Markdown Editor

A Windows desktop application used to perform the following activities.

* Edit and preview Markdown code.
* Enable the use of parameterization, converting interpolated variables in the code to resolved values upon preview or rendering.
* Convert source documents from a linear layout to a table-based layout.
* Export code to natural text, DOCX with and without master template references, and to HTML.

# Linear Style Versus Table Style Layout

Linear layout simply refers to a free-flowing, forward-only approach to writing documentation, in a top-to-bottom style in respect to the physical page, that typically uses the following general pattern.

# Heading  
Text, media, and other content, in various flush-left, indented, and block-wrapped styles.

- List item.  
 - List sub-item.

...

# Heading  
Content in new section.

...

Since no special formatting is required by default, linear layout is quick and easy to compose or to maintain. The added condition that it is also very easy to read and follow by the end viewer makes linear layout a popular choice for contemporary documentation.

Markdown is a plain-text language format that leans heavily into the linear layout philosophy.

Table-style layout, on the other hand, is a type of layout where a lot of the format structure of the visible document is partitioned into not only row content, such as what you can achieve in a linear layout, but also column and discrete cell content, as you typically see in tables, matrices, and data records.

A basic table-style layout can be achieved through text in Markdown, but because of readability considerations, is best left to the rendered WYSIWYG graphic output platforms like web browsers and word processing applications.

As you might notice in the following example table-based layout, although the designer of the document often has the intention making a page more readable through the categorization and grouping of similar or related information, the exact opposite effect is achieved, making the entire document both less manageable and less readable.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | A purple triangle with a dot and a black background  Description automatically generated |  | 01/01/1980 | |  | |  |  | | --- | --- | | **Introduction** | | | This is a two-column page layout within a table-formatted page where the regions have all been predefined.  In this document | structure, the content is meticulously organized into a two-column table layout, in an attempt to enhance readability or facilitate quick access to information. | |  | | | **Details** In the following section, a complete table is crammed full of information about four related characteristics of three different objects. | | | |  |  |  |  | | --- | --- | --- | --- | | Magical Creature | Element | Power Level | Favorite Food | | Glimmerwing | Air | Glimmerwings possess a **High** power level when they bask in the moonlight during a celestial alignment, absorbing lunar energy through their iridescent wings. However, their power wanes during thunderstorms, as the charged ions disrupt their harmonious aura. To maintain peak power, Glimmerwings must recite ancient incantations while sipping dewdrops from crystal petals. | Stardust berries | | Emberclaw | Fire | Emberclaws' power levels fluctuate dramatically based on ambient temperature. When nestled in the heart of a roaring volcano, their flames blaze with **Medium** intensity, allowing them to forge molten artifacts. However, during icy blizzards, their flames dwindle to mere embers, rendering them vulnerable. To recharge, Emberclaws meditate atop lava geysers, absorbing geothermal energy. | Lava nectar | | Aquanox | Water | Aquanox thrive in the depths of ocean trenches, where pressure is immense and bioluminescent creatures dance. Their **Low** power level surges during full moons, when tides reach their zenith. To harness this energy, Aquanox perform intricate water ballets, tracing sacred symbols with their liquid tendrils. Yet, exposure to desalinated tap water weakens their abilities, necessitating purification rituals in underwater caves. | Seashell sushi | | | |  |  | |  | |  | Page 3 of 3 |  | |

In the above example, two of the three pages appear to be virtually wasted in the effort to group related attributes of the objects being described.

