

vfmd

Markdown with a spec

Introducing vfmd

vfmd is a variant of [Markdown](#) with an unambiguous specification of its syntax.

vfmd stands for *vanilla-flavoured markdown*. It formalises [John Gruber's original Markdown syntax](#) as a fully-defined specification, with some [modifications](#) to the syntax.

Background

The [original Markdown syntax page](#) is really a syntax guide that helps authors in writing a document in Markdown. For *implementers* of Markdown, the [original Markdown syntax page](#) is at best a set of loosely defined guidelines on how an input shall be interpreted. The syntax elements specified in the [original Markdown syntax](#) constitute what is termed as the **core syntax** of Markdown.

Since the original Markdown was published in 2004, there have been many different implementations of Markdown, written in different programming languages, and many different flavours of Markdown, with additional or modified features or syntax elements. All these different implementations and flavours of Markdown are based on the *core syntax* as defined in the [original Markdown](#), but their interpretations have [not always been consistent](#), even when we consider just the *core syntax*. This divergence implies that, unless written very carefully to avoid any corner cases, a Markdown document is tied to the variant of Markdown that was used while writing the document.

Markdown would be a lot more valuable when different implementations and flavours agree on the output for all input scenarios, atleast when using just the *core syntax*.

One of the main reasons why the different variants of Markdown differ in their behaviour is that there is no real specification for Markdown. In the absense of a specification, the developers behind the different variants of Markdown have interpreted the loosely defined guidelines specified in

[original Markdown syntax](#) in different ways, thereby resulting in this divergence.

A specification for Markdown would make it possible for different implementations that adopt the specification to interpret an input in a consistent manner.

Prior work

There have been two significant attempts to unambiguously define the Markdown syntax. Both include some syntax extensions, but neither of them can be said to have comprehensively defined the *core syntax* of Markdown.

1. Markdown Extra Specification

[Michel Fortin](#), the creator of PHP Markdown, started work on a specification for the original Markdown plus the extensions in PHP Markdown. The [Markdown Extra Syntax specification](#) defines many block-level syntax constructs, but no span-level constructs are addressed as yet. The specification is not complete, and work on this seems to have [stopped as of July 2008](#).

2. Grammar from peg-markdown

[John MacFarlane's](#) [peg-markdown](#) includes a [parsing expression grammar](#) for Markdown, which might be considered as a specification for Markdown. The included [PEG grammar file](#) contains both the grammar, and the code to be executed at specific points during parsing, and it appears that the grammar and the code are closely and inseparably integrated with each other.

The grammar part of that file does not seem to be able to autonomously describe the Markdown syntax completely. For example, consider a bulleted list contained within a blockquote. The grammar does not describe this scenario by itself. Instead, the grammar specifies that blockquotes can contain arbitrary text. The implementation extracts the blockquoted arbitrary text and runs the parser on the extracted text to recognize block-elements within it. This is a perfectly acceptable design for an implementation, but this means that the grammar falls short of being able to represent the complete Markdown syntax independently.

The design of vfmd

vfmd is designed with the following goals and guiding principles in mind.

In adhering to these goals and principles, the vfmd syntax deviates in some aspects from the [original Markdown syntax](#). These [differences](#) make it possible to define the syntax as a well-defined specification, and also make the syntax a little more readable.

Goals

The following are the goals for the vfmd specification:

1. The vfmd specification shall unambiguously define the interpretation for all input scenarios for the *core syntax* of Markdown
2. Any input should be accepted as a valid vfmd document
3. In case a vfmd implementation wants to support any additional syntax elements not covered by the *core syntax* (e.g., fenced code-blocks, footnotes), the vfmd specification shall define how the handling of the custom additional syntax should be integrated with the handling of the *core syntax*

Guiding Principles

The following are the principles that guide the design of the vfmd syntax, given in the order of their preference:

1. As far as possible, the vfmd syntax shall stick to the goal of the original Markdown: "Make it as readable as possible". Just like the original Markdown, the biggest source of inspiration for vfmd shall be the format of plain text email.
2. As far as possible, the vfmd syntax should make the input document follow the look and structure of the output richtext
3. As far as possible, the vfmd syntax shall not be different from the [original Markdown syntax](#)

Thanks

Many thanks to:

- [John Gruber](#), who came up with the original Markdown syntax
- [John MacFarlane](#), for [Babelmark2](#) and the [Babelmark2 FAQ](#) which were immensely useful in designing vfmd

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