# Yet Another Markdown Cheatsheet Including MarkDown, MultiMarkdown, pandoc, GFM and LaTeX Math Syntax by MathJax

# Kolen Cheung University of California, Berkeley khcheung@berkeley.edu

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# Contents

Con	atents	1
Ι	Introduction	4
1	Organization	5
II	Examples	6
2	Header	7
	2.1 Header <i>Containing Styling</i> and a Link	7
	2.2 Header Containing Attributes {#identifier .class1 key=value1}	7 7 7
	2.3 Header Unnumbered $\{-\}$	7
	2.4 Header Unnumbered 2 {.Unnumbered}	7
	2.5 Auto Cross Reference	7
	2.6 User defined reference	7
	2.7 Deeper Levels of Headers	8
	2.7.1 Header4	8
	2.7.1.1 Header5	8
	3.0.0.0.0 Header6	8
3	Backslash Escapes	8
4	Emphasis 4.1 CriticMarkup	8
5	Horizontal Rules	8

CONTENTS 2

6	Break	8		
7	Superscript & Subscript			
8	Smarty Pants	9		
9	Abbreviations (PHP Markdown Extra)	9		
10	Lists         10.1 Ordered Lists          10.2 Unordered Lists          10.3 Nested Lists          10.4 Cutoff a List          10.5 List Item in a Block          10.6 Fancy Lists	9 10 10 10 11 11		
III	. one	12		
IV	. two	13		
11	Definition Lists         11.1 Method 1          11.2 Method 2	14 14 14		
12	Numbered Example Lists	14		
13	Code         13.1       Fenced Code Blocks          13.1.1       Method 1          13.1.2       Method 2          13.1.3       Method 3	14 15 15 15 15		
14	Block-quotes 14.0.1 Test	15 15 15		
15	Line Blocks	15		
16	Tables         16.1 Method 1	16 16 16 16 16 17		
17	Links           17.1 Reference Links	1 <b>7</b> 17		

CONTENTS 3

Foot	notes	
18.1	Reference Footnotes	
18.2	Glossaries	
18.3	Citations	
18	.3.1 MultiMarkdown	
18	3.3.2 Pandoc	
Imag	res	
19.1		
19.2	9	
19.3	Block Level Images	
RAW	, , , , , , , , , , , , , , , , , , ,	
-		
20.2		
Othe	er Syntaxes	
Meta	adata	
21.1	MultiMarkdown Metadata Block	
21.2	Pandoc Title Block	
21.3	YAML Metadata Block	
TOC		
22.1	Pandoc	
22.2		
22.3	Kramdown	
Math	1	
23.1	Markdown	
23.2		
23		
23		
23.3		
23.4		
23.5	Other Examples	
File '	Transclusion	
Refe	rences	
ograpl	ny	
	18.1 18.2 18.3 18 18 18 19.1 19.2 19.3  RAW 20.1 20.2  Other Meta 21.1 21.2 21.3  TOC 22.1 22.2 22.3  Math 23.1 23.2 23 23.3 23.4 23.5  File 7  Refe	18.2 Glossaries         18.3 Citations         18.3.1 MultiMarkdown         18.3.2 Pandoc         Images         19.1 Reference Images         19.2 Image with Links by Nesting Image and Link         19.3 Block Level Images         RAW         20.1 HTML         20.2 LaTeX         Other Syntaxes         Metadata         21.1 MultiMarkdown Metadata Block         21.2 Pandoc Title Block         21.3 YAML Metadata Block         TOC         22.1 Pandoc         22.2 MultiMarkdown         22.3 Kramdown         Math         23.1 Markdown         23.2.1 MultiMarkdown         23.2.2 Pandoc         23.3 Inline Math         23.4 Block Math

# Part I Introduction

1. ORGANIZATION 5

Examples (Part II) shows explicit examples for different syntaxes. Other Syntaxes (Part V) show the syntaxes that can't be shown explicitly.

