WEEK 1 - PART 4
MARKDOWN

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WHAT IS MARKDOWN

Markdown is a versatile and widely adopted markup language that has revolutionized the way we format and present text in the digital world.
It is an essential tool for writers, developers, and content creators alike.
At its core, Markdown is all about simplicity and accessibility. Its syntax is intentionally straightforward, making it easy for beginners to grasp.

A markup language is a system of annotating text to provide additional information about its structure and presentation.
The use of universal symbols like asterisks, underscores, and hash symbols denotes formatting elements such as bold, italic, headers, and lists.
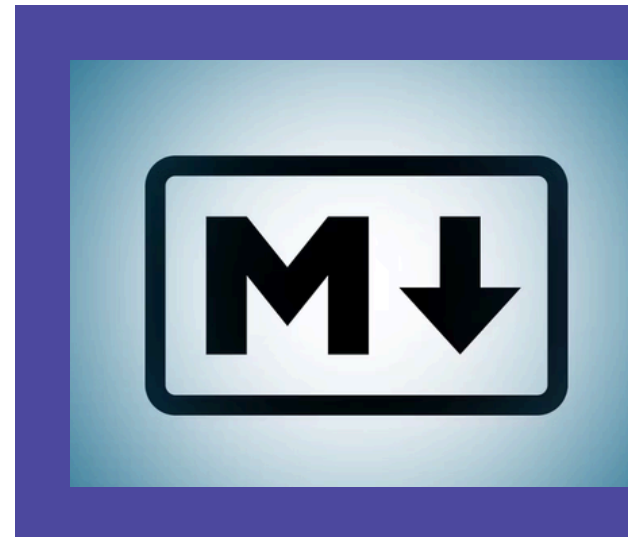
It's widely used because it allows you to write text in a simple and readable way, which can then be **automatically converted into different formats, like HTML for websites.**

Many platforms where people collaborate on projects support Markdown. This means that Markdown is especially useful for creating clear and easy-to-read documents like **README files, which provide important information about a project.** Developers, writers, and other professionals use Markdown because it's straightforward to learn and helps them present their information in a clean, professional manner without needing advanced formatting skills.

The ability to embed code snippets with syntax highlighting enables developers to showcase their code examples in a way that is both readable and easy to write.

HOW DOES MARKDOWN WORK

CREATE AND FORMAT DOCUMENTS USING MARKDOWN

First, you create a plain text document. Then, you format it using Markdown's text-based rules to format your content. For instance, to create headings, you use hash (#) symbols at the beginning of a line.

The number of hash symbols you use specifies the level of the heading, which helps organize your content hierarchically:

Heading 1 is the largest heading, typically used for main titles or primary sections.

Heading 2 is slightly smaller, used for subsections under Heading 1.
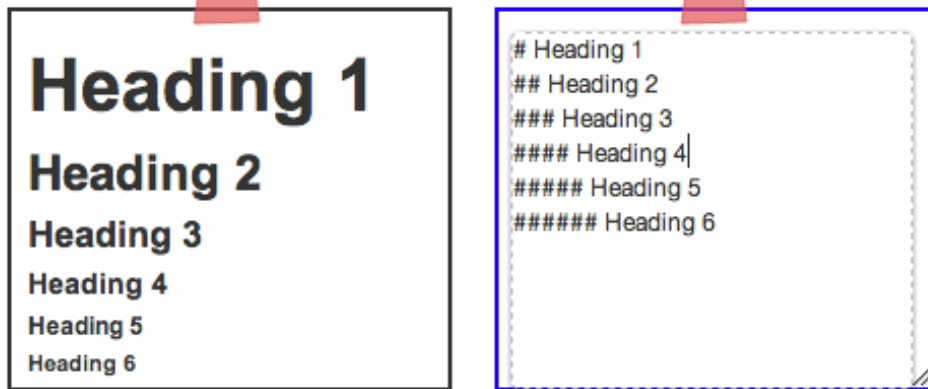
Heading 3 is even smaller, used for further subsections.

Markdown needs a renderer, which is a tool or software that converts Markdown text into formatted content.

While you are writing Markdown using it's rules, it appears as plain text. Once rendered, it displays with proper formatting such as headings, bold text, and lists.
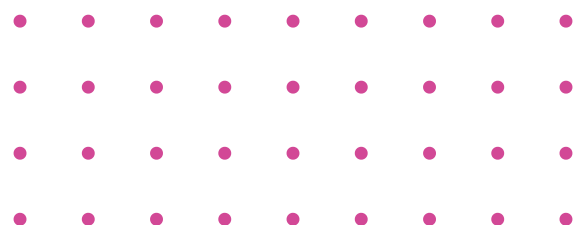
FORMATTING TEXT - EXAMPLES

Markdown also allows you to format text in various ways to emphasize or style it:

Bold text: Use double asterisks (**) or double underscores (__) around the text to make it bold. For example: **Bold text or __Bold text__.**

*Italic text: Use single asterisks (*) or single underscores (_) around the text to italicize it. For example: *Italic text* or _Italic text_.*

~~Strikethrough text~~: Use double tildes (~~) around the text to create a strikethrough effect. For example: ~~Strikethrough text~~.

