Intro to HTML

CISC-2350-R01 | Fall 2017 | Week 2

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Today’s Agenda

- Attendance
- Questions from last week’s material
- Discuss homework reading
- Review Sublime
- Intro to HTML
- HTML Structure
- HTML Tags
- In-class exercise
- Student presentations

Attendance

Connecting to wifi

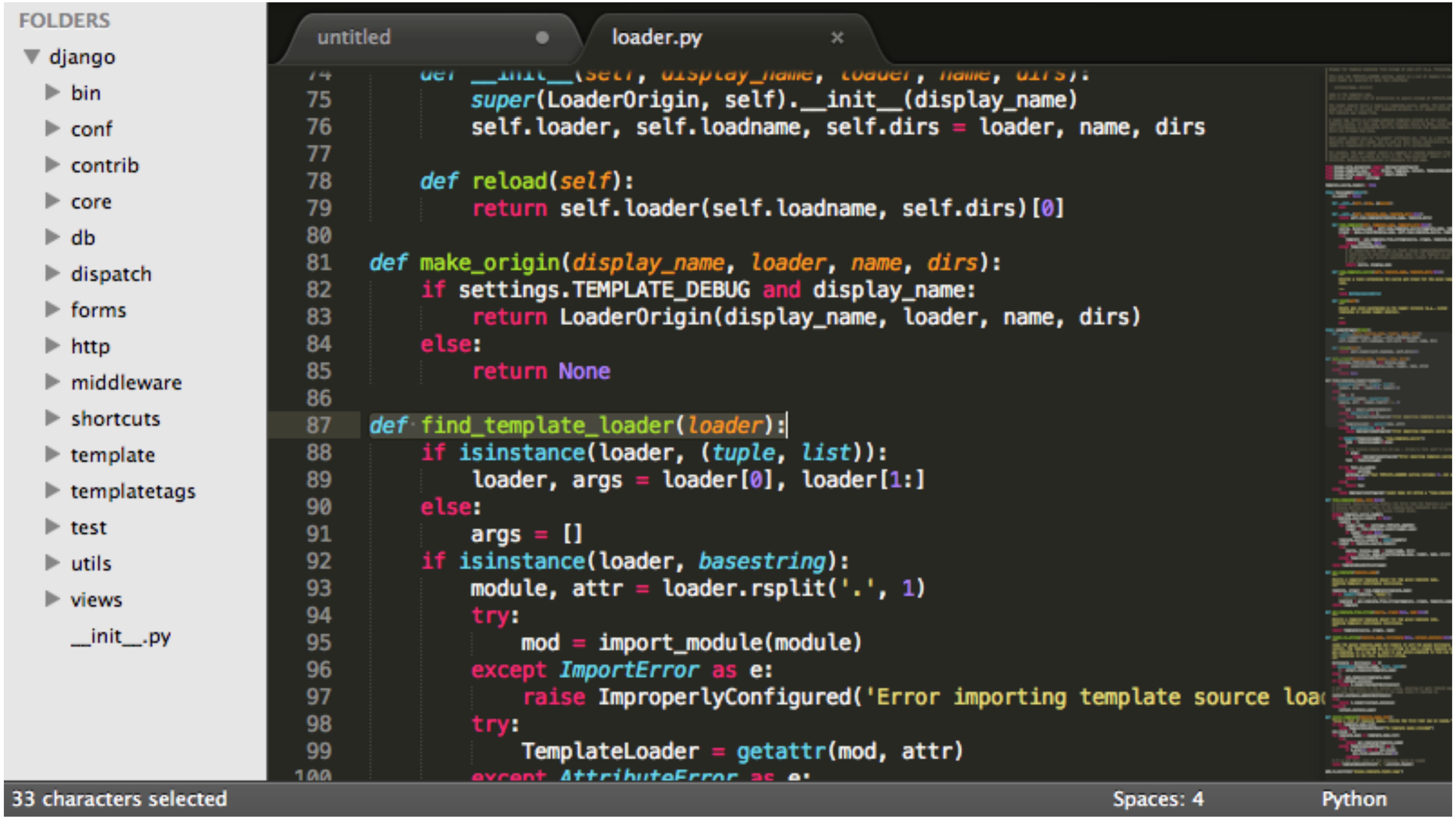
Instructions can be found here:
http://bit.ly/2x8xhC2

Questions

Long Live The Web

Intro to Sublime

Download Sublime here



```
    def __init__(self, display_name, loader, name, dirs):
        super(LoaderOrigin, self).__init__(display_name)
        self.loader, self.loadname, self.dirs = loader, name, dirs

    def reload(self):
        return self.loader(self.loadname, self.dirs)[0]

def make_origin(display_name, loader, name, dirs):
    if settings.TEMPLATE_DEBUG and display_name:
        return LoaderOrigin(display_name, loader, name, dirs)
    else:
        return None

def find_template_loader(loader):
    if isinstance(loader, (tuple, list)):
        loader, args = loader[0], loader[1:]
    else:
        args = []
    if isinstance(loader, basestring):
        module, attr = loader.rsplit('.', 1)
        try:
            mod = import_module(module)
        except ImportError as e:
            raise ImproperlyConfigured('Error importing template source loa
        try:
            TemplateLoader = getattr(mod, attr)
        except AttributeError as e:
```

What is Sublime?

- Sublime is a plain text/code editor. There are many code editors

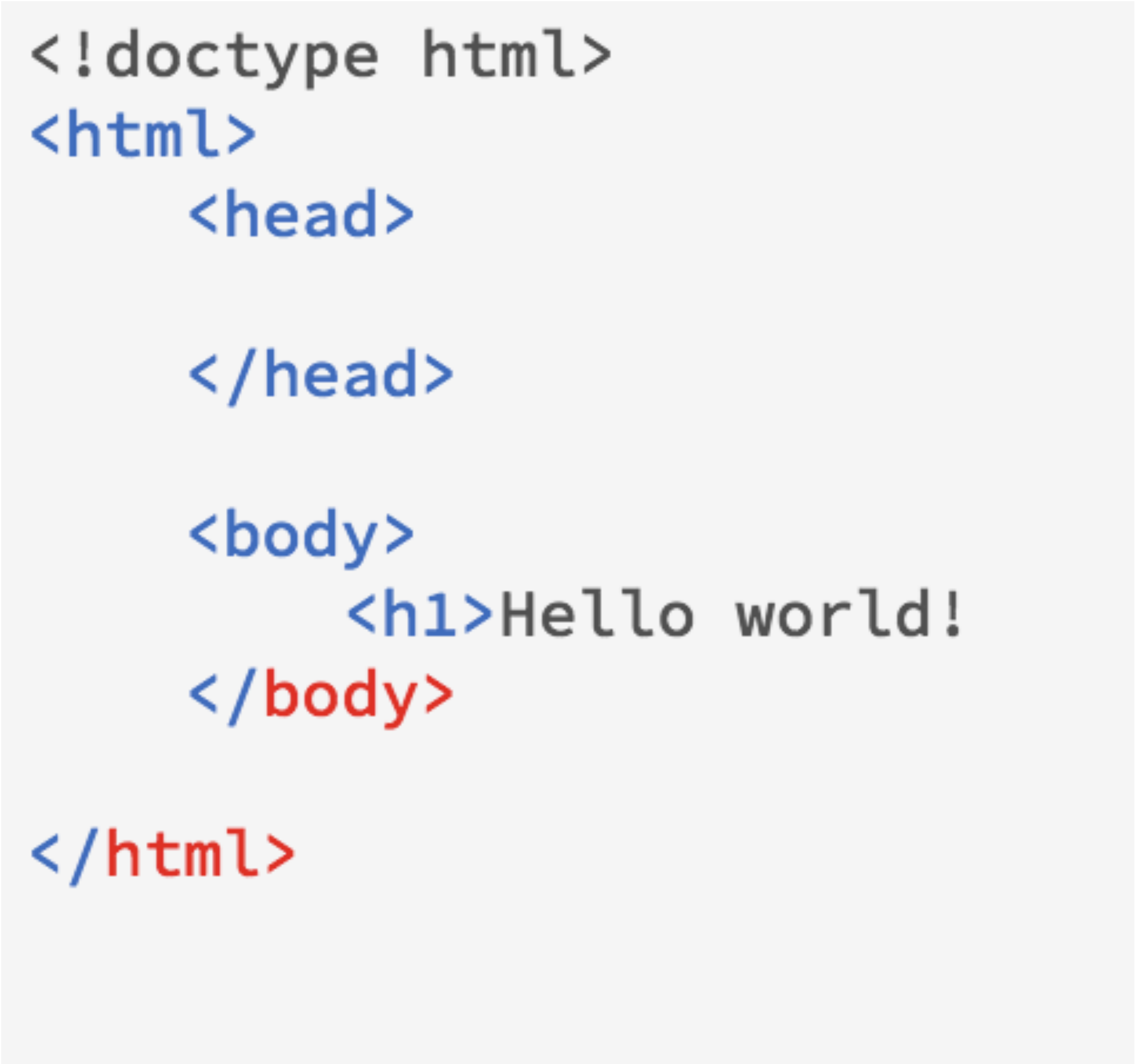
- Other popular ones include Atom and Brackets

- It is not the same as Microsoft word!

- Fundamentally the same as plain text editor (textedit or notepad) but has color coding, indentation, and auto-finish to help us

- Pay attention to those things!

- Tutorial **here**



```
<!doctype html>
<html>
    <head>

    </head>

    <body>
        <h1>Hello world!
    </body>

</html>
```