# 1 Organization

- Header levels (except possibly the last header level): features in groups
- Last header level or a list: different syntaxes
- TaskPaper-styled tags to indicate in what favor of Markdown such syntax is supported
  - Cmarkdown: supported by original markdown, hence understood to be supported by all variants of markdown
  - Oghpages: GitHub-Favored Markdown, built by kramdown with GFM option.
     i.e. GitHub Pages' GitHub-Favored Markdown
  - @mmd: MultiMarkdown
  - Opandoc: pandoc-favored markdown
  - Ophpextra: PHP Markdown Extra (inspired some syntax in pandoc and mmd and gfm, not exhaustively tested here)
- TaskPaper Tags
  - 0...(partial): partial supports only
  - 0...(+...): when the extension is used
  - @pandoc(--...): when the command line argument is used
  - @pandoc(parsed): not verbatim, but parsed

# Note:

• You might see <!-- \begin{comment} -->...<!-- \end{comment} -->. This is for mmd to tex to pdf use only. Ignore this.

# Part II

# Examples

2. HEADER 7

## 2 Header

@markdown

See Emphasis (chapter 4) and Other Syntaxes (Part V) to see alternative Setext-style header styles @markdown

# 2.1 Header Containing Styling and a Link

@markdown

# 2.2 Header Containing Attributes {#identifier .class1 key=value1}

@pandoc @phpextra

# 2.3 Header Unnumbered {-}

@pandoc

# 2.4 Header Unnumbered 2 {.Unnumbered}

@pandoc

# 2.5 Auto Cross Reference

- Link to Header (chapter 2) @pandoc @ghpages @mmd
- Link to Header (chapter 2) @pandoc @mmd
- Header (chapter 2) @mmd @pandoc
- Header (chapter 2) @mmd @pandoc

## 2.6 User defined reference

- ullet userdefined reference (section 2.6) @mmd
- Link to userdefined reference (section 2.6) @mmd @pandoc(+mmd header identifiers)
- Link to "Header Containing Attributes" (??) @pandoc
- another-link (??) @pandoc

# 2.7 Deeper Levels of Headers

# 2.7.1 Header4

#### 2.7.1.1 Header5

# 2.7.1.1.1 Header6 3 Backslash Escapes

\*testing\* @markdown

# 4 Emphasis

- ullet italic or italic @markdown
- bold or bold @markdown
- bold italic or bold italic @markdown
- $\sim\sim$ strikethrough $\sim\sim$  @pandoc
- Small caps @pandoc @markdown(html)

# 4.1 CriticMarkup

Visually it looks like emphasis. Functionally it is much more, and called Critic Markup @mmd

See more at CriticMarkup—MultiMarkdown Documentation<sup>1</sup>.

## 5 Horizontal Rules

@markdown			
3 or more hyphens	or asterisks		

# 6 Break

@markdown
No break like this
Soft break
like this
Hard break

 $<sup>^{1}</sup> http://fletcher.github.io/MultiMarkdown-5/criticmarkup.html\\$ 

like this

# 7 Superscript & Subscript

- $\bullet$   $x^2$  @mmd
- $\bullet$  d<sub>o</sub> @mmd
- $\bullet$   $x^{a+b}$  @mmd @pandoc
- $\bullet$   $x_{y,z}$  @mmd @pandoc
- P\_a \ cat  $\sim$  @pandoc

# 8 Smarty Pants

@markdown(+smartypants) @pandoc(-smart) @ghpages

- "Example 1"
- 'Example 2'
- en-dash
- $\bullet$  em—dash
- ellipsis...

@mmd

• "Example 3"

# 9 Abbreviations (PHP Markdown Extra)

```
@mmd \ @phpextra \ @pandoc(+abbreviations)\\
```

Testing abbreviations: HyperText Markup Language (HTML), World Wide Web Consortium (W3C) (mouseover it to see)

# 10 Lists

# 10.1 Ordered Lists

@markdown

- 1. test
- 2. test
- 3. test

10. LISTS 10

# 10.2 Unordered Lists

@markdown

- test
- test
- test

# 10.3 Nested Lists

@markdown

- test
  - test
- $\bullet$  test
  - 1. test
  - 2. test
    - test
      - a) test
      - b) test
  - 3. test
- test

Note about LaTeX output in mmd/pandoc:

• The Maximum nesting level of lists in LaTeX is 4. The quick hack is to mix itemize and enumerate alternatively to go beyond this.