Notice how the same general content takes noticeably less space and is dramatically easier to understand.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | A purple triangle with a dot and a black background  Description automatically generated | 01/01/1980 |   **Introduction**  This is a single-column linear page layout within a single container where the region is completely free-flowing and allowed to expand or contract as required by that container.  The document header and footer areas may have been formatted using table-style techniques for specific visual purposes, but don't affect the main layout at all when using this structure.  **Details**  In the following sections, three separate objects will be described without any attempt to tie their shared attributes with one another.   |  | | --- | | **Magical Creature**  Glimmerwing  **Element**  Air  **Power Level**  Glimmerwings possess a **High** power level when they bask in the moonlight during a celestial alignment, absorbing lunar energy through their iridescent wings. However, their power wanes during thunderstorms, as the charged ions disrupt their harmonious aura. To maintain peak power, Glimmerwings must recite ancient incantations while sipping dewdrops from crystal petals.  **Favorite Food**  Stardust berries |  |  | | --- | | **Magical Creature**  Emberclaw  **Element**  Fire  **Power Level**  Emberclaws' power levels fluctuate dramatically based on ambient temperature. When nestled in the heart of a roaring volcano, their flames blaze with **Medium** intensity, allowing them to forge molten artifacts. However, during icy blizzards, their flames dwindle to mere embers, rendering them vulnerable. To recharge, Emberclaws meditate atop lava geysers, absorbing geothermal energy.  **Favorite Food**  Lava nectar |  |  | | --- | | **Magical Creature**  Aquanox  **Element**  Water  **Power Level**  Aquanox thrive in the depths of ocean trenches, where pressure is immense and bioluminescent creatures dance. Their **Low** power level surges during full moons, when tides reach their zenith. To harness this energy, Aquanox perform intricate water ballets, tracing sacred symbols with their liquid tendrils. Yet, exposure to desalinated tap water weakens their abilities, necessitating purification rituals in underwater caves.  **Favorite Food**  Seashell sushi |  |  | | --- | | Page 2 of 2 | |

Notice in the linear layout example the flowing text easier to read and that, because the name of each attribute precedes its value, the full explanation of every one of the objects is easier to understand.

Using color-coded sections helps to separate the descriptions of each of the objects being documented, but other methods can also be used, like separating each section with a horizontal line or drilling-down further on heading levels, etc. Using this specific approach, though, we are still able to create a series of what could be called 'records' without having to employ any kind of grid-based visuals.

Using the same information as in the sample above but drilling down with the use of headers to reduce the structure of the free-flowing document, we might see some of the sections worded differently, as in the following example.

**Aquanox**  
A magical creature whose element is water and favorite foods include seashell sushi.  
  
The Aquanox thrive in the depths of ocean trenches, where pressure is immense and bioluminescent creatures dance. Their **Low** power level surges during full moons, when tides reach their zenith. To harness this energy, Aquanox perform intricate water ballets, tracing sacred symbols with their liquid tendrils. Yet, exposure to desalinated tap water weakens their abilities, necessitating purification rituals in underwater caves.

# Using Sections in Markdown

Although Markdown doesn't explicitly offer the use of section containers for the use of defining individual records in your document, it does support all of HTML, versions 4 and 5, as well as CSS version 3. Because of this, you can use the HTML <section> ... </section> element to separate the enclosed content as a record.

For example:

|  |
| --- |
| ## Details  Following are the details of my visit to Greece.  <section>  ### Day 1  We ate a meal in Athens.  ### Tours  Bus trip to the hotel. Guided description of several ancient ruins.  </section>  ---  <section>  ### Day 2  People kept explaining things, but it was all Greek to me.  ### Tours  Parthenon. We skipped the line by being dropped-in by helicopter.  </section> |

Notice that the fields of each detail record are one level greater than the parent container, which, in this case, is 'Details'.

## Visual Separation - Horizontal Line

Notice the use of the horizontal line between the sections in the above example. This is a customary practice to delineate records on the preview page since the section tag has no associated visual properties of its own.

This is the easiest delineation method to use but it can stifle the author's freedom for using horizontal lines in their own detail-level descriptions.

## Visual Separation - Section Styles

For a more striking visual impact during preview than a horizontal line, you can color the sections using the HTML <style> ... </style> element, which contains CSS. The following CSS example alternates the background areas of the sections between two shades of light blue.

|  |
| --- |
| <style>  section  {  padding: 8px;  margin-top: 6px;  margin-bottom: 6px;  border: 1px solid #7f7f7f;  border-radius: 16px;  }  section:nth-child(odd)  {  background-color: #fafaff;  }  section:nth-child(even)  {  background-color: #f0f0f7;  }  </style> |

In the above example, the inner padding (the area inside the container between the border and the written content) is set to 8 pixels, the top and bottom margins (the space between a section and any other external object) are set to 6 pixels, and a 1 pixel border line is established in a light gray color. The border has rounded edges on a 16 pixel radius. In this definition, each odd section background in the list has one shade of blue, while each even section background has a different shade of blue.

If you add this style to the top of your Markdown code, all sections will automatically be colored. However, due to a common formatting error in preview renderers, this code can have a habit of offsetting your combined source and preview side-by-side viewing experience. To minimize this effect, you can counter-intuitively add this snippet to the bottom of your Markdown code file, if you'd like to.

