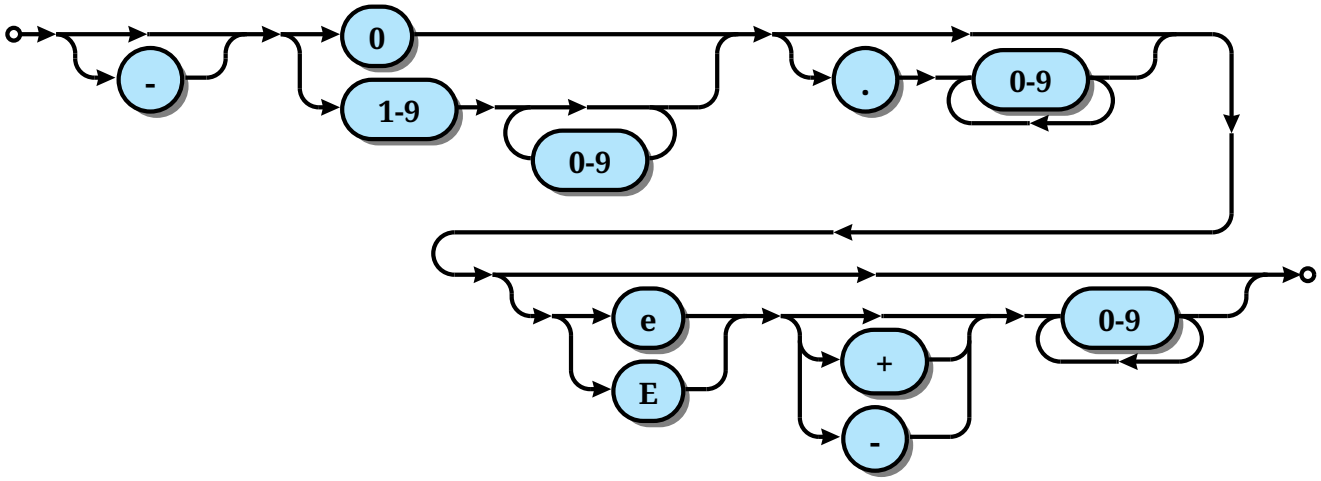
21.2. External diagram source file



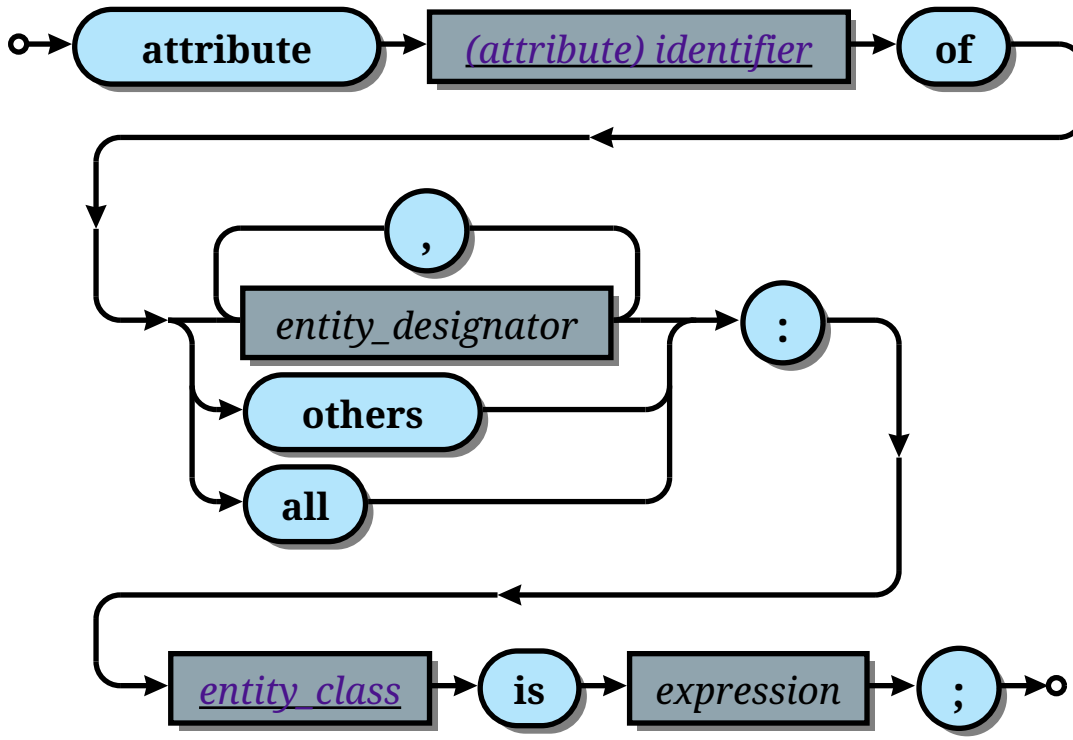
Chapter 22. Syntrax

> Syntrax is a railroad diagram generator. It creates a visual illustration of the grammar used for programming languages.
>
> — Kevin Thibedeau, https://kevinpt.github.io/syntrax

