Introduction to Markdown

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CEE 5430/6430 Hydrologic Modeling

2/5/2025

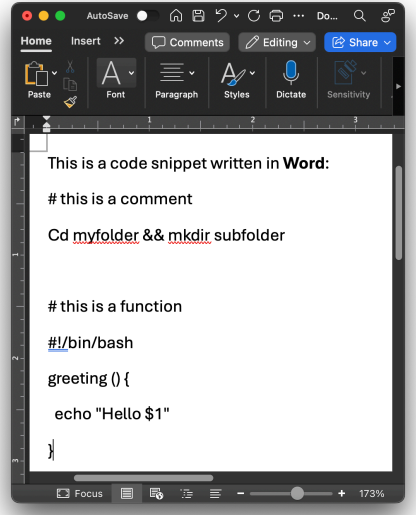
What is Markdown?

> *A lightweight markup language for creating formatted text using a plain-text editor.*

Why use Markdown?

- Simple. Easy to read and easy to write
- Free and non-proprietary (can open with any plain text editor)
- Great for writing math equations and codes
- Used in Jupyter Notebook, GitHub readme, etc
- Popular for creating documentation, slides, notes, web-sites, books, etc.

Why use Markdown?



Markdown syntax

Header

```
# Header 1

## Header 2

### Header 3
```

Markdown syntax

Font

```
*Italic1* _Italic2_
**Bold1** __Bold2__
~~Strikethrough~~
==Highlight==
```

Italic1 Italic2

Bold1 Bold2

~~Strikethrough~~

==Highlight==

Markdown syntax

List

```
#unordered list
    - item 1
    - item 2
    - item 3

#ordered list
    1. item 1
    2. item 2
    3. item 3
```

unordered list

- item 1
- item 2
- item 3

ordered list

1. item 1
2. item 2
3. item 3

Markdown syntax

Link

```
[USU](https://www.usu.edu/)
```

USU

Markdown syntax

Image

```
![alt text](image.jpg)

e.g.,

![alt text](https://github.com/adam-p/markdown-here/raw/master/src/common/images/icon48.png "Logo Title Text 1")
```

Markdown syntax

Check box

```
check box
- [ ] to do
- [x] done
```

check box

- [ ] to do
- [x] done

Markdown syntax

Math

- Accept `LaTex` and `MathJax` format
- inline math use single `$` to enclose the equation
- math block use double `$$` to enclose the equation

```
- inline math use single $:
Darcy's Law: $q=-K\frac{dh}{dx}$

- math block use double $:
\$$ #remove the leading \
\frac{{{\partial}}}{{{\partial}}t}\left(\varphi          s\eta\right)          +
{\boldsymbol{\nabla}}\cdot\eta{\boldsymbol{q}} = Q_w
\$$ #remove the leading \
```

Markdown syntax

Math

- Darcy's Law: $q = -K \frac{dh}{dl}$
- Richard's Equation

$$\frac{\partial}{\partial t}(\varphi s) + \boldsymbol{\nabla} \cdot \boldsymbol{q} = Q_w$$

Markdown syntax

Code

- Use back ticks

```
inline code:
`import numpy; print("abs(-5)=numpy.abs(-5)")`
```

```
- code block:

```python
      import numpy
      print("abs(-5)=numpy.abs(-5)")

```
```

Markdown syntax

Code

- inline code:
- `import numpy; print("abs(-5)=numpy.abs(-5)")`
- code block

```
import numpy
print("abs(-5)=numpy.abs(-5)")
```

Markdown syntax

Table

```
| Col 1 | Col 2 | Col 3 |
| -------: | :------: | :------ |
| x | 1 | 3 |
| y | 2 | 4 |
```

Col 1	Col 2	Col 3
x	1	3
y	2	4

Markdown App

- Obsidian.md. Free markdown editor and note-taking tools. Has a large user base with a wide selection of community plugins.
- Typora. $14.99. A minimal Markdown editor and reader.
- Visual Studio Code. Free and open source. Powerful developer code editor. A wide selection of community extensions.

References

1. Markdown Cheatsheet