# 10.4 Cutoff a List

@markdown

- 1. one
- 2. two
- 3. three
- 1. uno
- 2. dos
- 3. tres
- item one

10. LISTS 11

```
• item two
end of list
{ my code block }
```

# 10.5 List Item in a Block

@markdown

• First paragraph.

Continued.

• Second paragraph. With a code block, which must be indented eight spaces:

```
{ code }
```

# 10.6 Fancy Lists

@pandoc

Part III

. one

Part IV

. two

9) Ninth 10) Tenth 11) Eleventh i. i ii. ii iii. iii (2) Two (5) Three 1. Four \* Five

# 11 Definition Lists

## 11.1 Method 1

@mmd @phpextra @pandoc @ghpages

Physics The Fundamental of Science

Describe the Nature

Make Prediction

## 11.2 Method 2

@ghpages @pandoc @mmd

**Term 1** Definition 1

Term 2 with inline markup Definition 2

```
{ some code, part of Definition 2 }
```

Third paragraph of definition 2.

# 12 Numbered Example Lists

@pandoc

(@) My first example will be numbered (1). (@) My second example will be numbered (2).

Explanation of examples.

(@) My third example will be numbered (3).

(@good) This is a good example.

As (@good) illustrates, ...

# 13 Code

- testing @markdown
- \[\ket{a}\]{.latex} @pandoc

## 13.1 Fenced Code Blocks

## 13.1.1 Method 1

```
@markdown

test

test

test

# test
```

#### 13.1.2 Method 2

```
@markdown(partial:language-not-supported) @ghpages @pandoc @mmd
```

#### 13.1.3 Method 3

```
@pandoc
```

```
\sim\sim\simmarkdown test test # test \sim\sim\sim {#mycode .markdown .numberLines startFrom="100"} test test test # test \sim\sim\sim
```

# 14 Block-quotes

@markdown

#### 14.0.1 Test

test

 $\operatorname{test}$ 

test

- test
- test

# 14.1 Block-quotes Quoting Codes

@markdown

\newcommand...

# 15 Line Blocks

@ghpages(partial) @pandoc

 $\mid$  The limerick packs laughs an atomical  $\mid$  In space that is quite economical.  $\mid$  But the good ones I've seen  $\mid$  So seldom are clean  $\mid$  And the clean ones so seldom are comical 16. TABLES 16

| 200 Main St. | Berkeley, CA 94718

# 16 Tables

# 16.1 Method 1

@ghpages @pandoc @mmd

 $\mid \mathbf{1} \mid \mathbf{1} \mid \mathbf{1} \mid \mathbf{1} \mid \mathbf{1} \mid$  Notice how pandoc can have optional caption like this

# 16.2 Method 2

@mmd

Table 1: Table Caption

Left align	Right align	Grouping Center align		
This	This	This		
column	$\operatorname{column}$	$\operatorname{column}$		
will	will	will		
be	be	be		
left	$_{ m right}$	center		
aligned	aligned	aligned		
And a big grouping is like this				

# 16.3 Method 3

@pandoc Right Left Center Default ————————————————————————————————————	12 12 12 12 123	3 123 123 123 1 1 1 1
16.4 Method 4		
@pandoc		
Centered Default Right Left Header Aligned Align	0	— —- ole lines.

Second row 5.0 Here's another one. Note the blank line between

17. LINKS 17

rows.

Table: Here's the caption. It, too, may span multiple lines.

#### 16.5 Method 5

@pandoc Sample grid table.