22.1. Internal diagram source



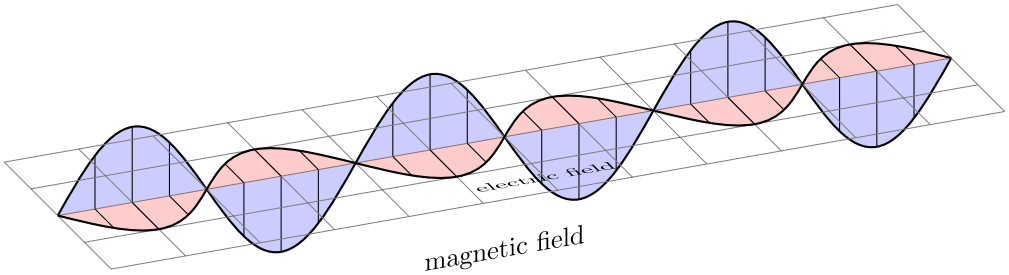
22.2. External diagram source file



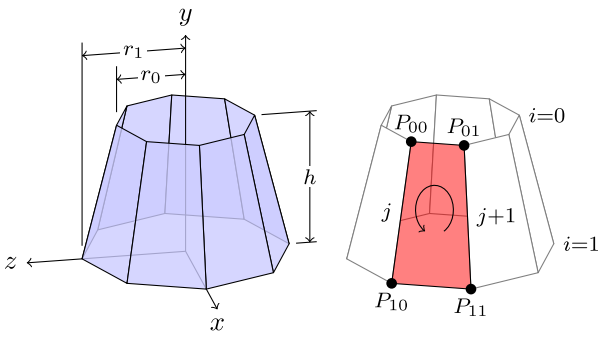
Chapter 23. Tikz

> “What is TikZ?”
>
> Basically, it just defines a number of TEX commands that draw graphics.
>
> — Till Tantau, https://pgf-tikz.github.io/pgf/pgfmanual.pdf

