

# 1 Markdown to LaTeX Comprehensive Guide

This guide demonstrates all supported markdown syntax features for the md-to-luatex converter.

## 1.1 Headings

```
% % % %
```

## 2 Heading 1

### 2.1 Heading 2

#### 2.1.1 Heading 3

Heading 4

Heading 5

Heading 6

## 2.2 Text Formatting

### 2.2.1 Bold

**bold text** or **bold text**

### 2.2.2 Italic

*italic text* or *italic text*

### 2.2.3 Bold + Italic

***bold and italic*** or ***bold and italic***

### 2.2.4 Strikethrough

~~strikethrough text~~

### 2.2.5 Highlight

highlighted text

### 2.2.6 Superscript

superscript (e.g., x<sup>2</sup>)

### 2.2.7 Subscript

subscript (e.g., H<sub>2</sub>O)

## 2.3 Inline Code

## 2.4 Code Blocks

### 2.4.1 Fenced Code Block

### 2.4.2 Code Block Without Language

### 2.4.3 Terminal Block

## 2.5 Links

[link text](#)

[link text](#)

## 2.6 Images

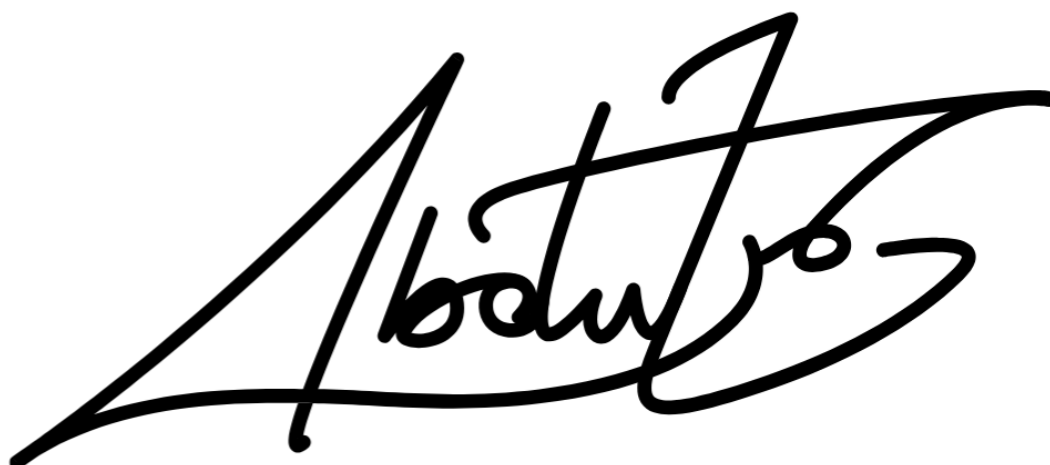
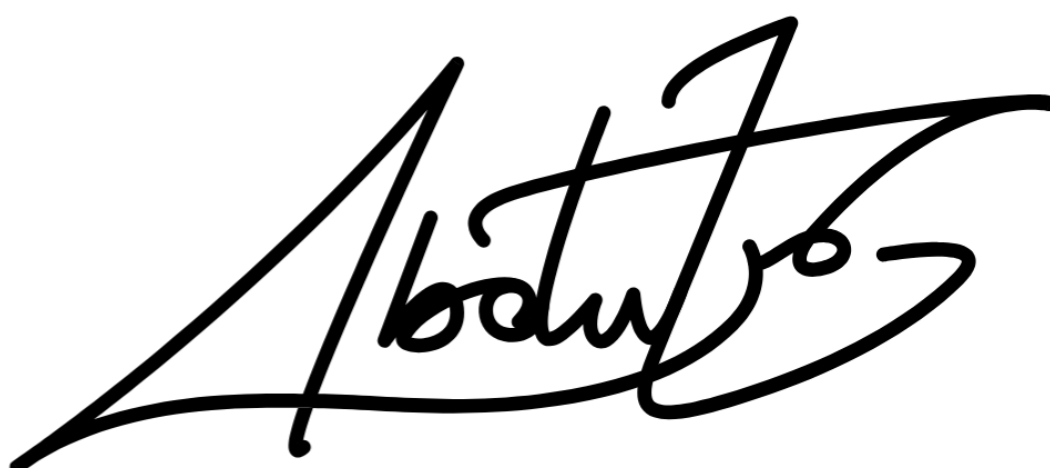
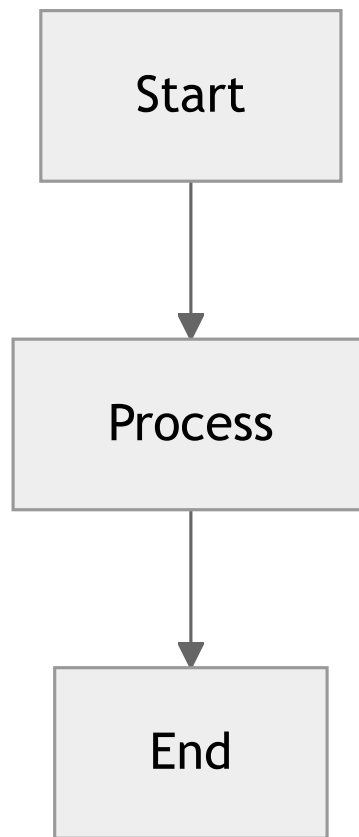
A handwritten signature in black ink, appearing to read 'Abdus'. The signature is written in a cursive style with a large, sweeping initial 'A' and a long, horizontal stroke extending to the right.A second instance of the handwritten signature 'Abdus' in black ink, identical to the one above. It features a large, sweeping initial 'A' and a long, horizontal stroke extending to the right.