#### 16.6 Method 6

```
@ghpages
See Syntax | kramdown<sup>2</sup>
```

# 17 Links

- $\bullet \ \, https://www.wikipedia.org @pandoc(+autolink\_bare\_uris)\\$
- https://www.wikipedia.org @markdown
- Wikipedia.org<sup>3</sup> @markdown
- Wikipedia.org<sup>4</sup> @markdown
- Mail to GitHub<sup>5</sup> @markdown

## 17.1 Reference Links

- Search here<sup>6</sup> @markdown
- A link<sup>7</sup> with attributes. @mmd
- Another link to the link above<sup>8</sup>. @mmd
- A link1<sup>9</sup> with attributes. @markdown

<sup>&</sup>lt;sup>2</sup>http://kramdown.gettalong.org/syntax.html#tables

<sup>&</sup>lt;sup>3</sup>https://www.wikipedia.org

<sup>&</sup>lt;sup>4</sup>https://www.wikipedia.org

<sup>&</sup>lt;sup>5</sup>mailto:support@github.com

 $<sup>^6 \</sup>rm https://www.google.com$ 

<sup>&</sup>lt;sup>7</sup>image.png

<sup>&</sup>lt;sup>8</sup>image.png

<sup>9/</sup>foo/bar.html

18. FOOTNOTES 18

- Another link<sup>10</sup>. @markdown
- link3<sup>11</sup>. @markdown

## 18 Footnotes

- Footnotes <sup>12</sup> @mmd
- Footnotes ^[This is a pandoc inline footnote] @pandoc

# 18.1 Reference Footnotes

- Footnotes<sup>13</sup> @markdown
- Long Footnotes <sup>14</sup> @pandoc @ghpages @mmd

This paragraph won't be part of the note, because it isn't indented.

#### 18.2 Glossaries

A special kind of footnote . @mmd See more at Glossary—MultiMarkdown Documentation  $^{15}$ .

# 18.3 Citations

It can looks like footnotes in HTML output.

# 18.3.1 MultiMarkdown

@mmd

• This is a statement that should be attributed to its source (1, p. 23).

See more at Citations—MultiMarkdown Documentation<sup>16</sup>.

Subsequent paragraphs are indented to show that they belong to the previous footnote.

```
{ some.code }
```

The whole paragraph can be indented, or just the first line. In this way, multi-paragraph footnotes work like multi-paragraph list items.

<sup>&</sup>lt;sup>10</sup>http://fsf.org

<sup>11/</sup>bar#special

<sup>&</sup>lt;sup>12</sup>This is a mmd inline footnote

 $<sup>^{13}\</sup>mathrm{This}$  is a footnote

<sup>&</sup>lt;sup>14</sup>Here's one with multiple blocks.

<sup>&</sup>lt;sup>15</sup>http://fletcher.github.io/MultiMarkdown-5/glossary.html

 $<sup>^{16} \</sup>rm http://fletcher.github.io/MultiMarkdown-5/citations.html$ 

# 18.3.2 Pandoc

@pandoc

Very powerful but complicated. See more at Citations—Pandoc Documentation<sup>17</sup>.

# 19 Images



 $\overline{\ ^{17} \rm http://pandoc.org/README.html\#citations}$ 

# 19.1 Reference Images



@markdown



 $@mmd \ @pandoc(+mmd\_link\_attributes)$ 



.class width=30 height=20px} @pandoc @phpextra(partial)

 $\bullet$  a reference ! [image][ref] with attributes. @pandoc @phpextra(partial)

[ref]: image.png "optional title" {#id .class key=val key2="val 2"}

 $\{\#\mathrm{id}$ 

# 19.2 Image with Links by Nesting Image and Link



19.3 Block Level Images

• Block level: HTML figure element in MultiMarkdown @mmd @pandoc

<sup>&</sup>lt;sup>18</sup>https://www.wikipedia.org/

20. RAW 23



Figure 1: Block Level



20. RAW 24

 $See \ more \ at \ Raw-MultiMarkdown \ Documentation^{19}. \ See \ test \ in \ [Babelmark 2-Compare markdown implementations] (http://johnmacfarlane.net/babelmark2/?normalize=1\&text=\%3Cdiv\%3EThis+should) (http://johnmacfarlane.net/babelmark2) (http://$ 