## Converting Between Styles with Sections

The use of sections for detailed record-style containers within a linear document also allows that document to lend itself to scenarios in which the completed content must be converted to table-style layout to fulfill a customer's own document design specification.

When each detail record has been isolated within a container, like <section>, it can be directly handled with the expectation that all of the contents are to be fitted onto a single destination row. Consider the two following representations of the same information.

|  |
| --- |
| # Introduction  This is a single-column linear page layout within a single container where the region is completely free-flowing and allowed to expand or contract as required by that container.  The document header and footer areas may have been formatted using table-style techniques for specific visual purposes, but don't affect the main layout at all when using this structure.  ## Details  In the following sections, three separate objects will be described without any attempt to tie their shared attributes with one another.  <section>  ### Magical Creature  Glimmerwing  ### Element  Air  ### Power Level  Glimmerwings possess a \*\*High\*\* power level when they bask in the moonlight during a celestial alignment, absorbing lunar energy through their iridescent wings. However, their power wanes during thunderstorms, as the charged ions disrupt their harmonious aura. To maintain peak power, Glimmerwings must recite ancient incantations while sipping dewdrops from crystal petals.  ### Favorite Food  Stardust berries  </section>  ---  <section>  ### Magical Creature  Emberclaw  ### Element  Fire  ### Power Level  Emberclaws' power levels fluctuate dramatically based on ambient temperature. When nestled in the heart of a roaring volcano, their flames blaze with \*\*Medium\*\* intensity, allowing them to forge molten artifacts. However, during icy blizzards, their flames dwindle to mere embers, rendering them vulnerable. To recharge, Emberclaws meditate atop lava geysers, absorbing geothermal energy.  ### Favorite Food  Lava nectar  </section>  ---  <section>  ### Magical Creature  Aquanox  ### Element  Water  ### Power Level  Aquanox thrive in the depths of ocean trenches, where pressure is immense and bioluminescent creatures dance. Their \*\*Low\*\* power level surges during full moons, when tides reach their zenith. To harness this energy, Aquanox perform intricate water ballets, tracing sacred symbols with their liquid tendrils. Yet, exposure to desalinated tap water weakens their abilities, necessitating purification rituals in underwater caves.  ### Favorite Food  Seashell sushi  </section> |

In the above example, the three detail records are defined using linear layout strategy with support for sections.

The following block demonstrates how the contents of the above sections is used directly to determine how the same information will be represented in the type of table-style layout the customer might require.

|  |
| --- |
| # Introduction  This is a single-column linear page layout within a single container where the region is completely free-flowing and allowed to expand or contract as required by that container.  The document header and footer areas may have been formatted using table-style techniques for specific visual purposes, but don't affect the main layout at all when using this structure.  ## Details  In the following sections, three separate objects are described as rows within a single table. Each of the objects has four attributes being described, each of which are assigned to a column. The four column names are "Magical Creature", "Element", "Power Level", and "Favorite Food".  Notice that although the table cells are formatted with additional right-trailing spaces in an attempt to make that cell's content align with its column name, Markdown table cells do not require to you maintain this alignment. You can remove all but one of the trailing spaces between a cell value and the closing 'pipe' character representing the cell's area. Conversely, as you can see in column 3 below, it is legal for content to far exceed the width defined in the column header.  | \*\*Magical Creature\*\* | \*\*Element\*\* | \*\*Power Level\*\* | \*\*Favorite Food\*\* |  |----------------------|-------------|-----------------|-------------------|  | \*\*Glimmerwing\*\* | Air | Glimmerwings possess a \*\*High\*\* power level when they bask in the moonlight during a celestial alignment, absorbing lunar energy through their iridescent wings. However, their power wanes during thunderstorms, as the charged ions disrupt their harmonious aura. To maintain peak power, Glimmerwings must recite ancient incantations while sipping dewdrops from crystal petals. | Stardust Berries |  | \*\*Emberclaw\*\* | Fire | Emberclaws' power levels fluctuate dramatically based on ambient temperature. When nestled in the heart of a roaring volcano, their flames blaze with \*\*Medium\*\* intensity, allowing them to forge molten artifacts. However, during icy blizzards, their flames dwindle to mere embers, rendering them vulnerable. To recharge, Emberclaws meditate atop lava geysers, absorbing geothermal energy. | Lava Nectar |  | \*\*Aquanox\*\* | Water | Aquanox thrive in the depths of ocean trenches, where pressure is immense and bioluminescent creatures dance. Their \*\*Low\*\* power level surges during full moons, when tides reach their zenith. To harness this energy, Aquanox perform intricate water ballets, tracing sacred symbols with their liquid tendrils. Yet, exposure to desalinated tap water weakens their abilities, necessitating purification rituals in underwater caves. | Seashell Sushi | |

Between the two examples above, notice that when HTML sections have been employed, we can easily perform the following algorithm to flawlessly convert the display style.