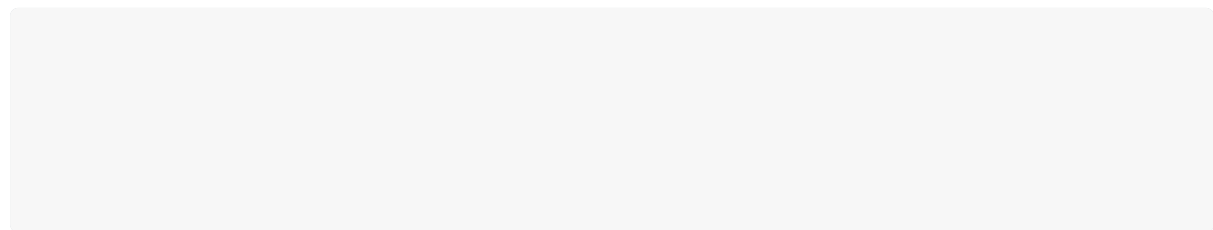
Figure 1: title

## 2.7 Mermaid Diagrams



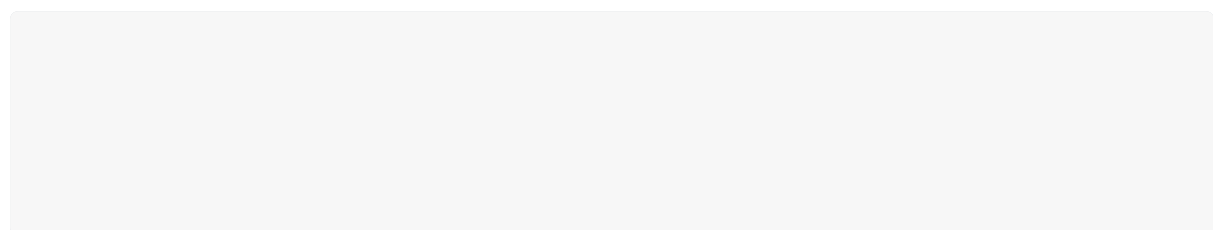
## 2.8 Lists

### 2.8.1 Unordered List



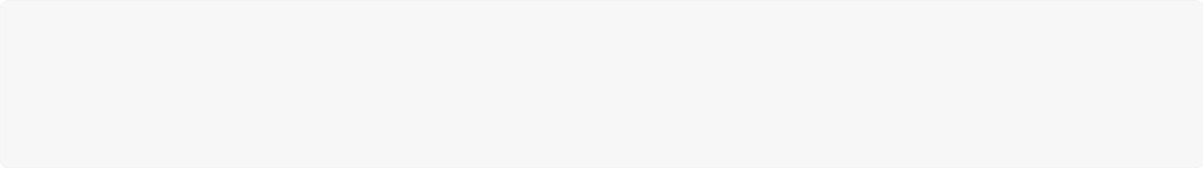
- Item 1
- Item 2
  - Nested item 2.1
  - Nested item 2.2
- Item 3