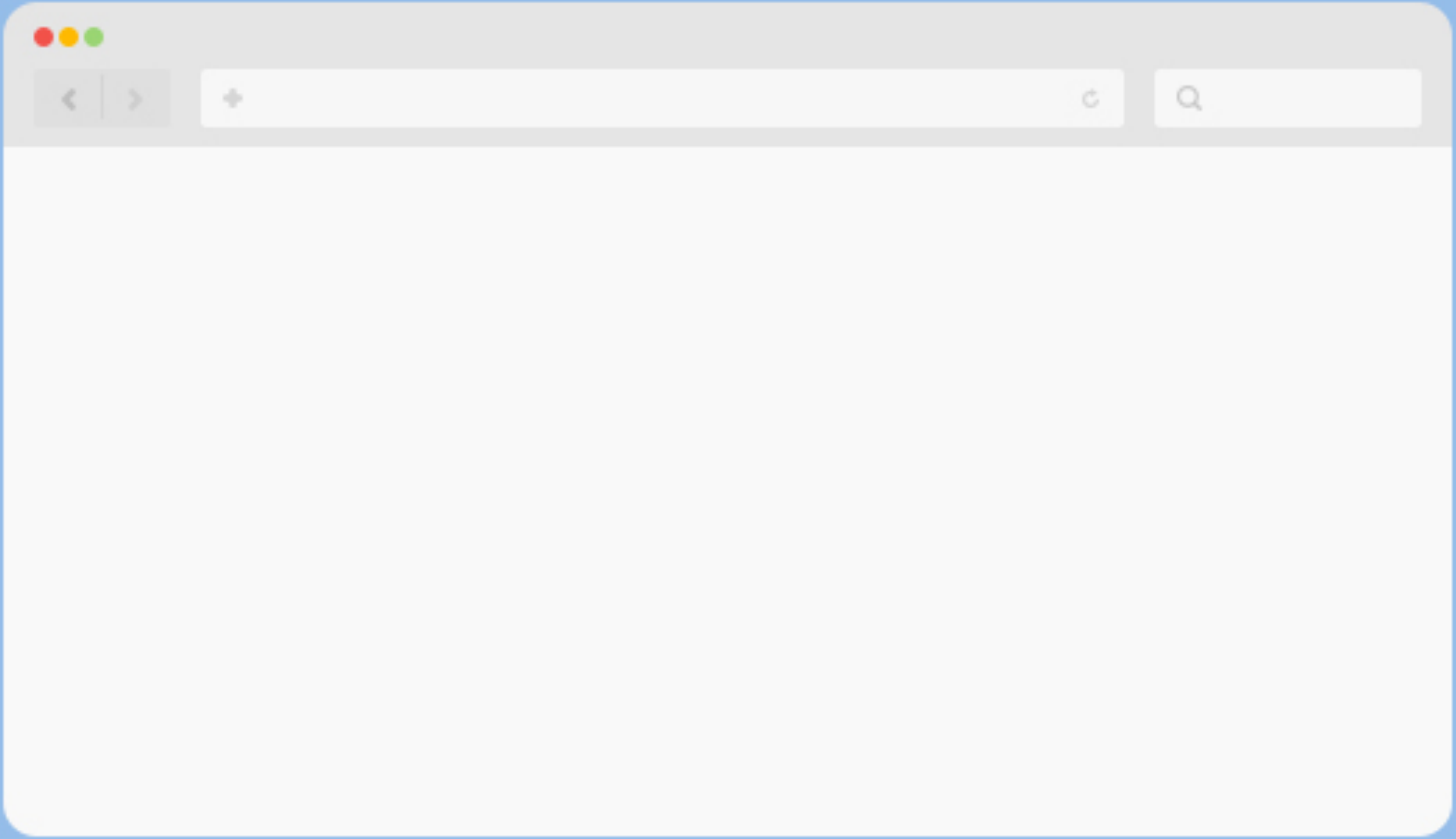
Starting project in Sublime

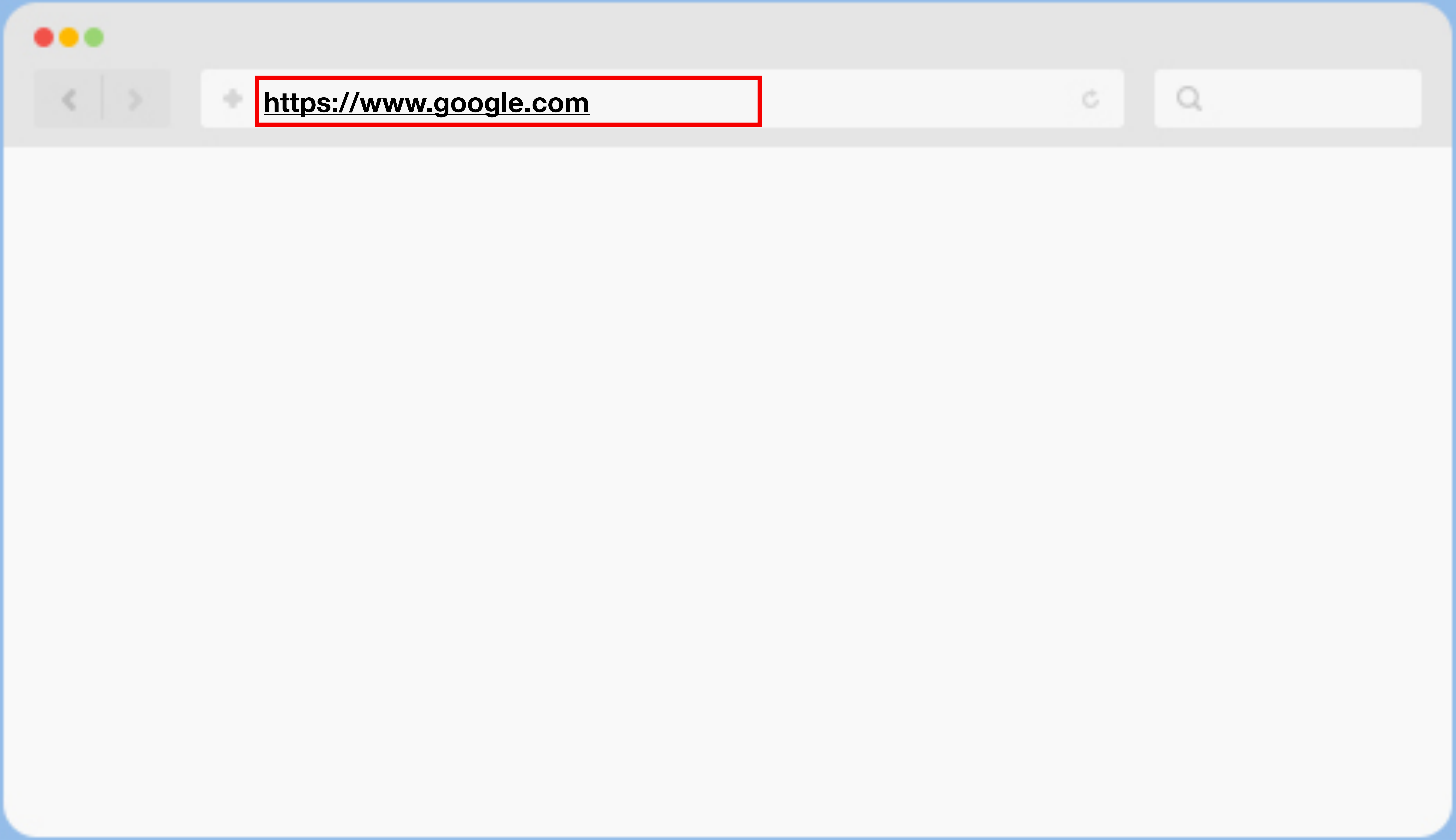
1. Option 1: Create a new index.html by going **File > New** and then saving that file as index.html

2. Option 2: If you're working from an example, download the folder. Then in Sublime, go to **File > Open** and work from there.

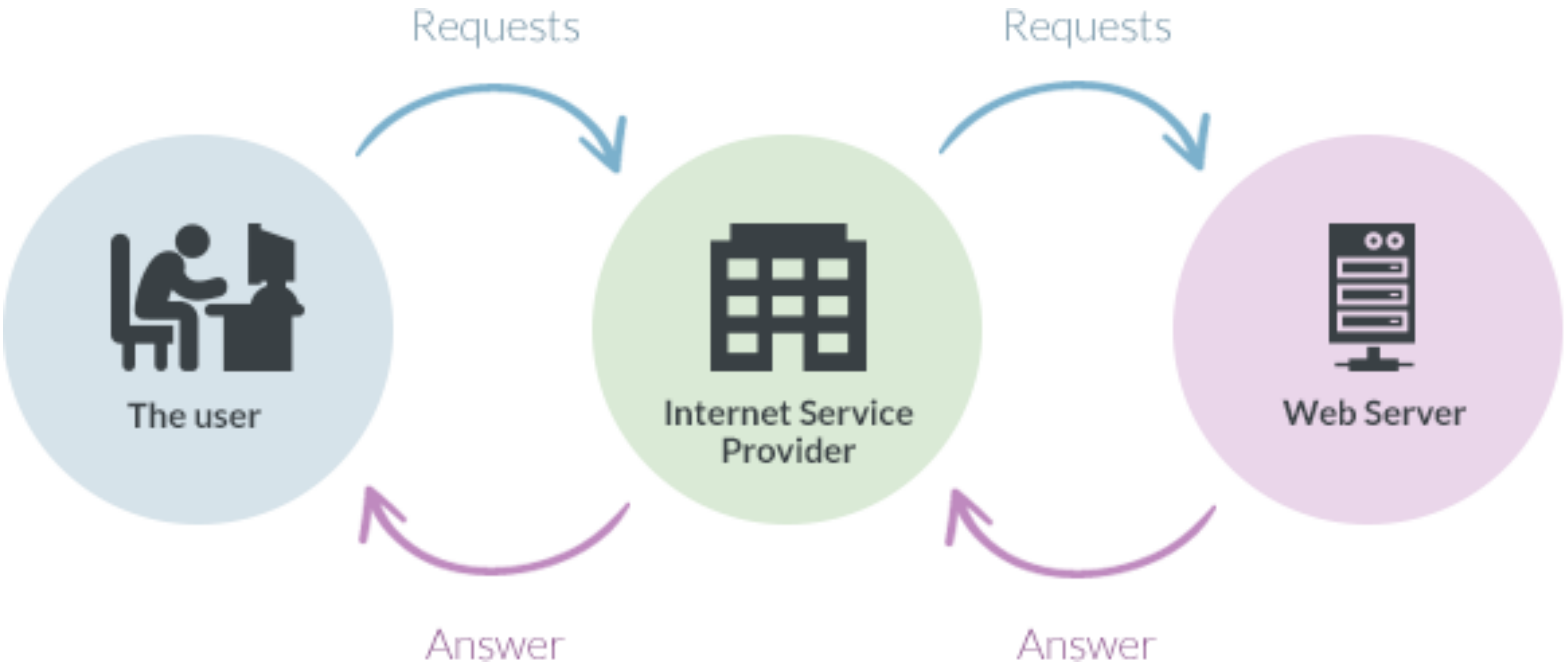
Web Overview

a collection of related web pages, including multimedia content, identified with a common domain name, and published on at least one web server

