

graphviz (30.md)

1. Description

Graphviz: A library for drawing graphs using dot notation
graphviz: A python library for implementing Graphviz

2. Example: Terminal

Fig. 1 is the result.

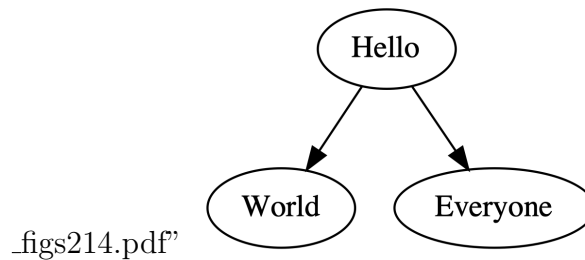


Figure 1: The image produced

This is from the pdf output.

see the manual page for dot
Below are how I produced a pdf and png file.

```
$ dot -Tpdf dog -o rat.pdf
```

```
$ dot -Tpng dog -o rat.png
```

The input file is dog

```
1 digraph d {
2   A [label="Hello"]
3   B [label="World"]
4   C [label="Everyone"]
5   A -> { B C }
6 }
```

a. Margins

`dot -Tpdf -o rat.pdf -Gmargin=0 graph; open rat.pdf`

Can also add `margin=0;` to dot file

3. Example (python)

```
1 import graphviz
2
3 dot = graphviz.Digraph('test', comment='build test
   diagram')
4
5 node = dot.node
6
7 node("a", 'Effective Problem Solving')
8 node("b", 'Method for Problem Solving')
9 node("c", 'Nomenclature')
10
11
12 dot.edge('b', 'a')
13 dot.edge('c', 'a', 'essential for')
14 dot.edge('c', 'b')
15
16 print(dot.source)
17
18 dot.render('test.pdf', '/Users/donaldelger/Desktop
   ', True)
```

4. Example

Fig. ?? shows the first graph I built for CT

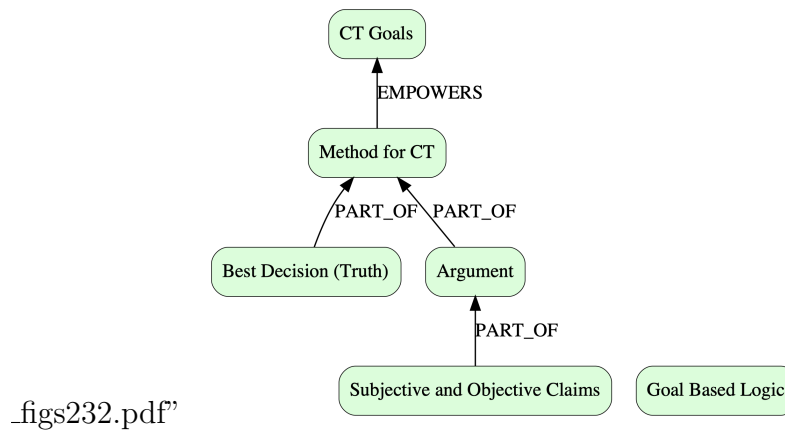


Figure 2: A graph showing some of the parts of CT

```

1 digraph {
2   rankdir="BT"
3   node [style = "rounded, filled" , shape=box,
4         fillcolor="#dafeda", penwidth=0.5]
5     42 [label="CT Goals"];
6     43 [label="Best Decision (Truth)"];
7     45 [label="Argument"];
8     46 [label="Method for CT"];
9     47 [label="Subjective and Objective Claims"];
10    71 [label="Goal Based Logic"];
11    "43" -> "46" [label="PART_OF"];
12    "45" -> "46" [label="PART_OF"];
13    "46" -> "42" [label="EMPOWERS"];
14    "47" -> "45" [label="PART_OF"];
15  }

```

5. Same Rank

{rank = same; B; D; Y;}

6. Sketch Viz

7. Colors

Table of Contents (254)

1. Custom Addition to TOC

`\addcontentline{file}{sec_unit}{entry}`

The `\addcontentline` command adds an entry.

- `file` is the extension of the file on which information is to be written: `toc` (table of contents), `lof` (list of figures), or `lot` (list of tables).
- `sec_unit` controls the formatting of the entry. It should be one of the following, depending upon the value of the file argument:
 1. `toc` - the name of the sectional unit, such as part or subsection.
 2. `lof` - figure 3, `lot` - table
- `entry` is the text of the entry.

Figure 3: Use these color names; no spaces

https://graphviz.org/Gallery/undirected/color_wheel.html

8. Resources

a. graphviz (python library)

Code

Manual

b. Graphviz

- Rene Nyffenegger. [Graphviz * \(dot\) examples](#). Clean and direct.
- Rene Nyffenegger <https://renenyffenegger.ch/notes/tools/Graphviz/attributes/label/index>: Go to his index and find “graphviz”.
- [Graphviz * tutorial](#) on YouTube, 11:48, Great into, 2021-01-13.
- [GraphViz Pocket * Reference](#) Has graph generator. Great site ..
- [Sketchviz's * tutorial](#)
- [Graphviz Reference * Site](#). Best online graph generator ...
- [How to Run Graphviz on the Mac](#)

c. Details

- [Partially Transparent Colors](#)