### 2.8.2 Ordered List



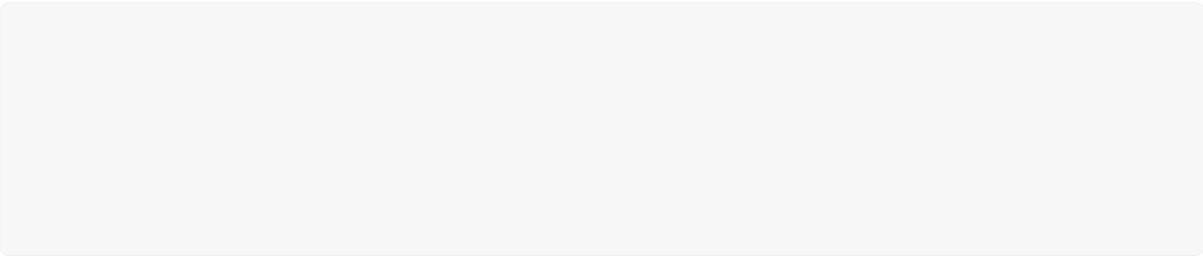
- 1. First item
- 2. Second item
  - 1. Nested item 2.1
  - 2. Nested item 2.2
- 3. Third item

2.8.3 Task Lists



- ☒ Completed task
- ☐ Incomplete task
- ☐ Partially completed task

2.9 Definition Lists

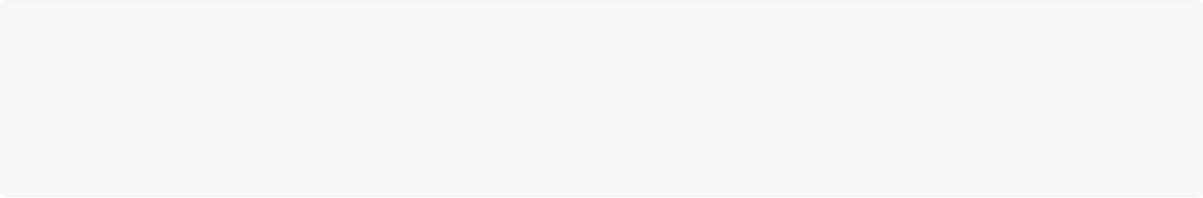


**Term 1**  
Definition 1

**Term 2**  
Definition 2a  
Definition 2b

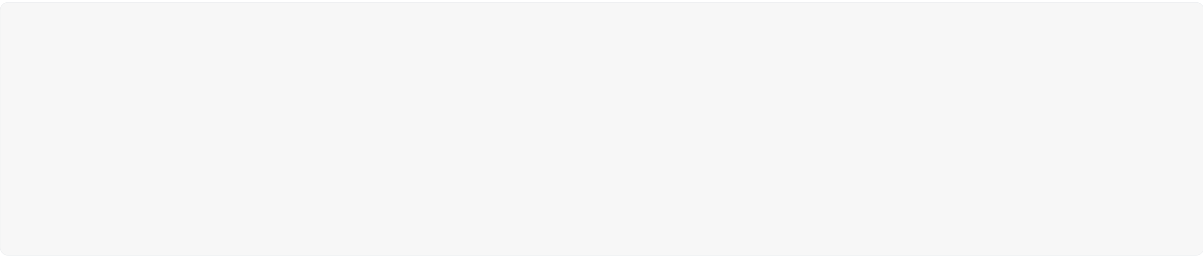
2.10 Tables

2.10.1 Pipe Tables



Left	Center	Right	Default
L1	C1	R1	Default
L2	C2	R2	Default

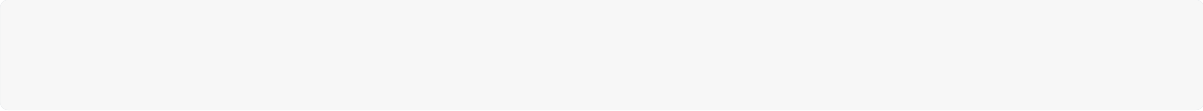
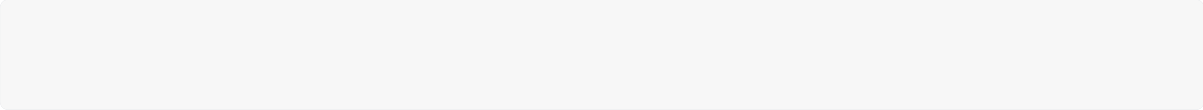
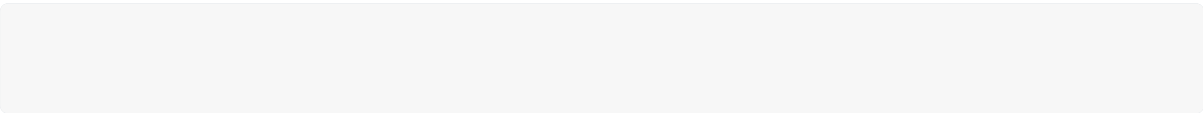
2.11 Table with Captions