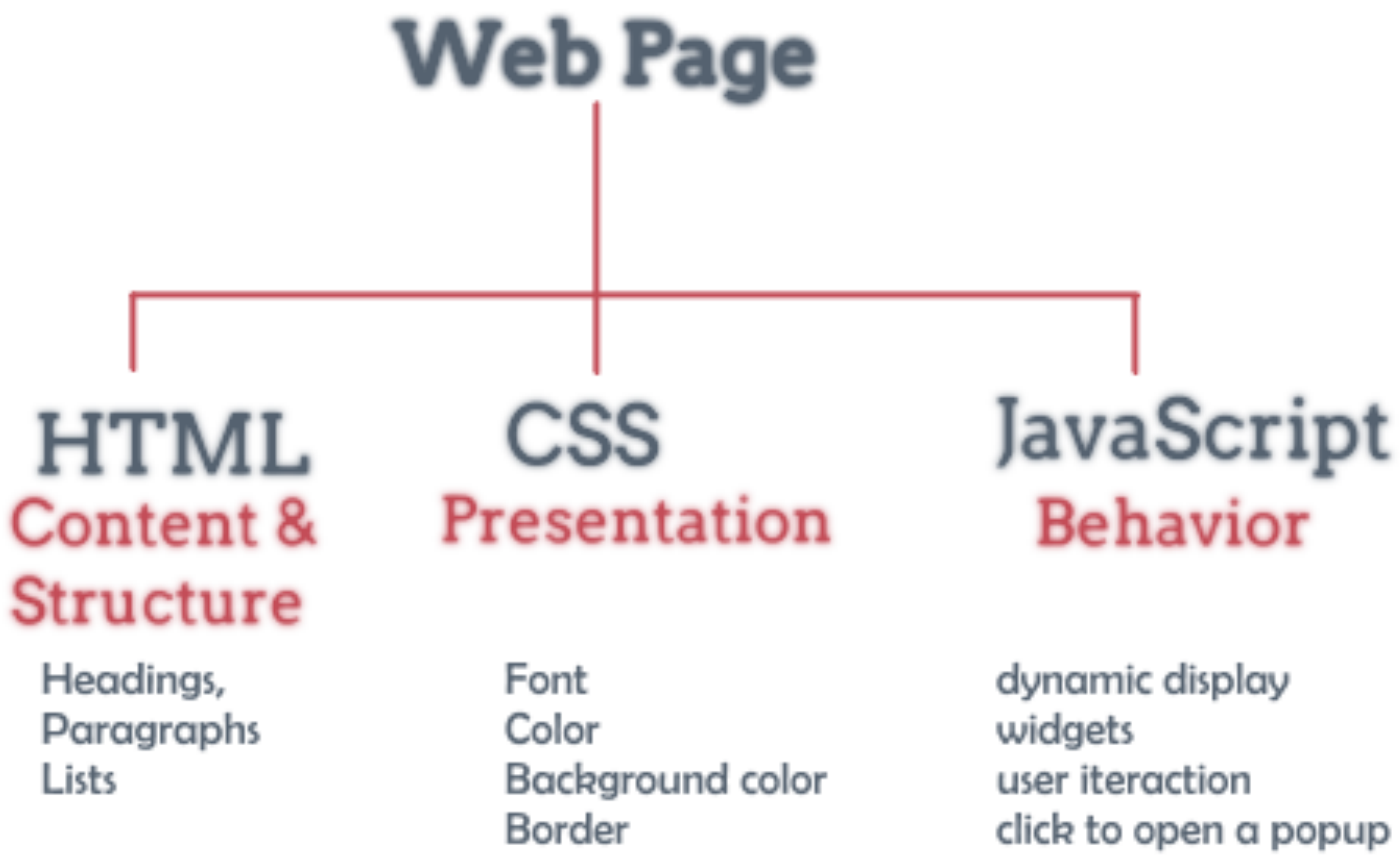




https://www.google.com


Requests
Requests
The user
Internet Service Provider
Web Server
Answer
Answer

HTML
CSS
JS



Web Page

HTML

Content & Structure

Headings,
Paragraphs
Lists

CSS

Presentation

Font
Color
Background color
Border

JavaScript

Behavior

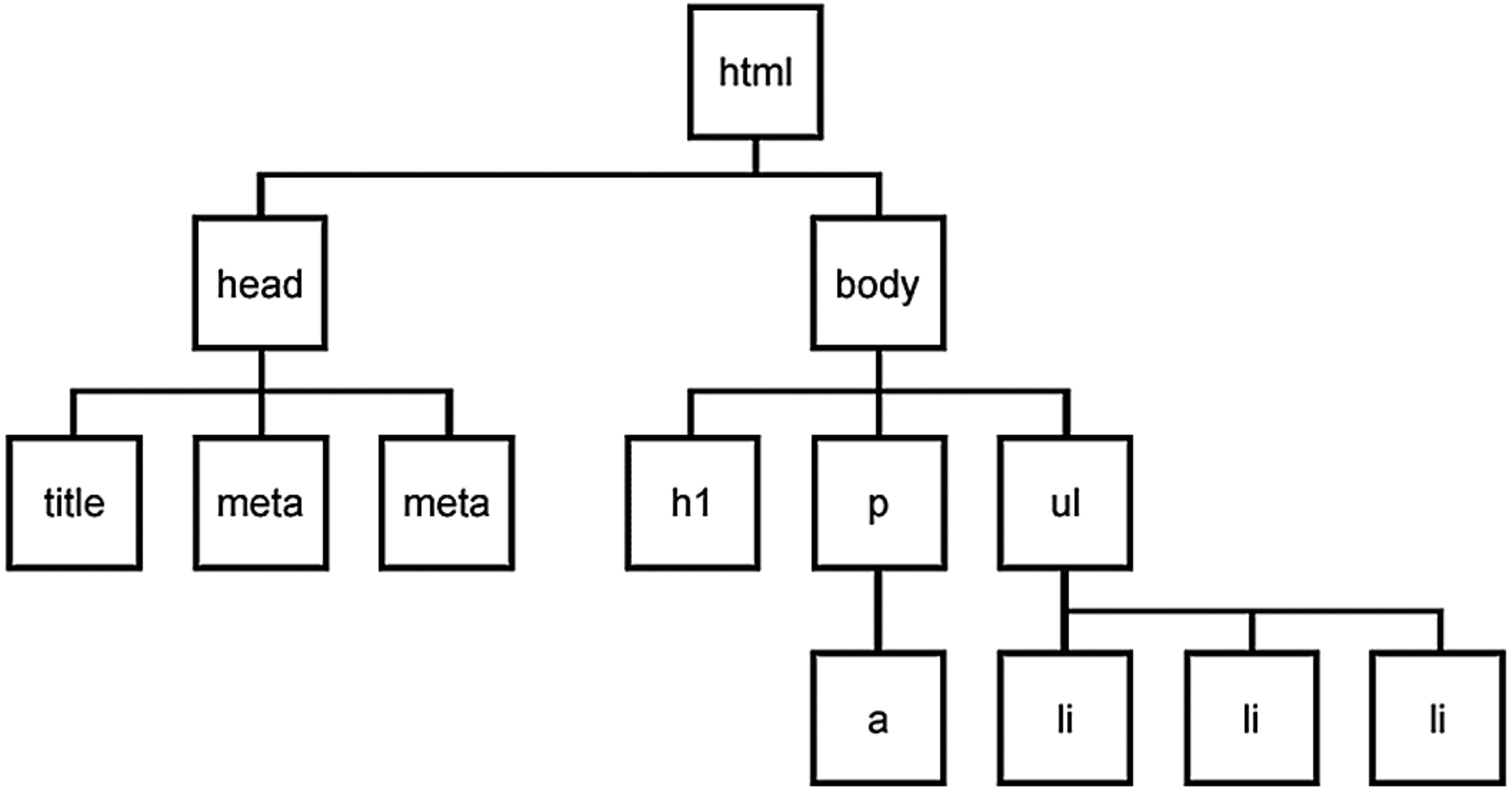
dynamic display
widgets
user iteraction
click to open a popup

Intro to HTML

What is HTML?

HTML is “Hypertext Markup Language”

- What is hypertext?
- What is a markup language?

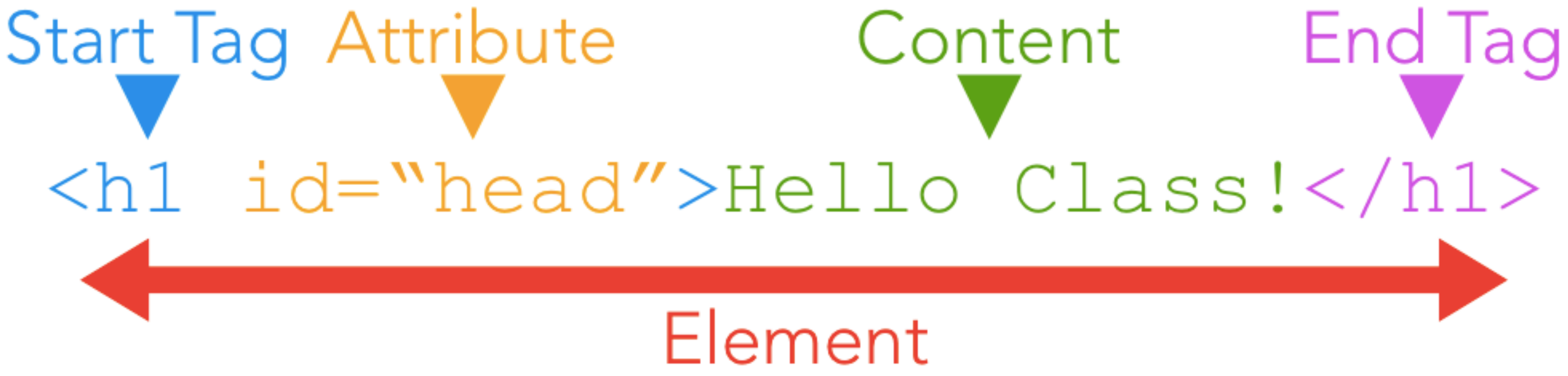

html
head
body
title
meta
meta
h1
p
ul
a
li
li
li

HTML Structure

HTML uses elements to describe the structure of pages

HTML Elements / Tags, Attributes, Content

- Elements and tags used interchangeably



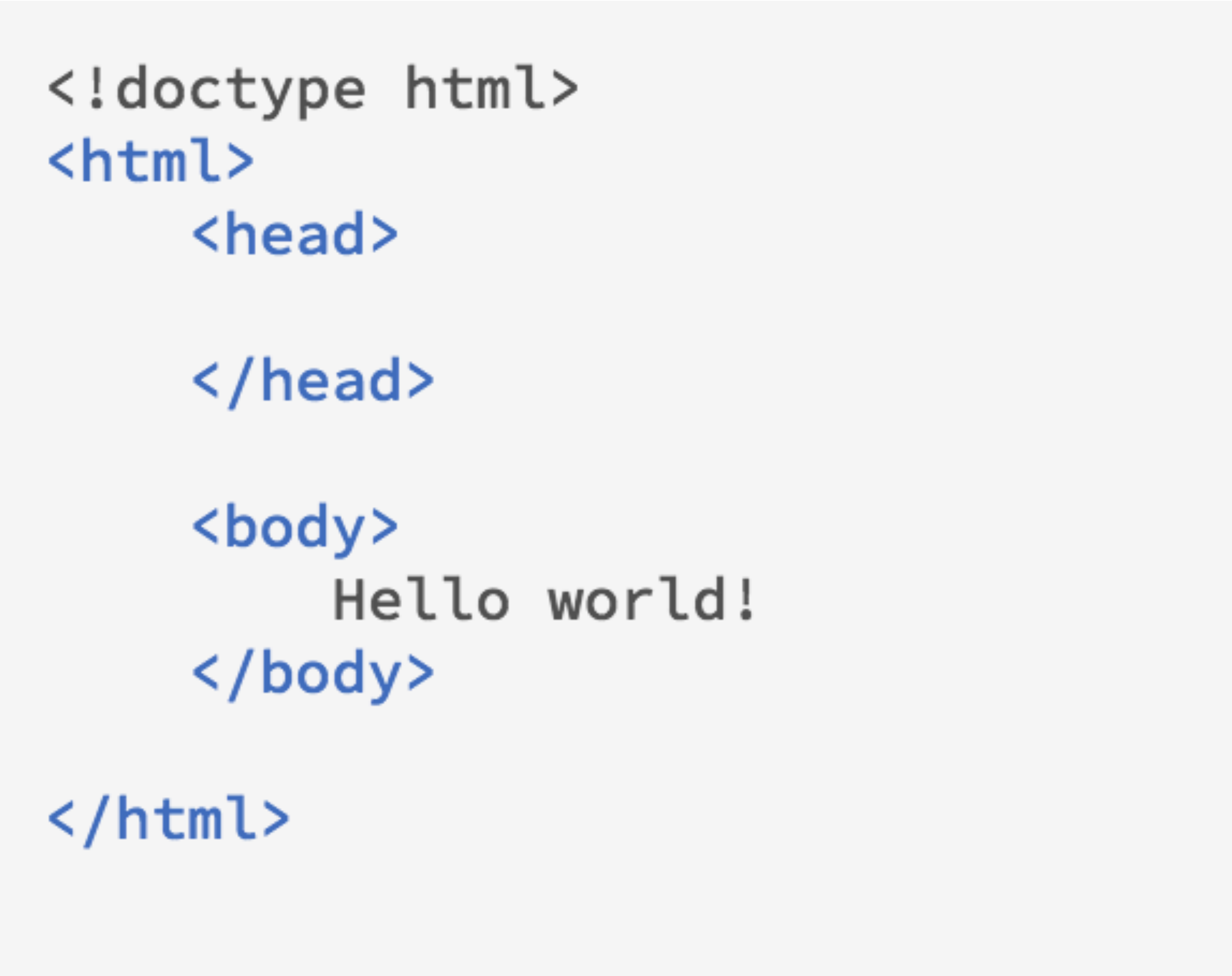
Start Tag Attribute Content End Tag

```
<h1 id=“head”>Hello Class!</h1>
```