23.1. Internal diagram source



23.2. External diagram source file



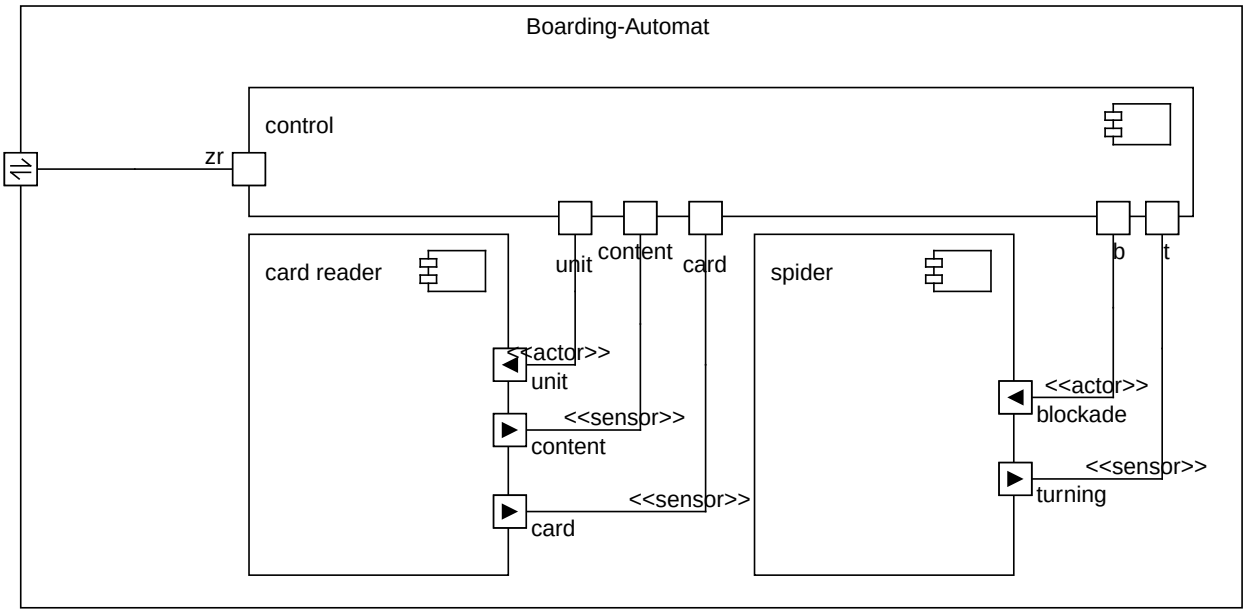
Chapter 24. UMLet

> UMLet is a free, open-source UML tool with a simple user interface: draw UML diagrams fast, create sequence and activity diagrams from plain text, share via exports to eps, pdf, jpg, svg, and clipboard, and develop new, custom UML elements.
>
> — The UMLet Team, https://www.umlet.com

24.1. Internal diagram source

The `umlet` backend currently does not support internal diagram sources.

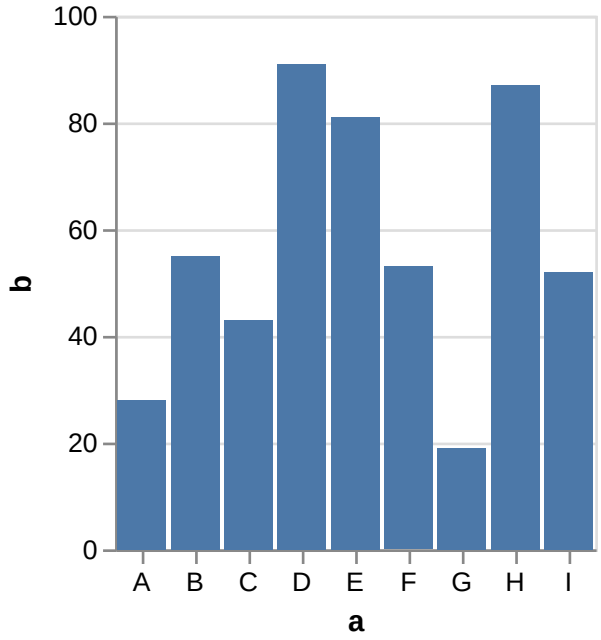
24.2. External diagram source file



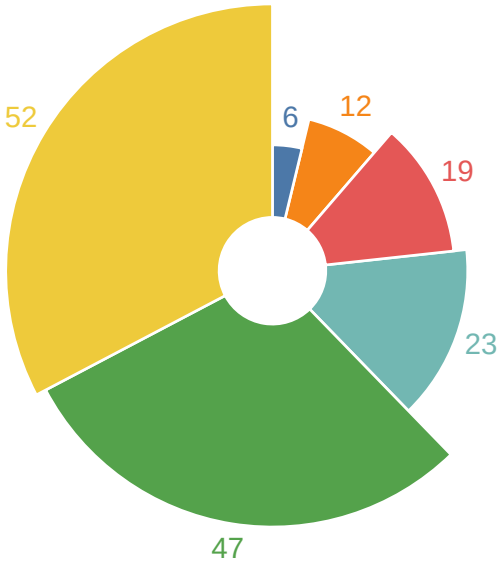
Chapter 25. Vega Lite

> Vega-Lite is a high-level grammar of interactive graphics. It provides a concise, declarative JSON syntax to create an expressive range of visualizations for data analysis and presentation.
>
> — Vega, https://vega.github.io/vega-lite/