Header 1	Header 2	Header 3
Cell 1	Cell 2	Cell 3
Cell 4	Cell 5	Cell 6

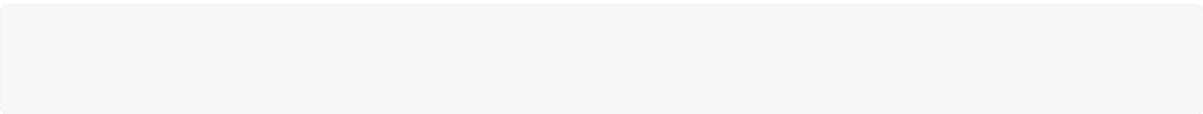
Table 1: Sample Table with Caption

2.12 Horizontal Rule



2.13 Math Expressions

2.13.1 Inline Math



This is inline math:  $E = mc^2$

### 2.13.2 Display Math

$$\int_0^\infty e^{-x^2} dx = \frac{\sqrt{\pi}}{2}$$

## 2.14 Footnotes

### 2.14.1 Inline Footnote

Text with inline footnote<sup>[1]</sup> .

### 2.14.2 Reference Footnote

Text with reference footnote<sup>[2]</sup> .

## 2.15 Keyboard Shortcuts

### 2.15.1 Single Key

○

### 2.15.2 Key Combination with Plus

○+○

### 2.15.3 Key Combination with Minus

○-○

---

[1] This is the footnote content

[2] This is the footnote content.



## 2.16 Line Break

### 2.16.1 Using Two Spaces

Put two spaces at the end of a line 1 to create a line break.

Line 1  
Line 2

### 2.16.2 Using Backslash

Line 1  
Line 2

### 2.16.3 Using HTML `<br />` Tag

Line 1  
Line 2

Line 1  
Line 2

### 2.16.4 Using Empty Line (Paragraph Break)

Line 1  
Line 2

## 2.17 Blockquotes

This is a blockquote. It can span multiple lines.  
And multiple paragraphs.

### 2.17.1 Nested Blockquotes

Level 1

Level 2

Level 3

### 2.17.2 Blockquotes with Styled Content

Blockquotes can contain inline code, keyboard shortcuts, tables, and other formatted elements:

This blockquote contains      and keyboard shortcuts like `⌘+⌘`.  
It can also have **bold**, *italic*, and highlighted text.

Feature	Supported
Tables	Yes
Code	Yes

### 2.17.3 Blockquotes with Code Blocks

Here's a code example inside a blockquote:

```
code block
```

The code block maintains its syntax highlighting.

## 2.18 GitHub Alerts

### 2.18.1 Note Alert

#### NOTE

This is a note alert with blue styling.

### 2.18.2 Tip Alert

#### TIP

This is a tip alert with green styling.

### 2.18.3 Important Alert

**IMPORTANT**  
This is an important alert with purple styling.

### 2.18.4 Warning Alert

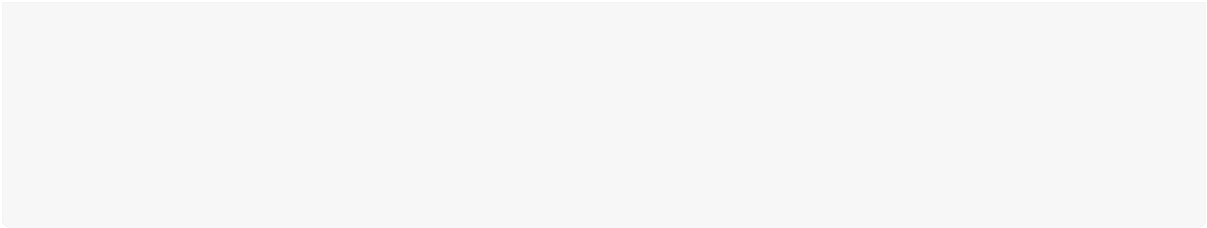
**WARNING**  
This is a warning alert with yellow/orange styling.