Element

Let’s make an HTML page

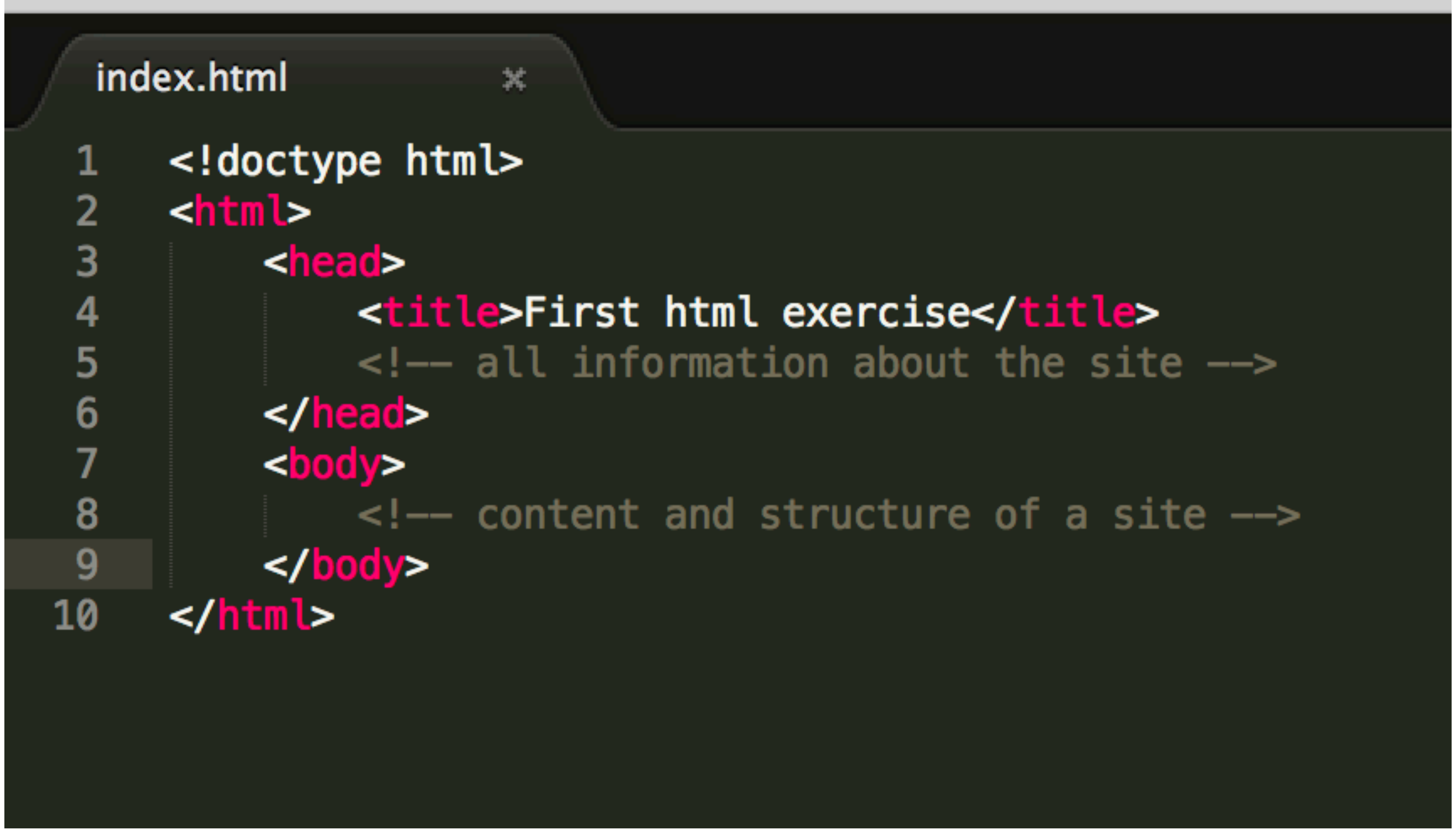
- Open a new file on a text editor
- Write doctype, html, head and body tags
    - don’t forget to indent!
    - need less than / greater than signs
- Save file as **index.html**



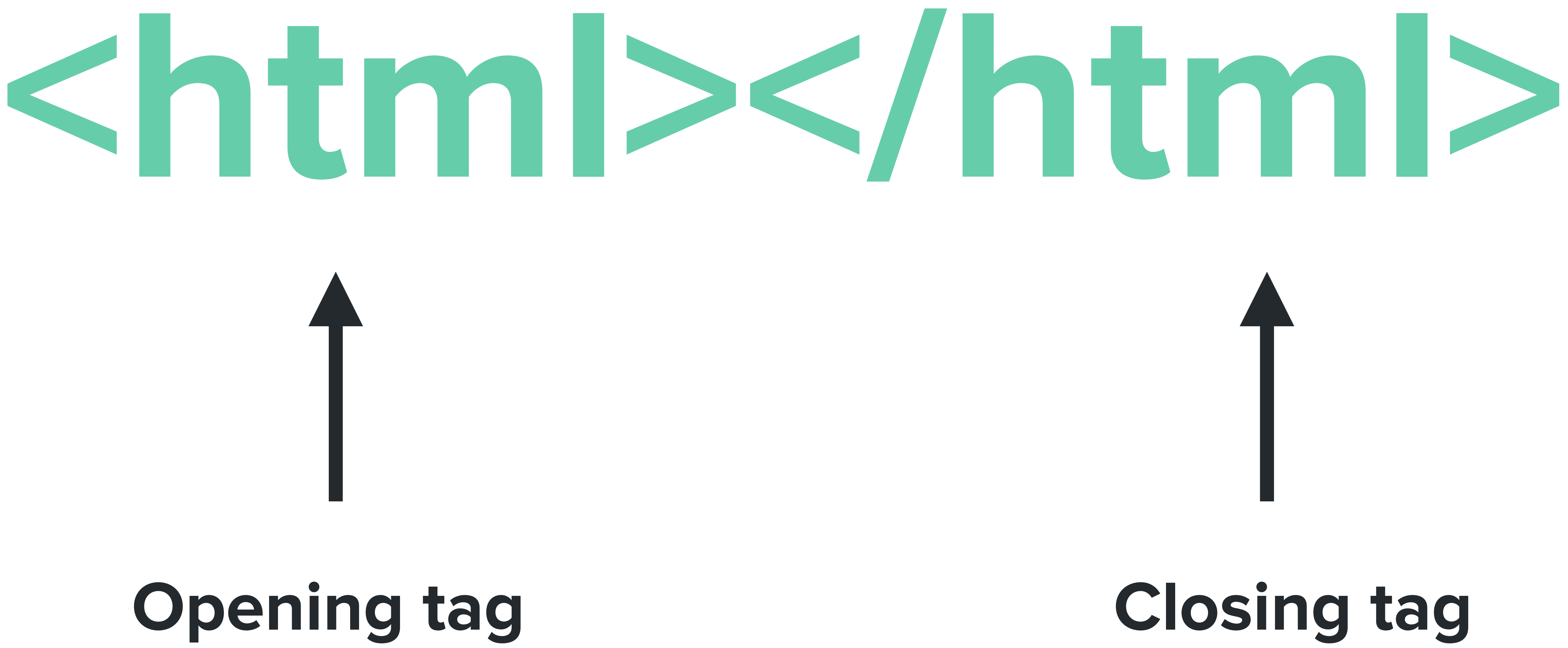
```
<!doctype html>
<html>
    <head>

    </head>

    <body>
        Hello world!
    </body>

</html>
```

What goes where?

- **Head** is everything that the browser/search engine/website needs to know
  - <title> for the name to appear at the top of your web browser
  - <meta> information for browser information
  - Loading style sheets and code from other places
- **Body** is everything you want to see on the page!
  - <p> paragraphs
  - Different elements: <div>, <h1>, etc.
- Everything should be in the **head** or the **body**
  - May work fine now but may cause problems when it gets more difficult
- Don’t forget the **closing tag** </>!



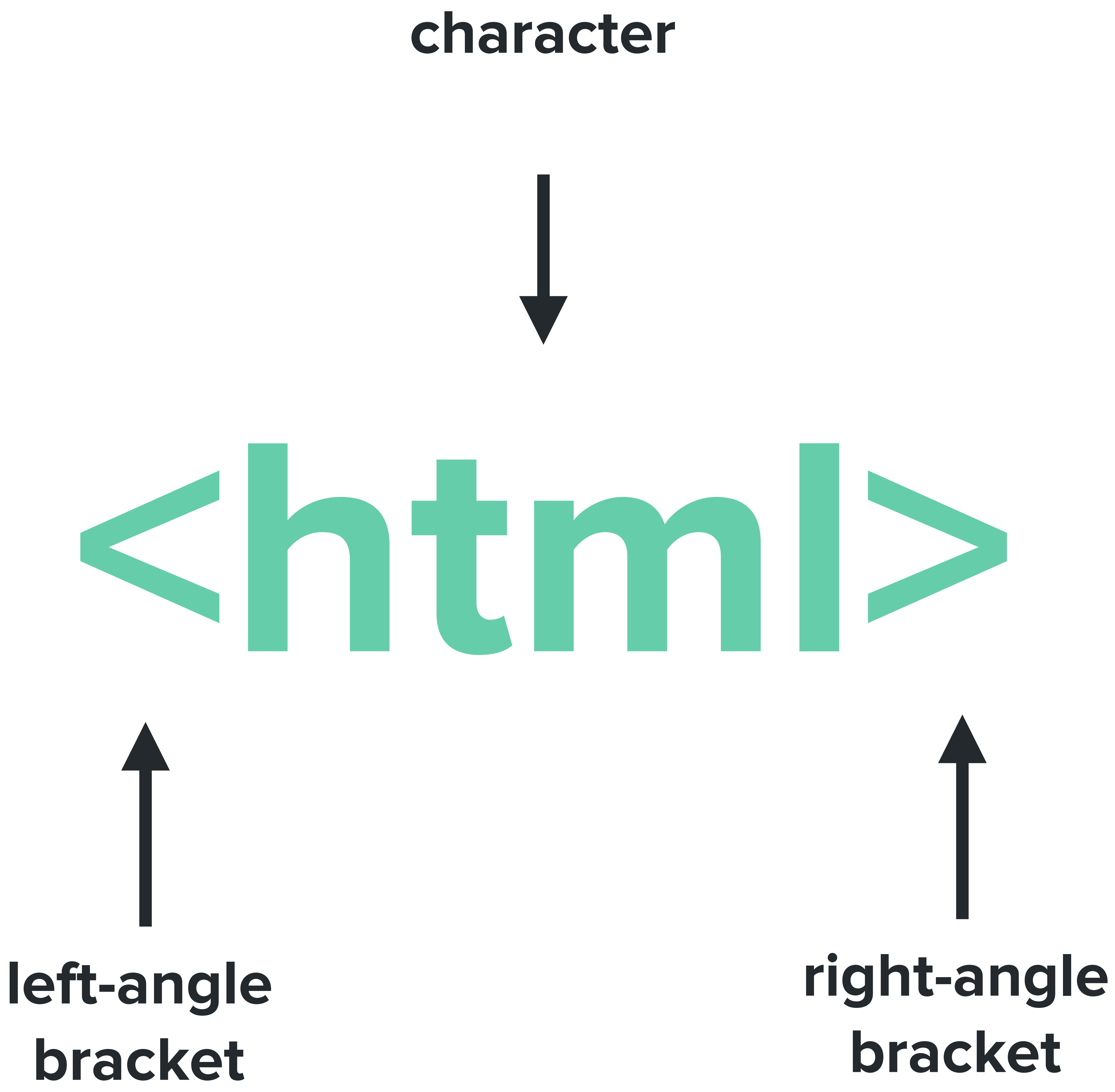
```html
<!doctype html>
<html>
    <head>
        <title>First html exercise</title>
        <!-- all information about the site -->
    </head>
    <body>
        <!-- content and structure of a site -->
    </body>
</html>
```