* For an h2 element, list all of the child section nodes. These will be used to create the rows collection.
* From all of the items in the nodes collection, count the number of unique h3 elements found. These will be used to create the columns collection.
* From between every two h3 elements and following the last h3 element, capture all non-header and h4+ material. This is used to create the cell collection for each of the preceding h3 nodes.
* Create a table composed of and filled with the discovered rows, columns, and cells.

Note that when using this approach to convert linear detail records to a table-based layout, the column names can be listed in any order in the source document and still be included in the correct order in the target document.

# Exporting Markdown to an HTML Document

Prior to rendering for viewer display, a Markdown source document is first converted to HTML. This allows a pre-generated version of HTML to be stored directly as a static file after parsing the source text.

# Exporting Markdown to a Word Document

Pandoc does have a method for converting Markdown to Word DOCX format in their utility. Although that utility works fine for the most generic situations, its support begins to fall apart when additional pressure is placed upon it to support font colors, customer user-defined styling, and a number of other aspects that they do not offer at all for a target Word document, regardless of from which source document type it might have been retrieved. This is an important distinction, because even though HTML supports font colors, for example, the default base functionality of the Markdown language does not. In this sense, although Pandoc can convert an HTML document to Word, that conversion will still not contain any of the font colors specified.

To accommodate a greater level of support for the pretty-formatting of Markdown documents through publication to Word, we have created our own Markdown-to-Word converter, which is more truthfully a fully featured Html-to-Word converter that happens to support the capability of parsing Markdown documents to HTML as its first step.

# Parameterizing Variables

Macro parameterizing variables can be applied to a markdown file in order to allow you to manage project details as simple property list, where each entry has a name and a value. To use those values within the markdown file itself, surround the property name with curly brackets, as in the following example, where the name of the defined property is MyColor.

|  |
| --- |
| The color of every car in the showroom is: {MyColor} |

Parameterized variable values can be numerical or text. Although you can create multiple level references in your variables file, fully evaluated expressions are not yet supported in this version.

# Target Document Variables

Variables to be applied in the target document environment, such as when exporting to Word's DOCX format, for example, are included in your markdown text in the form of HTML comments. For example, the command to take a full row within a table, FullRow, is expressed as <!-- FullRow --> in the following example.

|  |
| --- |
| <!-- FullRow --> \*\*Lesson 1: Welcome\*\* |

Remember one of the caveats of mixing HTML with natural markdown; if HTML is used to start a line, then any trailing markdown must be placed on the following line.

Following are the target document variables currently supported in this version.

* **FullRow**. Instruct the document to occupy a full row with the text of this cell.
* **TableOfContents**. Insert a table of contents for the heading levels 1 through 3 at the top of the target document. In Word, this object is somewhat dynamic, and in HTML, it is constructed programmatically from the heading entries.
* **TODO**: PageBreakBefore.
* **TODO**: PageBreakAfter.

# Font Tag Attributes

Fact: Although the HTML4 font tag is completely obsolete, it is still also fully supported by all browsers.

Because the font tag lends itself well to human annotation in the activity of Hypertext Markup Language, it will be honored by Markdown Editor for allowing you to contribute colors and basic inline font styling during the course of your task.

The font tag has three notable attributes.

* **face**. The font face. The value of this attribute is equal to the value you would provide the CSS **font-family** property.
* **color**. The font color. In this version, only an HTML hex color code (as in #112233) is accepted. This will be extended in future versions.
* **size**. A number between 1 and 7. Refer to the following list for specific font sizes on a typical web browser.
  + 1 = 8pt
  + 2 = 10pt
  + 3 = 12pt
  + 4 = 14pt
  + 5 = 18pt
  + 6 = 24pt
  + 7 = 36pt

To use the font tag, enclose the affected text with a start font element and a closing font element, as shown in the following example.

|  |
| --- |
| <font color="#ff00ff">This font tag sets the text color to magenta.</font> |