

[Introduction to Programming/](#) [Week 6: Documenting your program/](#) Markdown

Markdown

You may have noticed that your GitHub repositories each week come with a `README.md` file. This file is in the Markdown format. This page tells you about the Markdown format, so you can write your own Markdown code in a `README.md` or other file. Note that comments on GitHub (and other places) are written in Markdown too, so you can use this knowledge to format your messages to me.

Markdown is not a programming language, it is a markup language. This means it tags content to give it structure or indicate its style. Other markup languages include HTML (HyperText Markup Language), used on the web, and LaTeX, used for typesetting documents (especially mathematical ones).

You write a Markdown file in a text editor and save it as `filename.md`. Then you need a Markdown viewer to view your file. For example, committing and pushing a Markdown file into a GitHub repository means you can view its contents rendered on the GitHub website. Indeed, notes for this module are mostly written in Markdown (some parts in LaTeX) and then run through a program which converts them into HTML webpages for viewing online and PDF files for download.

This page introduces some basic Markdown syntax. You'll have a chance to practice in the weekly exercise on GitHub.

Headings

A main heading is a line that starts with a `#`.

```
# Main heading
```

A sub-heading is a line starting with `##`. A sub-sub-heading is a line starting with `###`.

Bold

Bold text is indicated with `**...**`.

```
If there is something you really need to stand out.
```

Italic

Italicised text is indicated with `*...*`.

```
Putting the emphasis on something.
```

Blockquote

A block quote is a line or lines starting with `>`.

```
In the notes on Markdown files, Peter wrote:  
  
> You may have noticed that your GitHub repositories each week come with a  
> README.md file. This file is in the Markdown format. This page tells you about  
> the Markdown format, so you can write your own Markdown code in a README.md or  
> other file. (Note that comments on GitHub and Gists are written in Markdown)
```

Lists

A bullet list is indicated using `-` marks at the start of lines. Leave a blank line before and after the bullets.

```
It's either:  
  
- one thing;  
- or another.
```

A numbered list is indicated using numbers. Again, leave a blank line before and after the bullets.

```
The academic years are labelled as levels at university:  
  
1. Level 4;  
2. Level 5;  
3. Level 6.
```

Code

Small bits of code are indicated using ``...``. This is the symbol to the left of the 1 key on my computer keyboard.

```
You can set up a `for` loop which iterates over a range using `for c in range(0,10):`
```

Large blocks of code are indicated using ```` ... ````

```
An example where a variable is used as a counter (here called `c`) is used across  
```  
for c in range(0,10):
 print(c)
```
```

It is common practice to use backticks ``` when referring to variables or commands, and some systems display these differently to the surrounding text (like in these notes, or check out the `README.md` file of one of the weekly tasks on GitHub).

Links

Links are indicated using `[text] (url)`.

```
You can search online using [DuckDuckGo] (https://duckduckgo.com/).
```

Images

Images are coded similarly to links, they look like this `![alt text] (image.png)`. Alt text is text that is displayed if the image cannot be viewed, for example because the file has gone missing or because the person viewing your page is blind. It should give a brief description of the key details of the image.

```
![Spider-Man pointing meme with one labelled multiply by i and the other label]
```

White space

Markdown likes a lot of white space ('white space' is spaces, tabs, blank lines, etc.).

You must leave a space between the `#`, `##`, etc. and the text in a heading, and between the `-` or numbers and the text in a list. Also, it won't recognise a new paragraph unless you leave a blank line first.

For example, this **will not render correctly**:

```
#Main heading
Some text here.
A second paragraph here.
##Subheading
Now a list:
-item 1
-item 2
```

Here is the correct version - with spaces between `#` and `-` and the text, and plenty of extra blank lines to space out the code.

```
# Main heading

Some text here.

A second paragraph here.

## Subheading

Now a list:

-item 1
-item 2
```