<html></html>

Opening tag

Closing tag

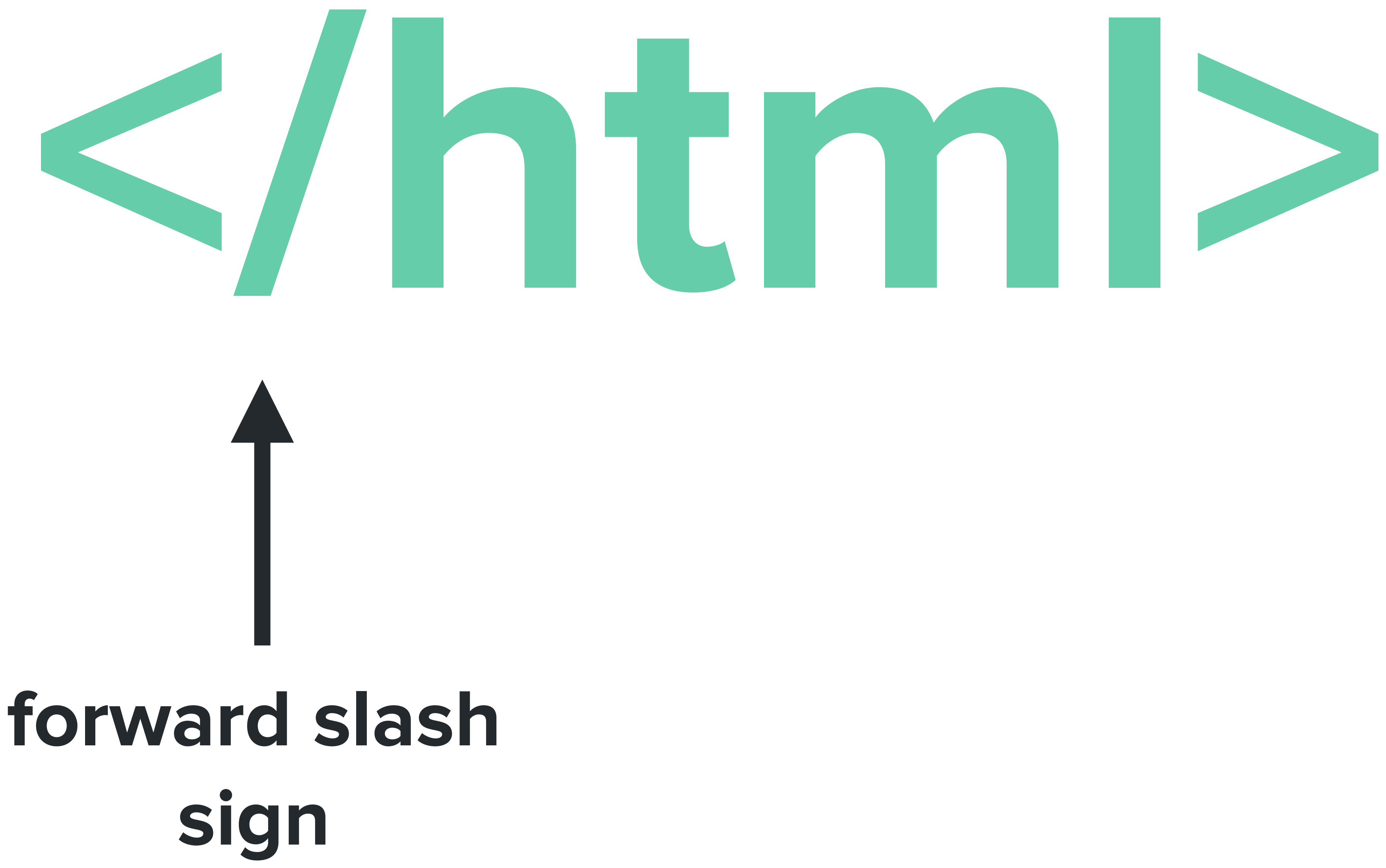


character

<html>

left-angle bracket

right-angle bracket

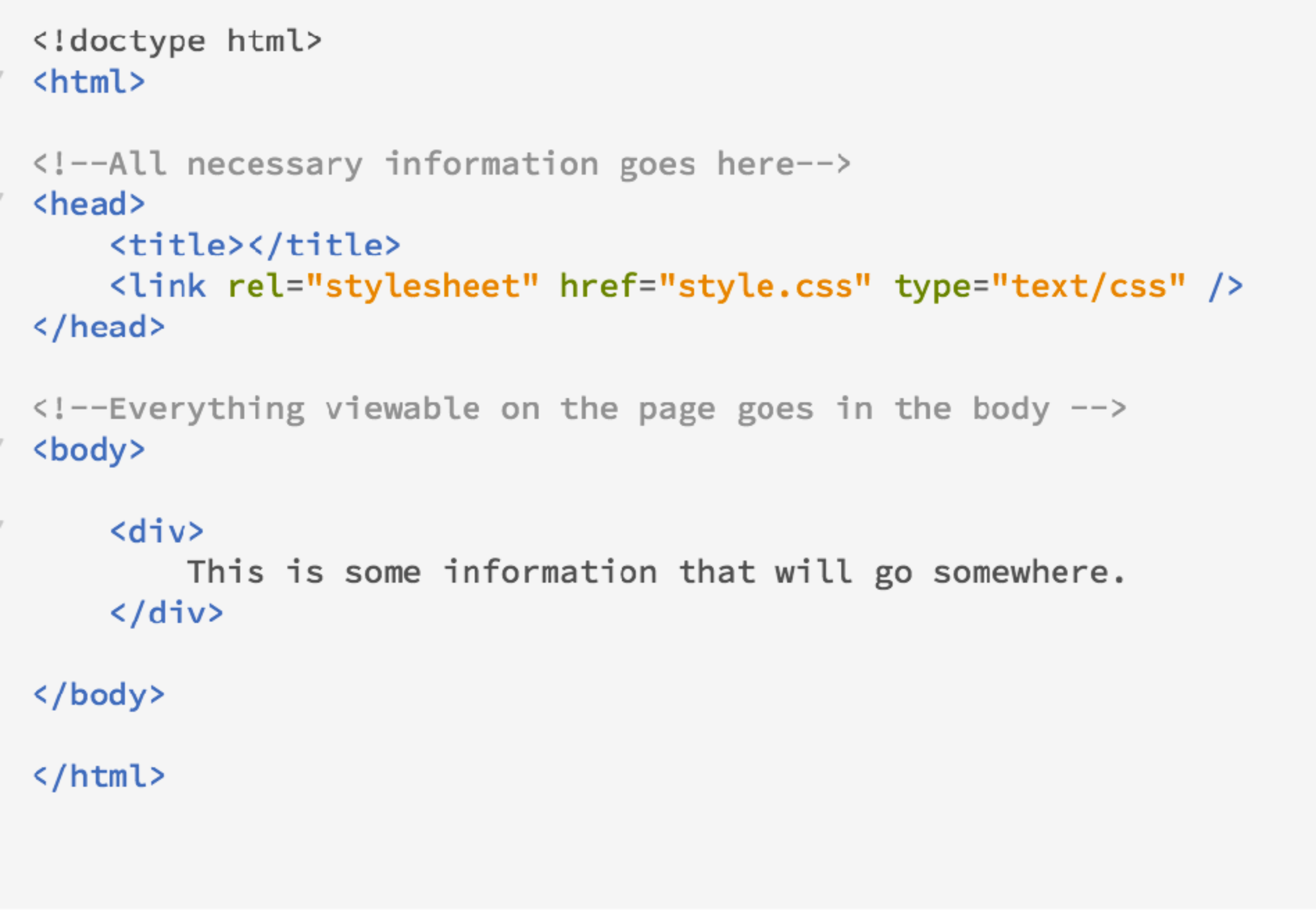


</html>

forward slash
sign

Structural tags

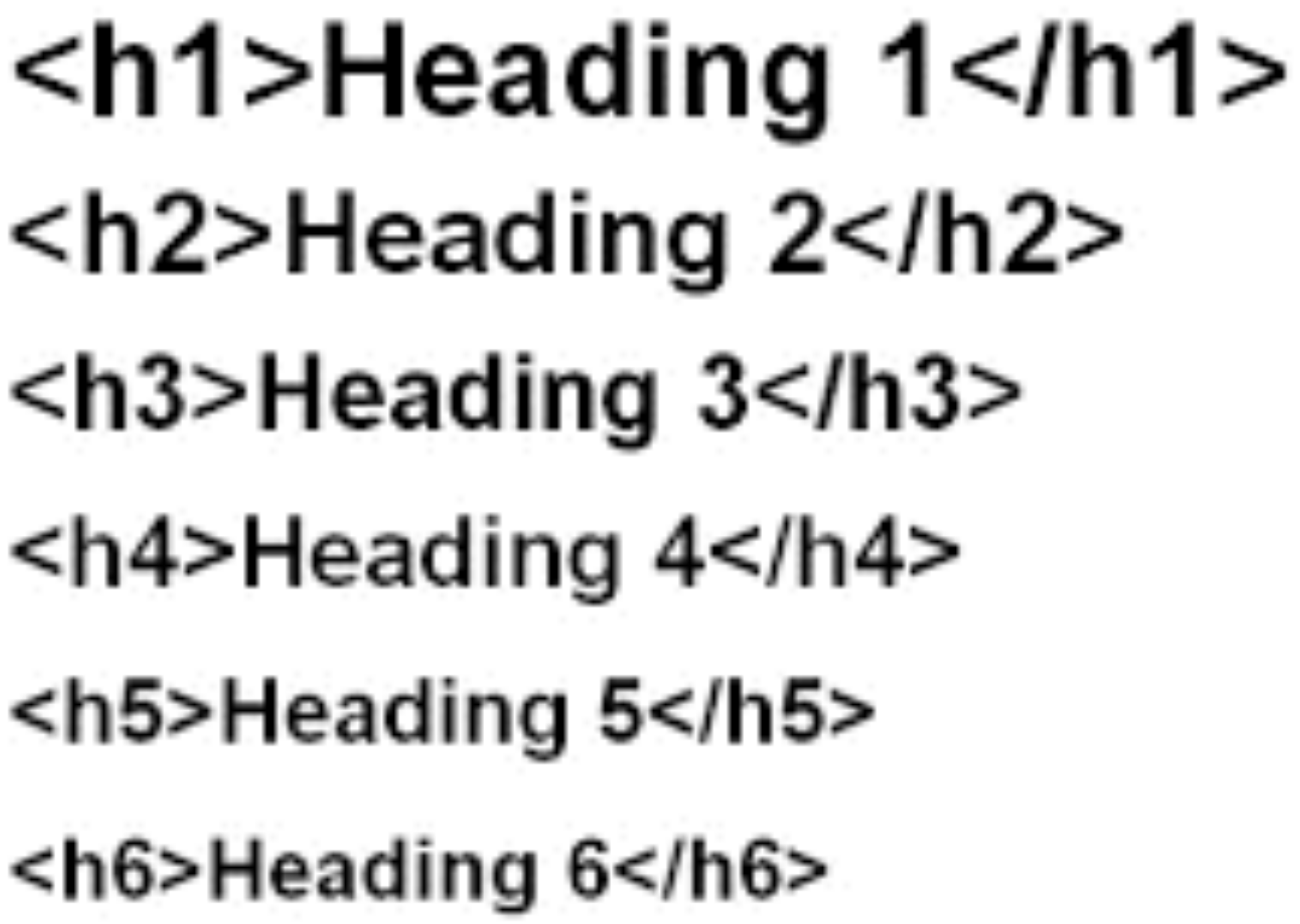
- **doctype, HTML, head, body, div** are structure tags



```html
<!doctype html>
<html>

<!--All necessary information goes here-->
<head>
    <title></title>
    <link rel="stylesheet" href="style.css" type="text/css" />
</head>

<!--Everything viewable on the page goes in the body -->
<body>

    <div>
        This is some information that will go somewhere.
    </div>

</body>

</html>
```

Text tags

- **h1, h2, h3, h4, h5, h6** are text tags for headings
- **p** is a tag for paragraphs
- **b** is for bold, **i** is for italics
- **ul, ol, li** are used for making lists
  - **ul:** unordered lists
  - **ol:** ordered lists
  - **li:** an individual list tag
- **<br/>** will break to a new line