Here's how these formatting options look in Markdown
(you can try copying and pasting these into a Markdown renderer and see how it looks):

I'll be thicker, like a bold text
I'll be leaning, like italic text
~~I have a strikethrough, a line going though my letters~~

When the Markdown is rendered, these text elements will appear with the corresponding styles.
Markdown also supports other features like lists, links, images, and code blocks, which further enhance its flexibility. For example, you can create ordered lists using numbers, unordered lists, and insert hyperlinks and images.
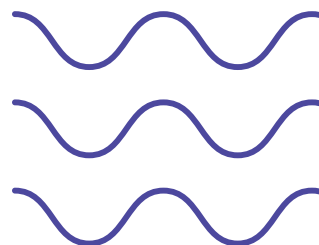
SIDE BY SIDE COMPARISON

PREVIEW

```
1 ▾ # Header 1
2
3    This is an R Markdown document. Markdown is a
     simple formatting syntax for authoring webpages.
4
5    Use an asterisk mark to provide emphasis, such
     as *italics* or **bold**.
6
7    Create lists with a dash:
8
9    - Item 1
10   - Item 2
11   - Item 3
12
13 ▾ ```
14   Use back ticks to
15   create a block of code
16 ▴ ```
17
18   Embed LaTex or MathML equations,
19   $\frac{1}{n} \sum_{i=1}^{n} x_{i}$
20
21   Or even footnotes, citations, and a
     bibliography. [^1]
22
23   [^1]: Markdown is great.
```

RENDERED

Header 1

This is an R Markdown document. Markdown is a simple formatting syntax for authoring web pages.

Use an asterisk mark to provide emphasis, such as *italics* or **bold**.
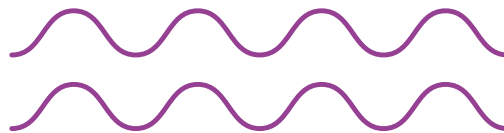
Create lists with a dash:

- Item 1
- Item 2
- Item 3

```
Use back ticks to
create a block of code
```

Embed LaTex or MathML equations, $\frac{1}{n} \sum_{i=1}^{n} x_i$

Or even footnotes, citations, and a bibliography. [1]

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1. Markdown is great. ↵

When you write Markdown, you use simple syntax to describe the structure and style of your document. While this text is easy to write and edit, it doesn't visually represent how the final document will look.

Rendering is the process of converting the plain Markdown text into a styled format. This is where the Markdown syntax is interpreted and transformed i- the rendered version of your document shows how it will appear to readers, complete with all the intended formatting.
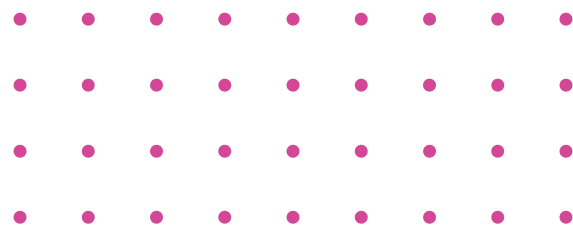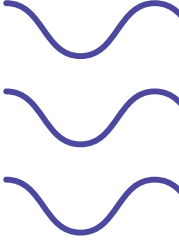
To write Markdown, you can use any text editor or word processor. In Markdown files, which typically have the .md file extension, you include text and use Markdown syntax to add elements like headings, lists, and links.

To view the rendered version of your Markdown document, you need a Markdown rendering tool. Many text editors and Integrated Development Environments (IDEs) come with built-in Markdown preview features. There are also standalone Markdown editors and viewers, which allow you to write and see a live preview of your Markdown file.

This course will recommend finding a suitable software tool that helps you write and preview Markdown. Using such tools will ensure that you can see how your document will look after rendering and make any necessary adjustments to the Markdown syntax as needed.

Markdown files have the file extension .md, which indicates that they contain Markdown-formatted text. Knowing how to use Markdown effectively and how to preview its rendered output can greatly enhance your writing and formatting process.

WHEN DO WE USE MARKDOWN?

Markdown is a one of the most popular choices for creating content, including **documentation, README files, as well as preparing content for web pages.** Documentation refers to detailed guides and instructions that explain how software or systems work, helping users understand and utilize them effectively. README files are specific documents that provide important information about a project, such as what it does, how to set it up, and how to use it.

Markdown is popular among developers, writers, and content creators because it allows them to create well-structured and visually appealing documents quickly and efficiently.