### 2.18.5 Caution Alert

**CAUTION**  
This is a caution alert with red styling.

### 2.18.6 Alerts with Rich Content

GitHub alerts can also contain formatted text, code, tables, and keyboard shortcuts:

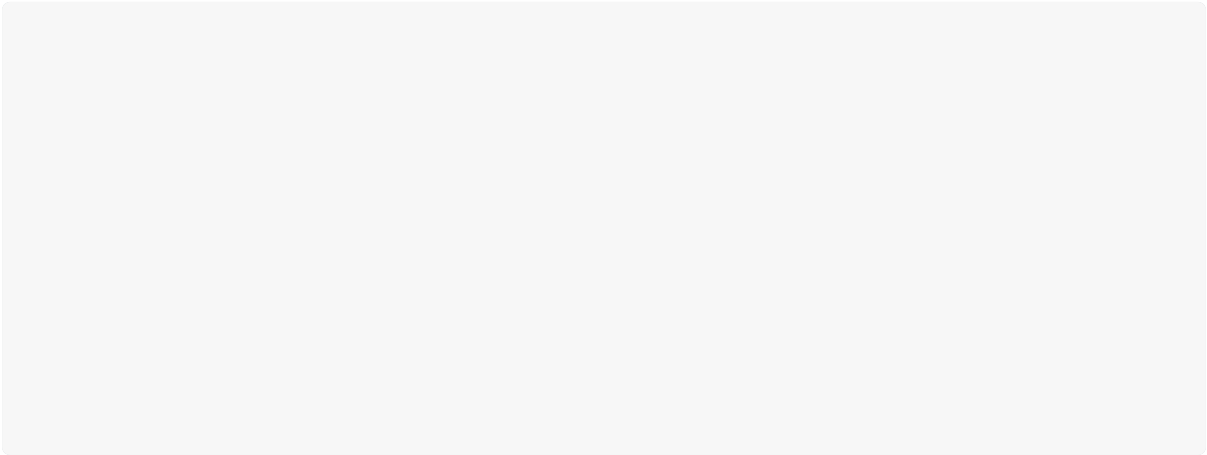


**TIP**

**Pro Tip:** Use `git commit` to commit changes.  
Common keyboard shortcuts:

- Save: `⌘ + ⌘`
- Undo: `⌘ + ⌘`

Command	Description
<code>git status</code>	Check repository status
<code>git log</code>	View commit history



**WARNING**

This contains highlighted text , ~~strikethrough~~, and <sup>superscript</sup>!

Code example:

**Never** run the above command!

### 2.19 Executable Python Code Blocks

The converter supports executing Python code blocks directly within your markdown and including their output or generated plots in the final PDF.

### 2.19.1 Prerequisites

For Python code execution to work, you need Python installed on your system. To generate plots with matplotlib, install the required packages:

#### NOTE

Mermaid diagram support is already documented in the Mermaid Diagrams section and requires separate installation of `mermaid` via npm.

### 2.19.2 Basic Syntax

Mark a Python code block for execution using properties in curly braces:

### 2.19.3 Available Properties

- `execute` - Execute the code block (required)
- `show_source` - Display the source code in the output
- `show_output` - Display execution output/plot (enabled by default)
- `hide_source` - Explicitly hide the source code (default)
- `hide_output` - Hide execution output/plot

### 2.19.4 Simple Print Example

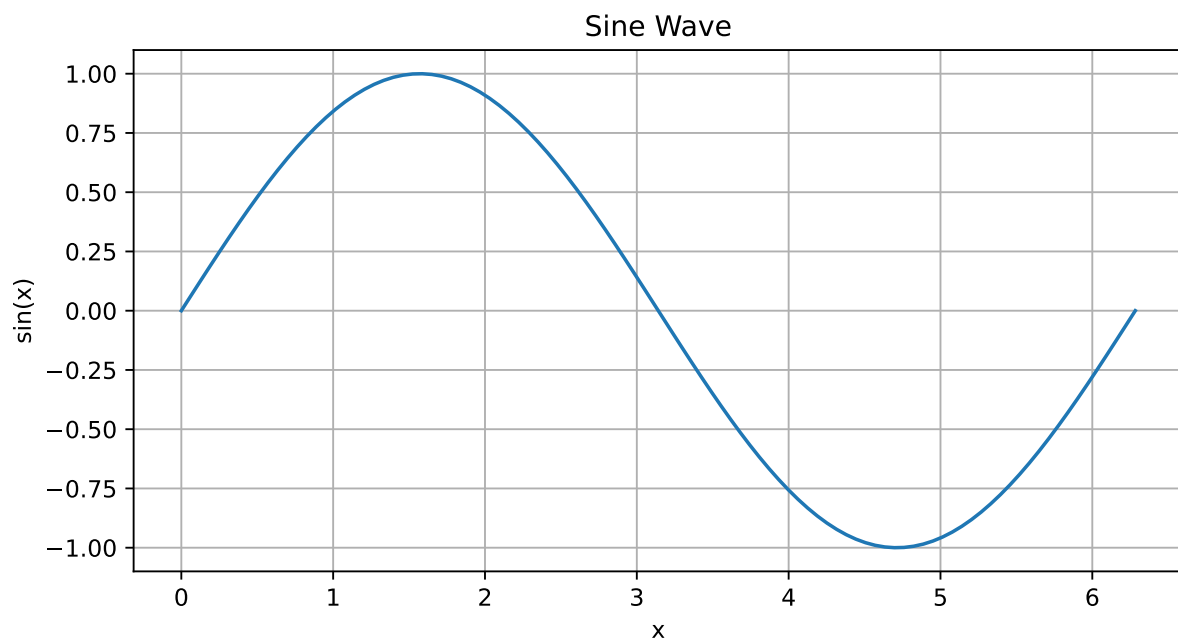
Output only (default):