<h1>Heading 1</h1>

<h2>Heading 2</h2>

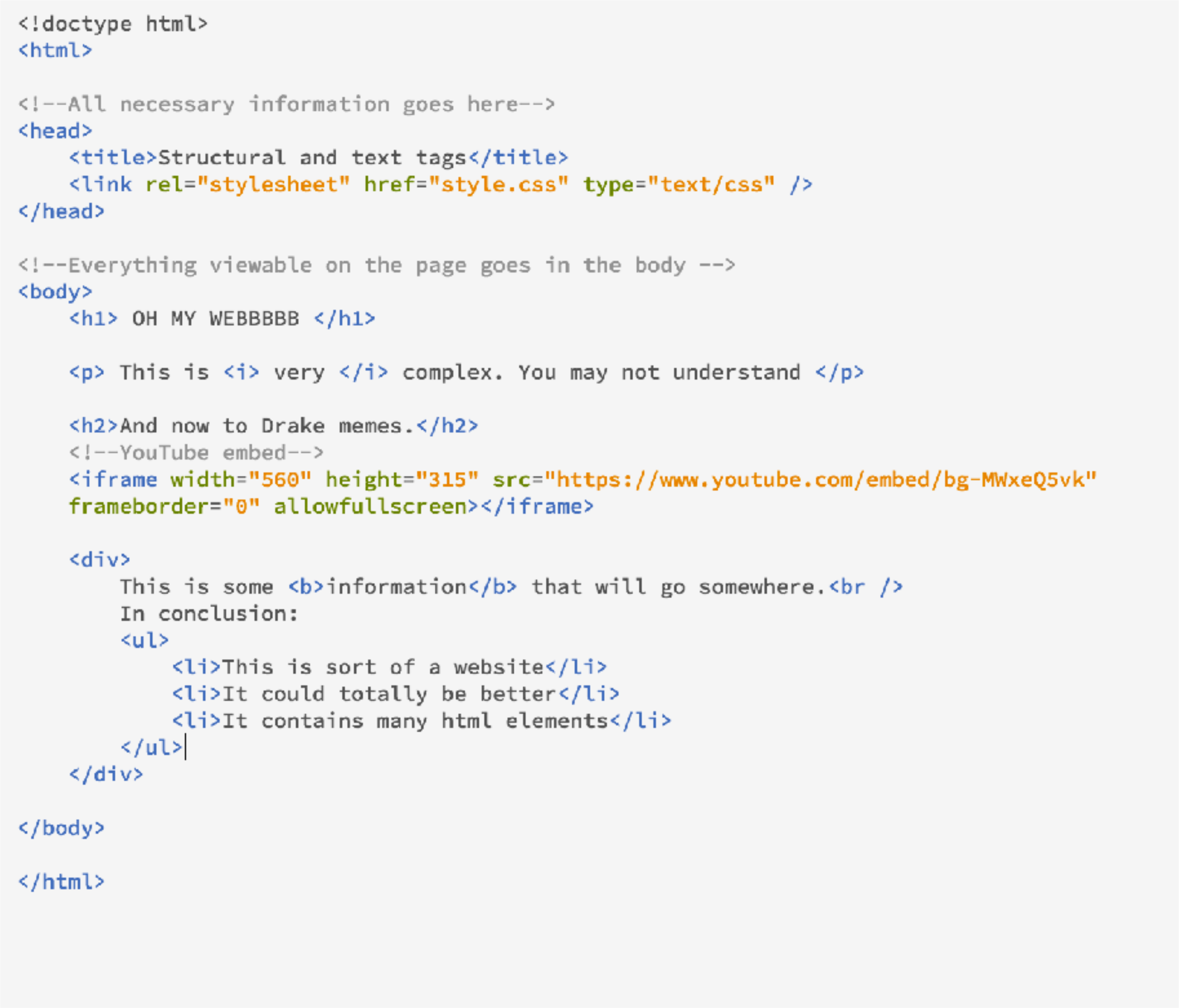
<h3>Heading 3</h3>

<h4>Heading 4</h4>

<h5>Heading 5</h5>

<h6>Heading 6</h6>

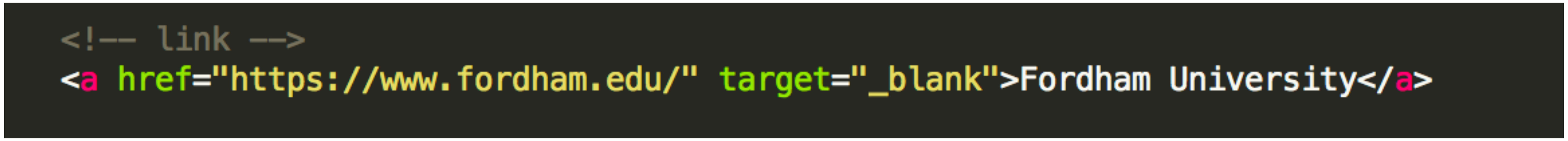
Structural + text tags



```html
<!doctype html>
<html>

<!--All necessary information goes here-->
<head>
    <title>Structural and text tags</title>
    <link rel="stylesheet" href="style.css" type="text/css" />
</head>

<!--Everything viewable on the page goes in the body -->
<body>
    <h1> OH MY WEBBBBB </h1>

    <p> This is <i> very </i> complex. You may not understand </p>

    <h2>And now to Drake memes.</h2>
    <!--YouTube embed-->
    <iframe width="560" height="315" src="https://www.youtube.com/embed/bg-MWxeQ5vk"
    frameborder="0" allowfullscreen></iframe>

    <div>
        This is some <b>information</b> that will go somewhere.<br />
        In conclusion:
        <ul>
            <li>This is sort of a website</li>
            <li>It could totally be better</li>
            <li>It contains many html elements</li>
        </ul>
    </div>

</body>

</html>
```

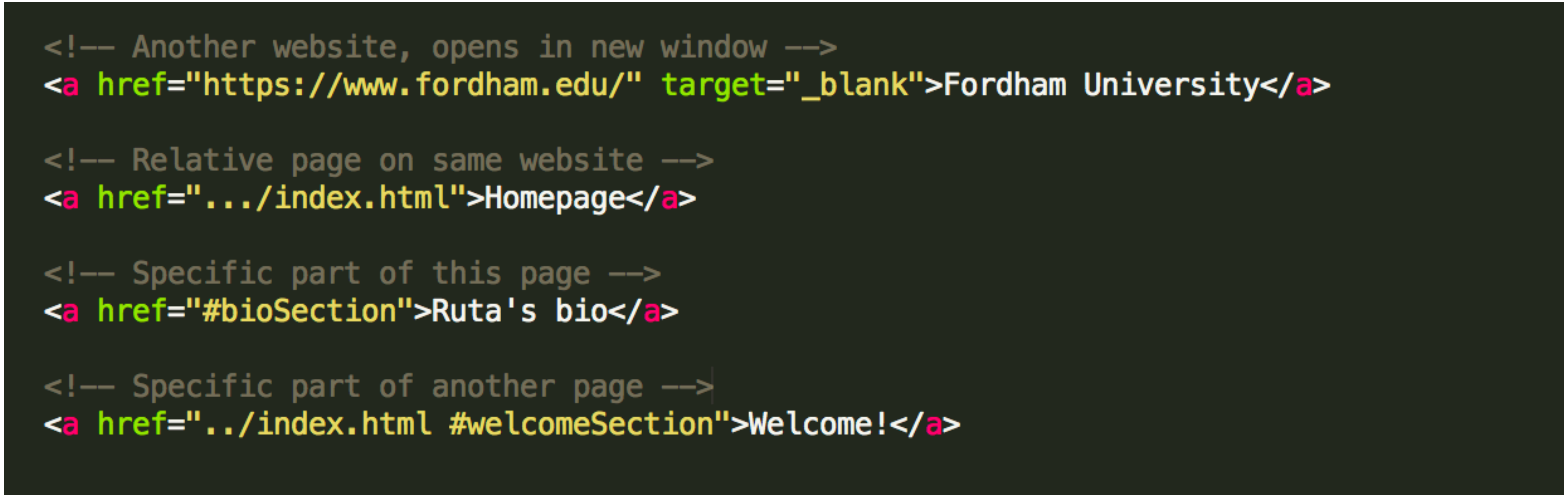
Links

- Links are written using the anchor tag, **<a>**
- Uses URL’s (uniform resource locator) link to other websites, relative URL’s for the same site, or linking to a specific part of a page
- Uses **blank** to open in a new window
- Follows the format:



```
<!-- link -->
<a href="https://www.fordham.edu/" target="_blank">Fordham University</a>
```

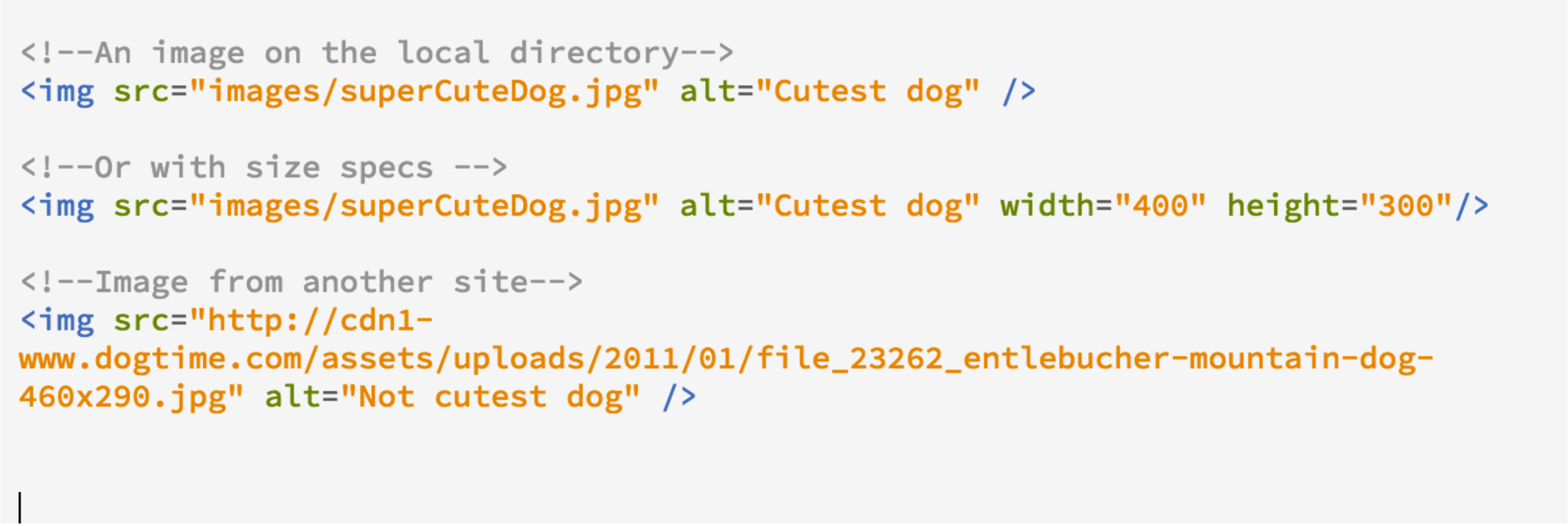
More on links



```html
<!-- Another website, opens in new window -->
<a href="https://www.fordham.edu/" target="_blank">Fordham University</a>

<!-- Relative page on same website -->
<a href=".../index.html">Homepage</a>

<!-- Specific part of this page -->
<a href="#bioSection">Ruta's bio</a>

<!-- Specific part of another page -->
<a href="../index.html #welcomeSection">Welcome!</a>
```