25.1. Internal diagram source



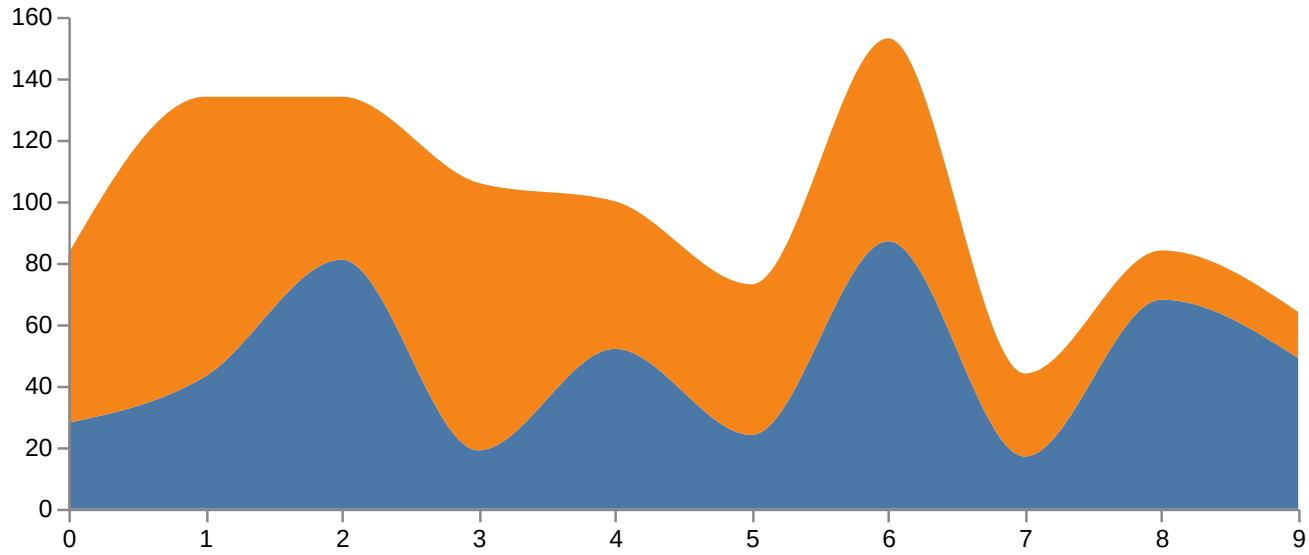
25.2. External diagram source file



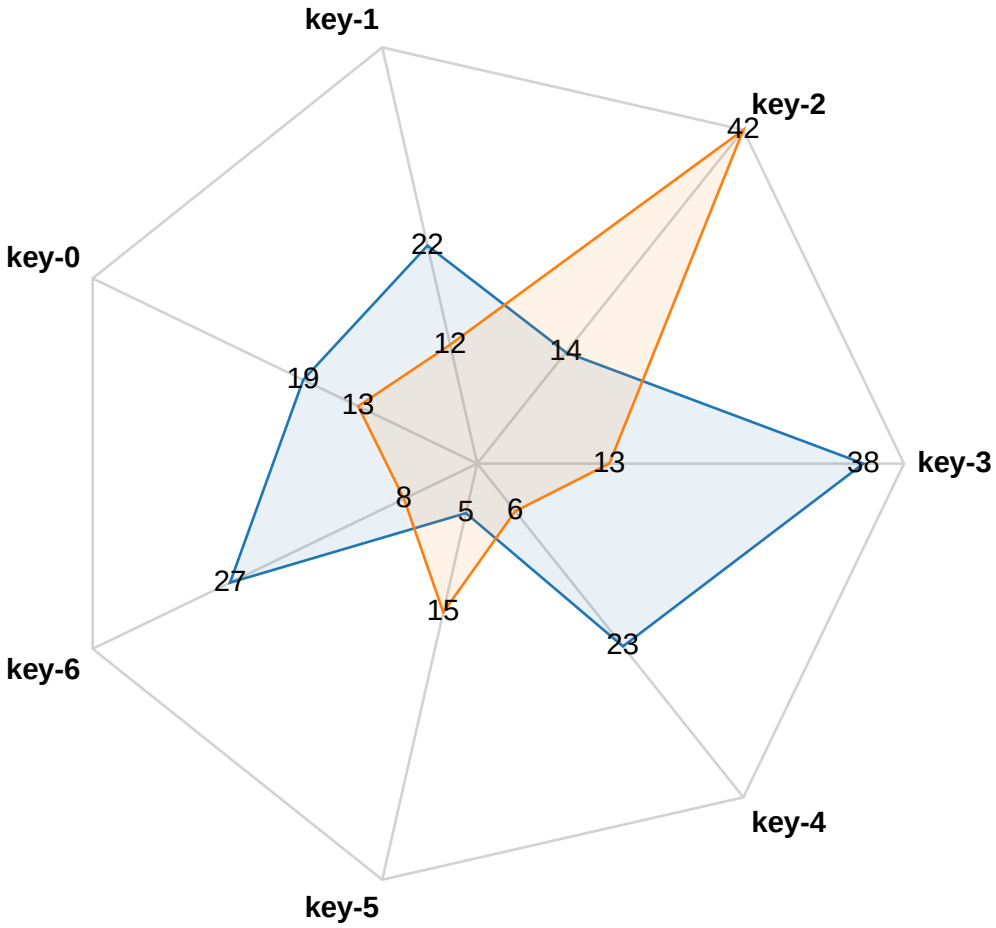
Chapter 26. Vega

> Vega is a visualization grammar, a declarative language for creating, saving, and sharing interactive visualization designs. With Vega, you can describe the visual appearance and interactive behavior of a visualization in a JSON format, and generate web-based views using Canvas or SVG.
>
> — Vega, https://vega.github.io/vega/

26.1. Internal diagram source



