

README

Detailed Project Description

What *is* a README?

A README file is the first file that will typically be viewed when a project is looked at. The purpose of the README file is to give a brief overview of your project and details such as technologies used, motivation for the project, etc. We will be going over the specifics of a good README file later in the slides.

Why is a README important?

In a world where open source software is increasingly available, a good README file will allow your project to stand out from the rest and catch the attention of other developers. In catching the attention of other developers, the project could receive more contributors to make it even bigger!

What makes a good README?

1. Project title: a README file should always begin with the project title which helps others understand the point of the project
2. Project description:
 - a. What your project achieves
 - b. What technologies were used in the project
 - c. Future implementations
3. How to install the project
4. How to use features that may not be obvious
5. Credits: who contributed to the project and what they did
6. License: what can and cannot be done with the project

Should a table of contents be added?

A table of contents should be added to a README file if sections begin to reach tedious lengths. In smaller projects, a README file may only reach twenty to thirty lines, but in larger projects, the README can reach up to hundreds of lines long! A good rule of thumb is if significant scrolling is required to reach certain sections of a README, then a table of contents is advised.

What is Markdown?

Markdown is an easy-to-write syntax to format plain text. When a new repository is created on GitHub, a README.md is typically generated. Using the GitHub text editor, we can apply Markdown syntax to any .md or .markdown files to quickly build our README in an easy to read format.

Markdown Headings:

H1

H2

H3

H4

H5

H6

Markdown Emphasis

1. Italics: to italicize, either wrap the statements desired in underscores or asterisks.

Example 1: **the words in here are italicized**

Example 2: *_the words in here are italicized_*

1. Bold: to bold, either wrap the statements desired in double underscores or asterisks

Example 1: ****the words in here are bolded****

Example 2: **__the words in here are bolded__**

1. Combined emphasis: using combinations of the above, bold and italic texts can be combined.

Example: ****the __words__ in here are italicized**** (every word in this statement is italicized, but “words” is both bolded and italicized)

1. Strikethrough: to do a strikethrough, wrap the statement desired with two tildes

Example: ~~~~the words in here have a line through them~~~~

Markdown Unordered Lists

Unordered lists are marked by an asterisk, minus sign, or plus sign followed by a space and the item.

Example:

Markdown:

```
+ item 1  
- item 2  
* item 3
```

Result:

- item 1
- item 2
- item 3

Markdown Ordered Lists:

Ordered lists are numbered in numerical order followed by a space and the item.

Example:

Markdown:

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

Result:

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

Markdown Nested Lists:

Ordered and unordered lists can be mixed and matched to create a list with sublists!
Simply add four spaces to create a sublist.

Example:

Markdown:

```
1. item 1
    + sub item 1
2. item 2
    - sub item 2
3. item 3
    * sub item 3
```

Result:

```
1. item 1
    ◦ sub item 1
2. item 2
    ◦ sub item 2
3. item 3
    ◦ sub item 3
```

Other Markdown features:

There are many other features of Markdown to make a README more interactive! Some of the other features include:

- Hyperlinks
- Images
- Code and Syntax Highlighting
- Tables
- Block Quotes
- Raw HTML
- Line Breaks
- YouTube Video Imbeds
- Mathematical Formulae

To learn more about these features, please see the recommended readings section at the end of this slide deck.

Recommended Reading and Activities

Example of a well done README

- <https://github.com/othneildrew/Best-README-Template>

For an interactive tutorial on Markdown

- <https://commonmark.org/help/tutorial/>

Markdown Cheatsheet

- <https://github.com/adam-p/markdown-here/wiki/Markdown-Here-Cheatsheet>

Resource to help decide on a project license

- <https://choosealicense.com/>