Images

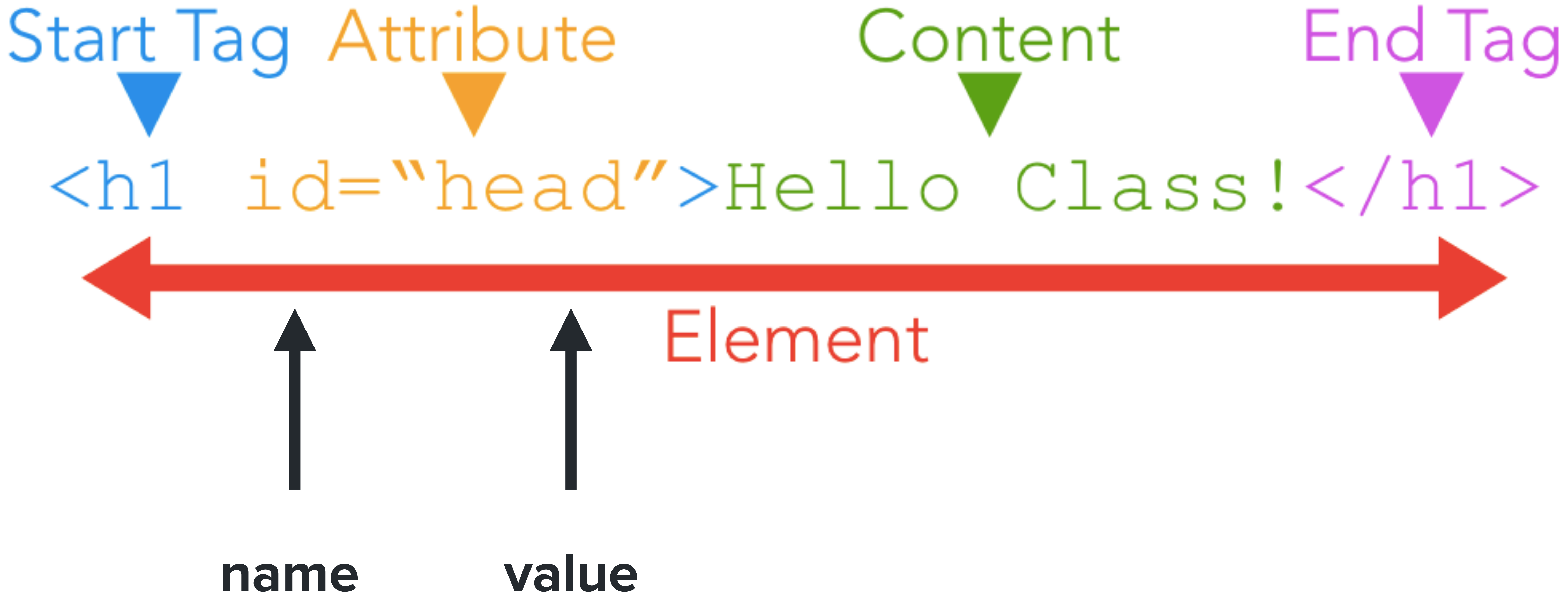
- The **<img>** tag is for images, which can be on your local directory or on another webpage in the form of a URL.



```
<!--An image on the local directory-->
<img src="images/superCuteDog.jpg" alt="Cutest dog" />

<!--Or with size specs -->
<img src="images/superCuteDog.jpg" alt="Cutest dog" width="400" height="300"/>

<!--Image from another site-->
<img src="http://cdn1-
www.dogtime.com/assets/uploads/2011/01/file_23262_entlebucher-mountain-dog-
460x290.jpg" alt="Not cutest dog" />
```

HTML Attributes

- Attributes provide additional information about the contents of an element
- Appear in an opening tag
- Made up of two parts: **name** and **value** and are separated by = sign
- Possible attributes: lang, id, class, etc. More can be found here.



Start Tag Attribute Content End Tag

```
<h1 id=“head”>Hello Class!</h1>
```

Element

name **value**

HTML Comments

- You can write comments in your HTML to make notes to yourself or others without impacting your code
- To write a comment, use the following opening and closing brackets with your content in the middle:

  <!-- Write your content here! -->
- Use comments! When your code gets larger, you’ll need to remember what is what
- I also need them for marking

HTML Structure Summary

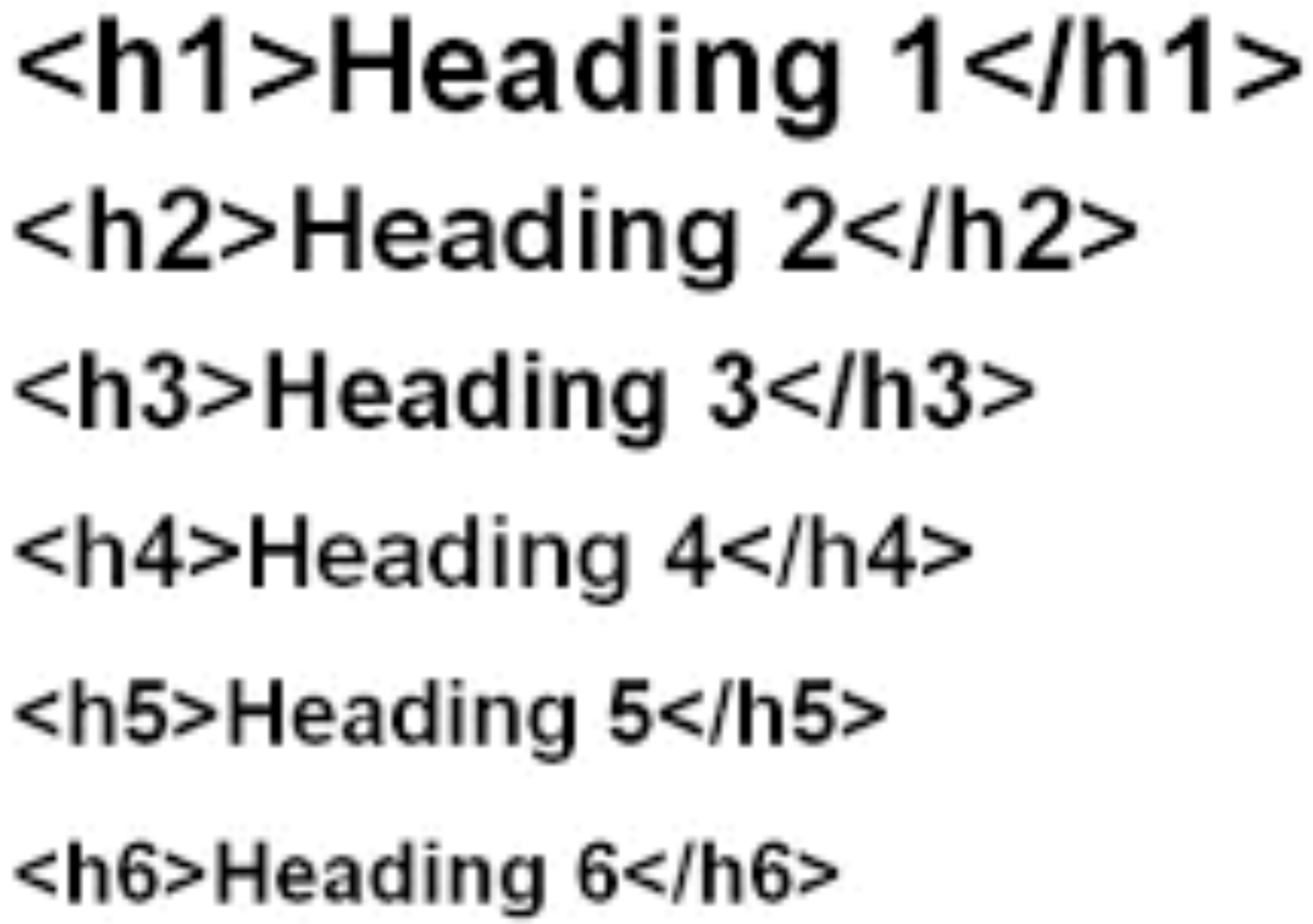
FROM JOHN DUCKET “HTML AND CSS”

- HTML pages are text documents
- HTML uses tags (characters that sit inside angled brackets) to give the information they surround special meaning
- Tags are often referred to as elements
- Tags usually come in pairs. The opening tag denotes the start of a piece of content; the closing tag denotes the end
- Opening tags can carry attributes, which tell us more about the content of that element
- Attributes require a name and a value
- To learn HTML you need to know what tags are available for you to use, what they do, and where they can go

HTML text tags

Headings

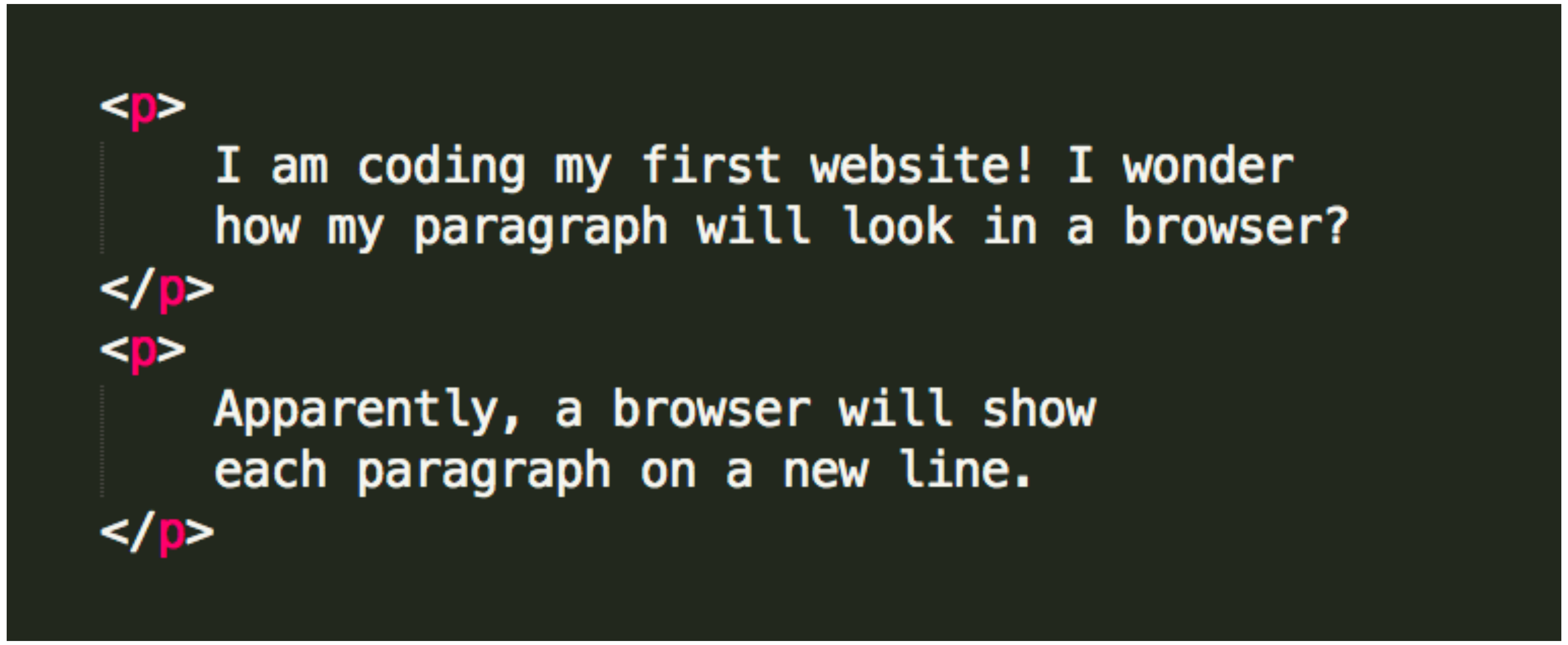
- **h1, h2, h3, h4, h5, h6** are text tags for headings
- Displayed in different sizes
- Size can be modified using CSS



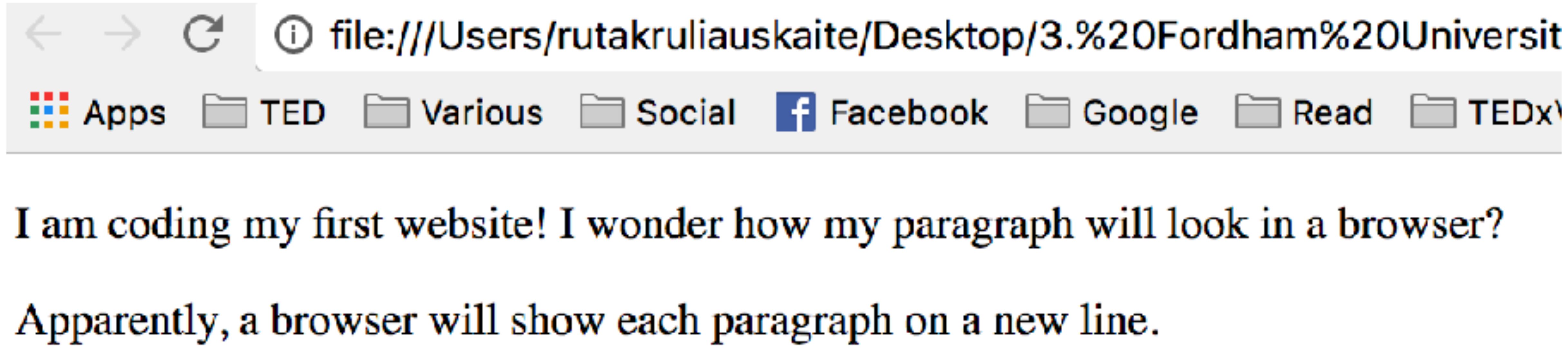
```
<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6</h6>
```