# 20.2 LaTeX

- @mmd
- \newcommand\rawlatex{} @pandoc(parsed)

 $<sup>{}^{19} \</sup>rm http://fletcher.github.io/MultiMarkdown-5/raw.html$ 

# Part V Other Syntaxes

21. METADATA 26

#### 21 Metadata

Note: mmd accepts capitalized metadata keys but others do not. For maximum compatibility, author(s), title, etc. should be in lower cases.

## 21.1 MultiMarkdown Metadata Block

@mmd @pandoc(+mmd title block)

title: A Sample MultiMarkdown Document

author: Fletcher T. Penney
date: February 9, 2011

comment: This is a comment intended to demonstrate

metadata that spans multiple lines, yet

is treated as a single value.

CSS: http://example.com/standard.css

See more at Metadata—MultiMarkdown Documentation<sup>20</sup>.

## 21.2 Pandoc Title Block

# 21.3 YAML Metadata Block

 $<sup>^{20} \</sup>rm http://fletcher.github.io/MultiMarkdown-5/metadata.html$ 

22. TOC 27

#### 22 TOC

## 22.1 Pandoc

@pandoc

Use --toc as a command argument.

#### 22.2 MultiMarkdown

@mmd

{{TOC}}, see beginning. It preprocess the headings and generate a ToC on its own, and doesn't give instruction for LaTeX to generate one. A hack is like this:

```
...
LaTeX Input: mmd-load-toc-setcounter
LaTeX Input: mmd-load-toc
...
---
<!-- \begin{comment} -->
{{TOC}}
<!-- \end{comment} -->
```

See more at ickc/peg-multimarkdown-latex-support: Default support files for generating LaTeX documents with MMD 3 through MMD  $5^{21}$ .

#### 22.3 Kramdown

```
@ghpages
    # Contents
    {:.no_toc}

* Will be replaced with the ToC, excluding the "Contents" header
    {:toc}
```

## 23 Math

MathJax is assumed. MathJax has many configurable options. See MathJax TeX and LaTeX Support — MathJax 2.6 documentation<sup>22</sup>.

## 23.1 Markdown

@markdown

Add the following at the beginning of the document:

 $<sup>^{21} \</sup>rm https://github.com/ickc/peg-multimarkdown-latex-support$ 

 $<sup>^{22} \</sup>rm http://mathjax.readthedocs.org/en/latest/tex.html$ 

23. MATH 28

MathJax.js is used and any codes within math delimiters are treated as raw HTML and to be processed by MathJax.

MathJax delimiter are \$\$...\$\$, \\(...\\) and \\[...\\] (because an extra \ can be used to escape from MarkDown).

Depending on the markdown parser, extra tricks might be needed to make sure nothing within the math delimiter is treated as markdown (see TeX and LaTeX in HTML documents — MathJax 2.6 documentation<sup>23</sup>). \$...\$ can be used with MathJax configuration (see TeX and LaTeX math delimiters — MathJax 2.6 documentation<sup>24</sup>).

#### 23.2 MultiMarkdown and Pandoc

There are subtleties how math should be used in HTML+MathJax and LaTeX output from single markdown source. See more in Testing LaTeX Environments Usage in MathJax From Markdown Conversion (including mmd and pandoc)<sup>25</sup>.

#### 23.2.1 MultiMarkdown

@mmd

Add the following metadata at the beginning of the document:

MultiMarkdown math delimiter are ..., ..., ..., and ....

#### 23.2.2 Pandoc

@pandoc(-mathjax)

For pandoc, add --mathjax in the command-line argument.

Default math delimiter for pandoc is \$...\$, \$\$...\$\$. Other options are configurable. See more in Pandoc - Pandoc User's Guide<sup>26</sup>.