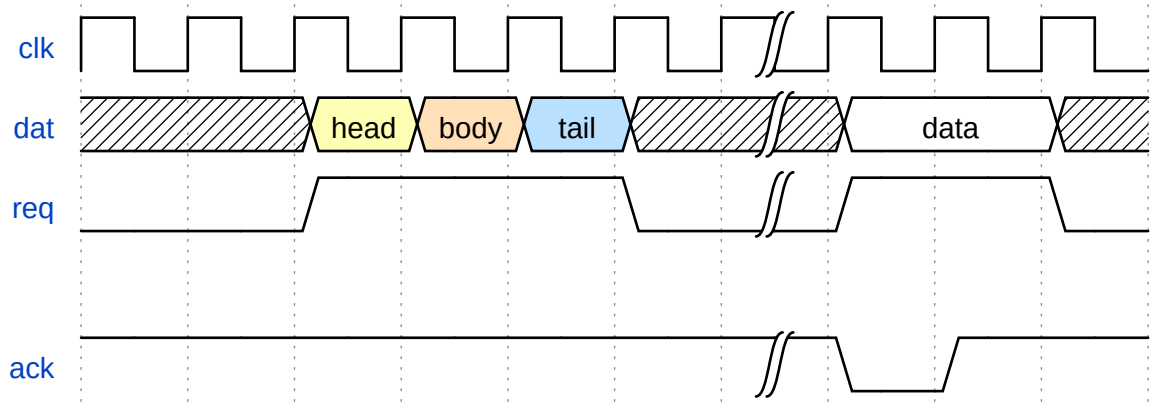
26.2. External diagram source file


key-1
key-2
key-0
key-3
key-6
key-4
key-5
42
22
12
14
19
13
13
38
8
5
6
27
15
23

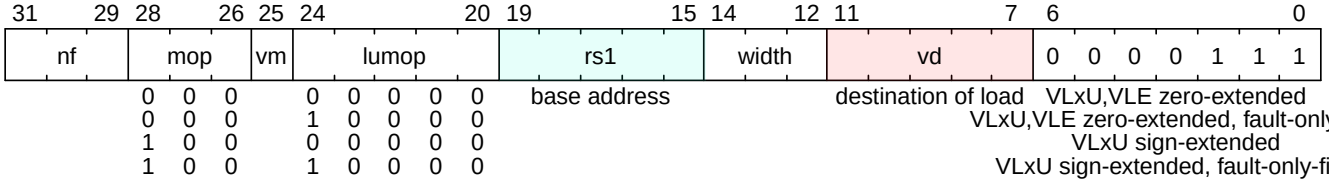
Chapter 27. WaveDrom

> WaveDrom draws your Timing Diagram or Waveform from simple textual description.
>
> — WaveDrom, https://wavedrom.com/

27.1. Internal diagram source



27.2. External diagram source file



Bibliography

- [DIAG] Asciidoctor Project (en): *Asciidoctor Diagram*. https://asciidoctor.org/docs/asciidoctor-diagram/ (Retrieved March 29, 2020)