

# Introduction to Markdown

The de facto standard tool for software engineering documentation

# What is Markdown?

Markdown is a *lightweight markup language* with plain text formatting syntax.

- designed to be converted to HTML and many other formats.
- This slide is made by Markdown and converted with Marp.

## Key Characteristics

- **Human-readable:** even in raw form
- **Machine-readable:** a computer can parse a Markdown document
- **Platform-independent**
- **Version control friendly**
- **Easy to learn** (5 minutes to basics!)

# Why Use Markdown?

The Markdown solves the traditional word processor problems:

- Slow and heavy
- Expensive software
- Proprietary formats
- Too much focus on formatting

## Markdown Approach:

- Fast and lightweight
- Free and open
- Plain text (works everywhere)
- Focus on content, not formatting

## Email example

Subject: URGENT: Please Review Document

Hi Team,

Please review the attached document ASAP.

Key points:

- Budget review
- Timeline changes
- Resource allocation

Thanks!

## Same Content in Markdown:

### # URGENT: Please Review Document

Hi Team,

Please review the attached document **\*\*ASAP\*\***.

#### ## Key points:

- Budget review
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Thanks!

# Basic Markdown Syntax

## Headlines & Text Formatting

```
# Heading 1 (Main Title)
## Heading 2 (Section)
### Heading 3 (Subsection)

**Bold text** or __Bold text__
*Italic text* or _Italic text_
***Bold and Italic***

~~Strikethrough text~~
```

Rendered output on the next page.



# Heading 1

## Heading 2

### Heading 3

**Bold text** *Italic text* ***Bold and Italic*** ~~Strikethrough~~

## Unordered Lists (Bullet Points)

- First item
- Second item
  - Nested item
  - Another nested item
- Third item

- First item
- Second item
  - Nested item
  - Another nested item
- Third item

## Ordered Lists (Numbered)

1. First step
2. Second step
  1. Sub-step A
  2. Sub-step B
3. Third step

1. First step
2. Second step
  - i. Sub-step A
  - ii. Sub-step B
3. Third step

## Links

[Google] (<https://google.com>)  
[Email me] (<mailto:chos5@nku.edu>)

[Google](https://google.com)

[Email me](mailto:chos5@nku.edu)

## Images

![Alt text](./pic/nku.webp)

![University Logo](https://www.nku.edu/content/1992535686.jpg)



## Inline Code

Use the `print()` function to display output.  
The variable `userName` stores the input.

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## Code Blocks

```
```python
def greet_student(name):
    print(f"Hello, {name}! Welcome to class.")

greet_student("Alice")
```
```

```
def greet_student(name):
    print(f"Hello, {name}! Welcome to class.")

greet_student("Alice")
```

## Tables: Organizing Data

| Student | Grade | Status |
|---------|-------|--------|
| Alice   | A+    | Pass   |
| Bob     | B     | Pass   |
| Charlie | C-    | Pass   |

| Student | Grade | Status |
|---------|-------|--------|
| Alice   | A+    | Pass   |
| Bob     | B     | Pass   |
| Charlie | C-    | Pass   |



## Blockquotes

```
> "The best way to learn programming is by doing."  
> — Dr. Cho
```

"The best way to learn programming is by doing."  
— Dr. Cho

# Markdown Tools

Use pandoc(<https://pandoc.org>) to convert Markdown into any file format.

```
pandoc MANUAL.md -o example1.html  
pandoc MANUAL.md -o example1.pdf
```

Use VSC Extensions: [Markdown Extension Pack](#)

- Markdown All in One
- Markdown PDF
- Markdown Table Prettifier
- markdownlint

# Why Markdown Matters in Software Engineering

| Feature          | Markdown                  | Word/PDF/HTML           |
|------------------|---------------------------|-------------------------|
| Version Control  | Excellent (plain text)    | Poor/Complex            |
| Learning Curve   | Low                       | Medium/High             |
| Portability      | High (cross-platform)     | Variable                |
| Formatting Power | Basic (extendable)        | Advanced                |
| Collaboration    | Seamless (merge-friendly) | Often cumbersome        |
| Tool Dependence  | Minimal (any text editor) | High (proprietary apps) |