Show both code and output:

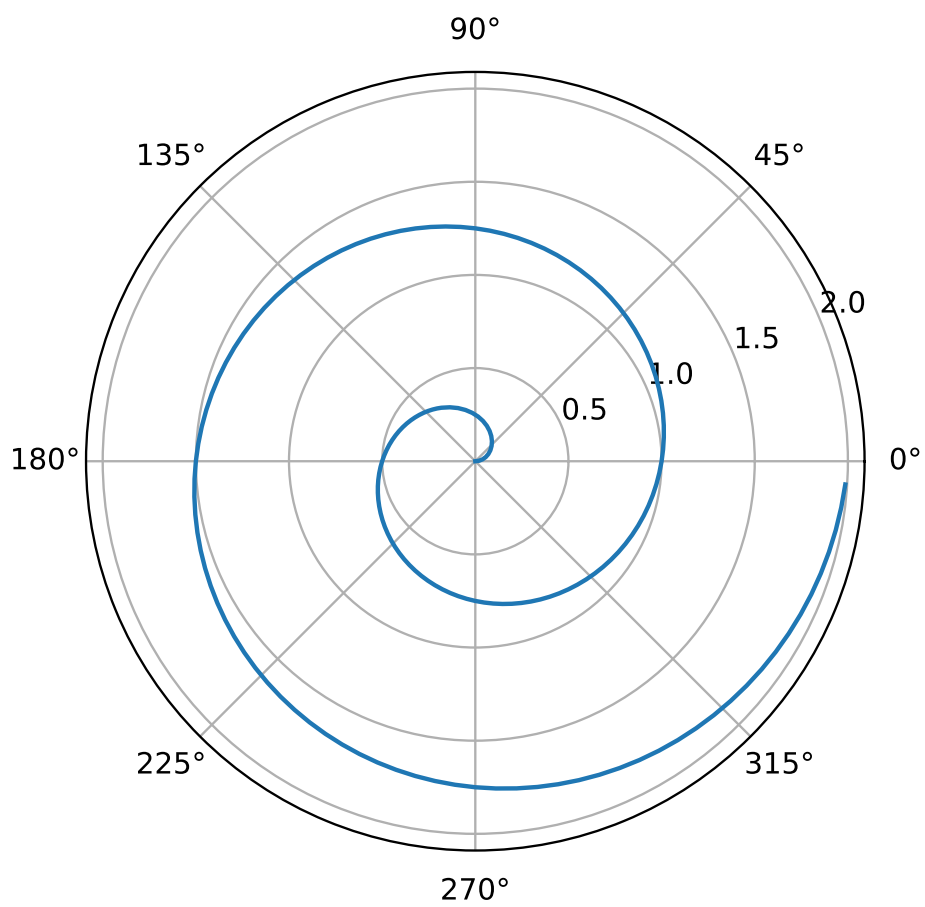
### 2.19.5 Matplotlib Plots

When your code uses matplotlib, the plot is automatically saved as a PDF and embedded in the document.

