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<> **homework.md**

Implement a Markdown => HTML converter

Markdown is a simple syntax used to generate formatted text. It's used in lots of places, but the one most developers have probably encountered is README files in GitHub.

For this exercise, we'd like you to write a program that converts a small subset of markdown to HTML. You can implement this as a command-line program or as a web application, whatever you're more comfortable with.

You can use **any language of your choice.** Please don't feel the need to impress us with a language we use - we really want you to pick the language you feel most comfortable with so you can put your best foot forward.

Formatting Specifics

Markdown is a fairly rich specification; for this assignment, we're only looking for a small subset. This is the formatting we'd like you to implement:

Markdown	HTML
# Heading 1	Heading 1
## Heading 2	Heading 2
...	...
###### Heading 6	Heading 6
Unformatted text	Unformatted text

Markdown	HTML
[Link text] (https://www.example.com)	`<a href="https://www.example.com">Link text</a>`
Blank line	Ignored

Some tests

Here are a few sample inputs. Your code should, of course, work with any input that uses the formatting rules above, but you can use this sample to get started testing.

```
# Sample Document

Hello!

This is sample markdown for the [Mailchimp](https://www.mailchimp.com) homework
assignment.
```

We would expect this to convert to the following HTML:

```
<h1>Sample Document</h1>

<p>Hello!</p>

<p>This is sample markdown for the <a
href="https://www.mailchimp.com">Mailchimp</a> homework assignment.</p>
```

Similarly, this sample:

```
# Header one

Hello there

How are you?
What's going on?

## Another Header

This is a paragraph [with an inline link](http://google.com). Neat, eh?

## This is a header [with a link](http://yahoo.com)
```

Would convert to the following HTML:

```
<h1>Header one</h1>

<p>Hello there</p>

<p>How are you?
What's going on?</p>

<h2>Another Header</h2>

<p>This is a paragraph <a href="http://google.com">with an inline link</a>. Neat,
eh?</p>

<h2>This is a header <a href="http://yahoo.com">with a link</a></h2>
```

(Please note that new lines don't matter in HTML, so if your version has extraneous new lines that don't affect the overall output when rendered, that's OK.)

Please feel free to use libraries to generate HTML or otherwise make your life easier. However, please don't use a library that actually implements markdown to HTML conversion for you! We recognize that this problem is, by its nature, artificial, and that just finding a well-supported library would be the preferred real-world solution to this question.

What We're Looking For

We'll evaluate your assignment by looking for a few things:

- Functionality
  - Does the code do what it should?
  - Does it handle edge cases?
- Code quality
  - Is the code readable & maintainable?
  - Is there reasonable test coverage?
- Performance
  - Does the code balance reasonably fast execution with readability?
  - Can the implementation handle large inputs gracefully?
- Pragmatism
  - Are the above factors balanced well against the limited time to implement the solution?

Timeline

We've estimated that this question should typically take 4 hours or less. Please try not to go significantly above that, as we want to be mindful of your time and other life commitments!

Submission

Please zip your entire exercise directory and send it back to us via email. You are free, but not required, to create a Git repository for your work, just remember to include your .git directory in your zip if you do!

Best of luck! Thanks for taking the time to interview with Mailchimp.