## 23.3 Inline Math

- 1+1
- 1+1 @pandoc(+tex math double backslash)

 $<sup>^{23} \</sup>rm http://mathjax.readthedocs.org/en/latest/tex.html\#tex-and-latex-in-html-documents$ 

 $<sup>{\</sup>bf ^{24}http://mathjax.readthedocs.org/en/latest/tex.html\#tex-and-latex-math-delimiters}$ 

<sup>&</sup>lt;sup>25</sup>https://github.com/ickc/mathjax-latex-md-mmd-pandoc

 $<sup>^{26}</sup>$ http://pandoc.org/README.html#non-pandoc-extensions

29

## 23.4 Block Math

•

$$RR^T = I$$

•

$$A_S^T = B$$

# 23.5 Other Examples

•

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

• \$\$ \begin{aligned} \\dot{x} & = \sigma(y-x) \ \\dot{y} & = \rho x - y - xz \ \\dot{z} & = -\beta z + xy \end{aligned} \$\$\$

•

$$\left(\sum_{k=1}^{n} a_k b_k\right)^2 \le \left(\sum_{k=1}^{n} a_k^2\right) \left(\sum_{k=1}^{n} b_k^2\right)$$

•

$$\mathbf{V}_1 \times \mathbf{V}_2 = \begin{vmatrix} \mathbf{i} & \mathbf{j} & \mathbf{k} \\ \frac{\partial X}{\partial u} & \frac{\partial Y}{\partial u} & 0 \\ \frac{\partial X}{\partial v} & \frac{\partial Y}{\partial v} & 0 \end{vmatrix}$$

•

$$P(E) = \binom{n}{k} p^k (1-p)^{n-k}$$

•

$$\frac{1}{\left(\sqrt{\phi\sqrt{5}} - \phi\right)e^{\frac{2}{5}\pi}} = 1 + \frac{e^{-2\pi}}{1 + \frac{e^{-4\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{$$

• \$\$ \begin{aligned} \nabla \times \vec{\mathbb{B}} -\, \frac{\c{\hat{E}}}{\operatorname{E}} {\mathbb{E}} & = \frac{4\pi^{2}}{c} \cdot \frac{\mathbb{E}}{\mathbb{E}} & = 4\pi^{2} \cdot \mathbb{E}} \\ + \frac{4\pi^{2}}{c} \cdot \frac{\mathbb{E}}{\mathbb{E}} & = 4\pi^{2} \cdot \mathbb{E}} \\ + \frac{\pi^{2}}{\pi^{2}} & = \frac{\pi^{2}}{\pi^{2}} \\ + \frac{\pi^{2}}{\pi^{2}} & = \frac{\pi^{2}}{\pi^{2}} \cdot \mathbb{E}} \\

•

$$1 + \frac{q^2}{(1-q)} + \frac{q^6}{(1-q)(1-q^2)} + \dots = \prod_{j=0}^{\infty} \frac{1}{(1-q^{5j+2})(1-q^{5j+3})}, \quad \text{for } |q| < 1.$$

# 24 File Transclusion

@mmd

See more at File Transclusion—MultiMarkdown Documentation<sup>27</sup>.

 $<sup>^{27} \</sup>rm http://fletcher.github.io/MultiMarkdown-5/transclusion.html$ 

# Part VI

# References

BIBLIOGRAPHY 31

Some examples are directly or indirectly copied from the following documentations:

- 1. Pandoc Pandoc User's Guide $^{28}$
- 2. MultiMarkdown User's Guide $^{29}$
- 3. Syntax | kramdown<sup>30</sup>

# Bibliography

- [1] John Doe. Some Big Fancy Book. Vanity Press, 2006.
- [2] John Doe. Another Big Fancy Book. Vanity Press, 2016. 18

 $<sup>^{28} \</sup>rm http://pandoc.org/README.html$ 

 $<sup>^{29} \</sup>rm http://fletcher.github.io/MultiMarkdown-5/$ 

 $<sup>^{30} \</sup>rm http://kramdown.gettalong.org/syntax.html\#tables$