**Simple plot example (plot only):**

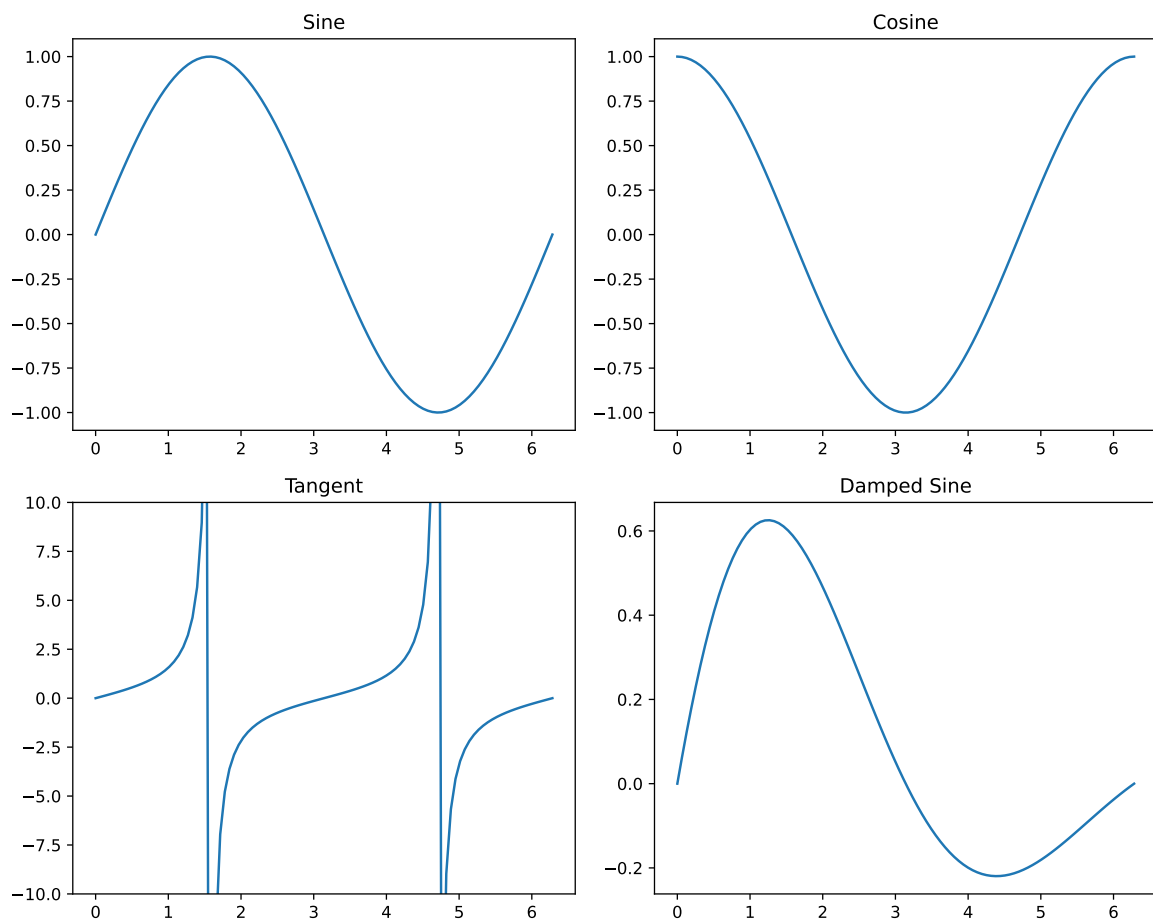
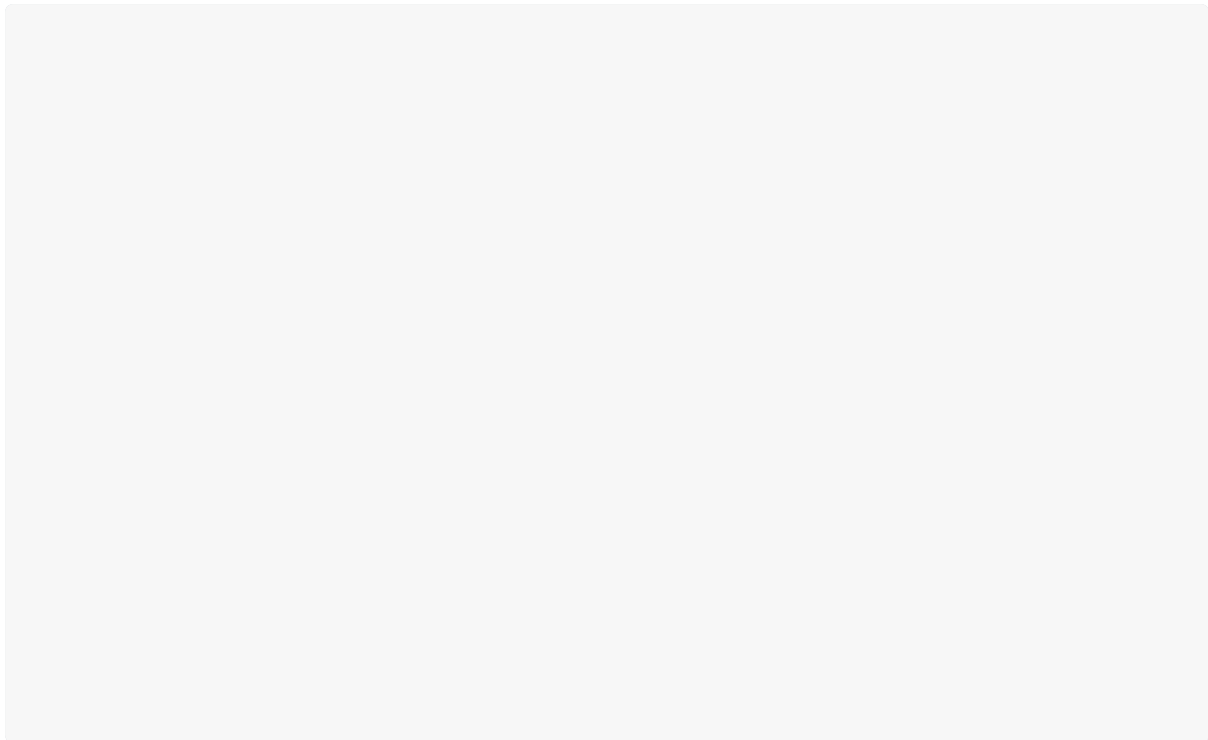


**Polar plot with code shown:**



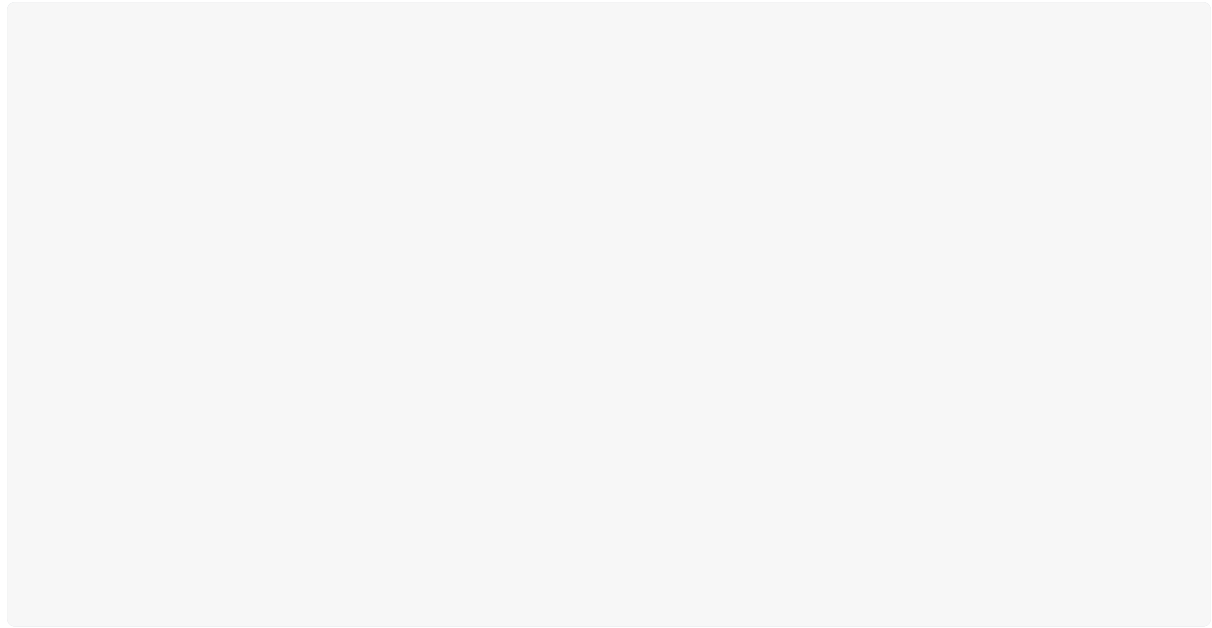
Multiple subplots:









## 2.20 Document Metadata (JSON)

Document metadata is configured in a separate JSON file:



### 2.20.1 Title Template Modes

The  setting controls how the title page is displayed:

-  : No title (disabled)
-  : Full university title page with logo (default) - Good for assignments and reports
-  : Title header above content - Good for notes
-  : Title on separate page - Good for when the contents are enabled

Controls document structure, metadata, and optional pages.