Paragraphs

- Written using **<p></p>** opening and closing tags



```
<p>
    I am coding my first website! I wonder
    how my paragraph will look in a browser?
</p>
<p>
    Apparently, a browser will show
    each paragraph on a new line.
</p>
```



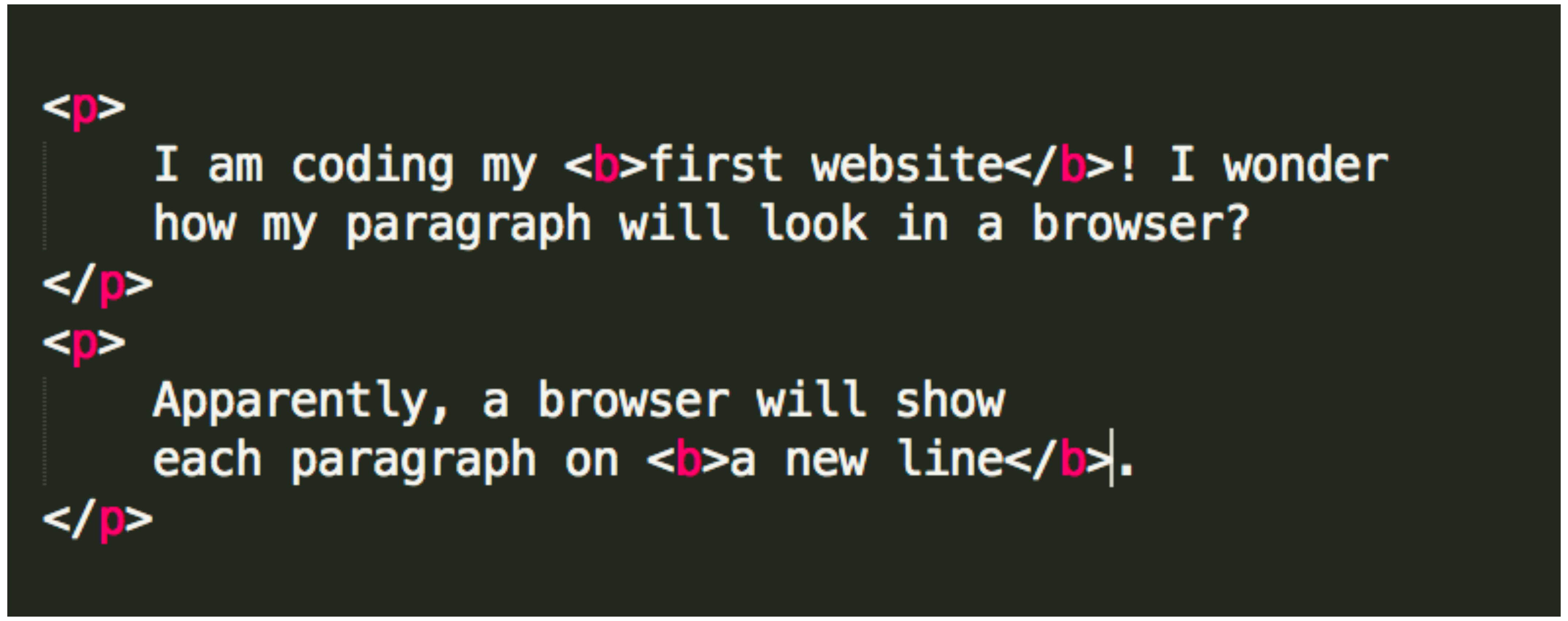
file:///Users/rutakruliauskaite/Desktop/3.%20Fordham%20Universit
Apps
TED
Various
Social
Facebook
Google
Read
TEDx

I am coding my first website! I wonder how my paragraph will look in a browser?

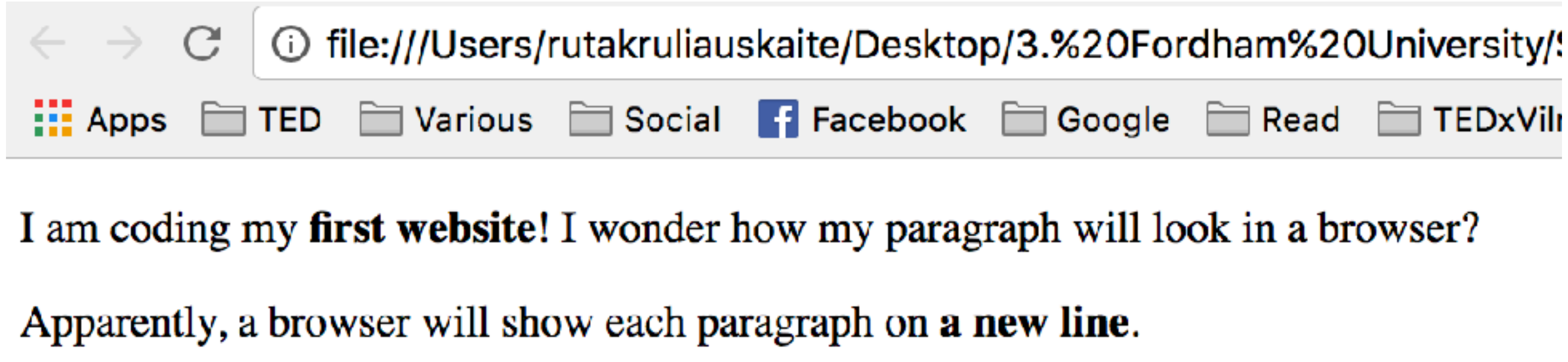
Apparently, a browser will show each paragraph on a new line.

bold

- Used to make characters appear **bold**
- Written using **<b></b>** opening and closing tags



```
<p>
    I am coding my <b>first website</b>! I wonder
    how my paragraph will look in a browser?
</p>
<p>
    Apparently, a browser will show
    each paragraph on <b>a new line</b>.
</p>
```



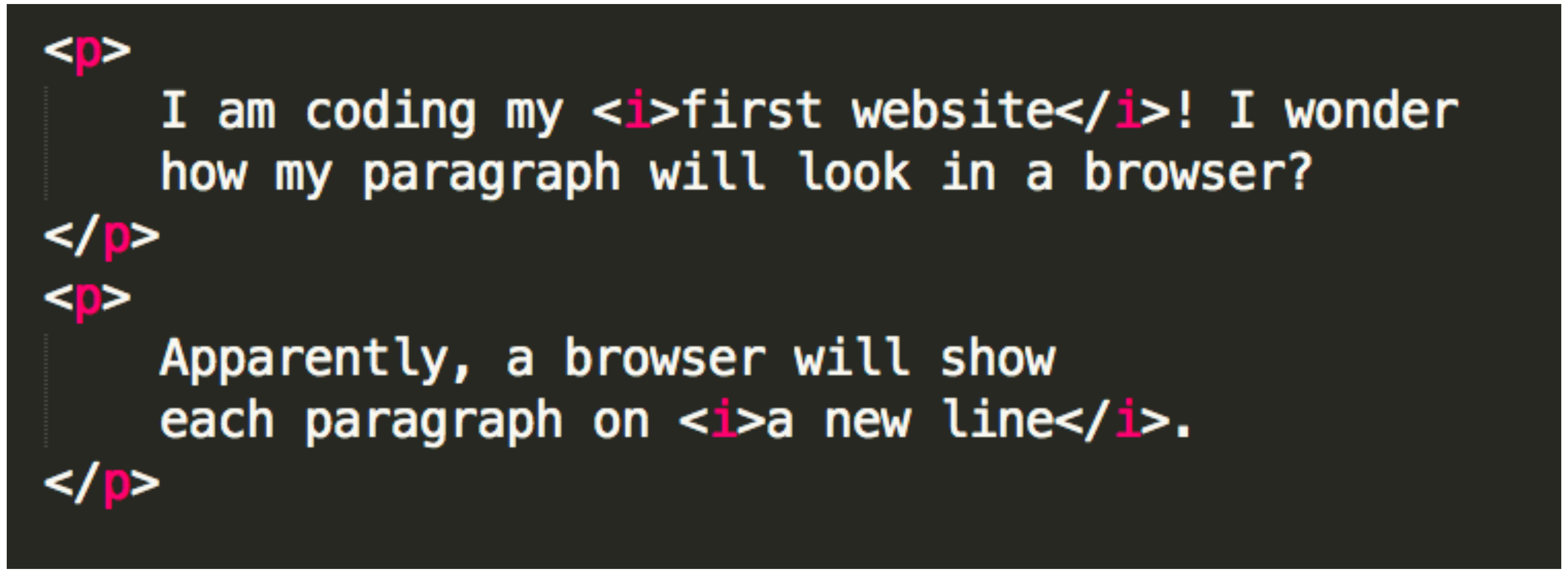
file:///Users/rutakruliauskaite/Desktop/3.%20Fordham%20University/
Apps
TED
Various
Social
Facebook
Google
Read
TEDxVil

I am coding my **first website**! I wonder how my paragraph will look in a browser?

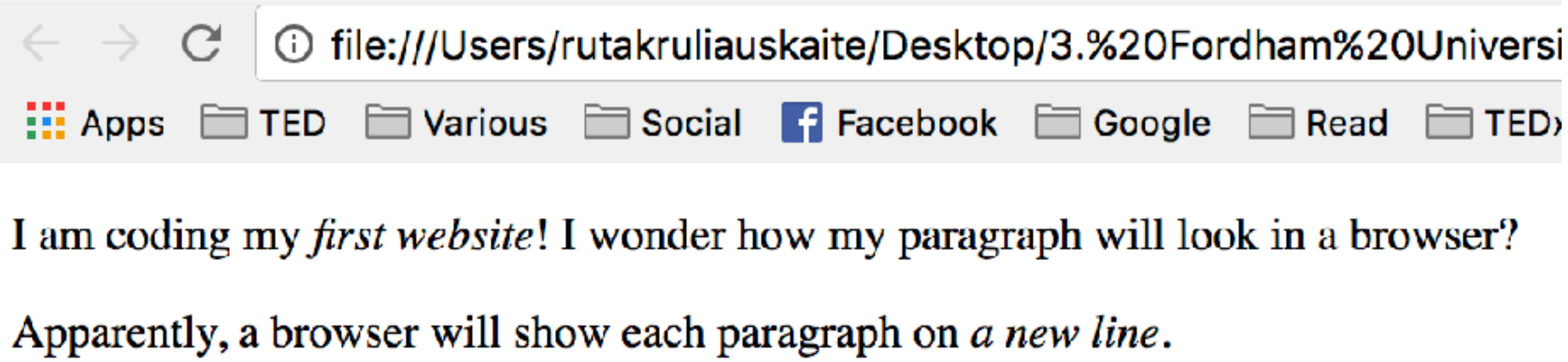
Apparently, a browser will show each paragraph on **a new line**.

italic

- Used to make characters appear *italic*
- Written using **<i></i>** opening and closing tags



```
<p>
    I am coding my <i>first website</i>! I wonder
    how my paragraph will look in a browser?
</p>
<p>
    Apparently, a browser will show
    each paragraph on <i>a new line</i>.
</p>
```



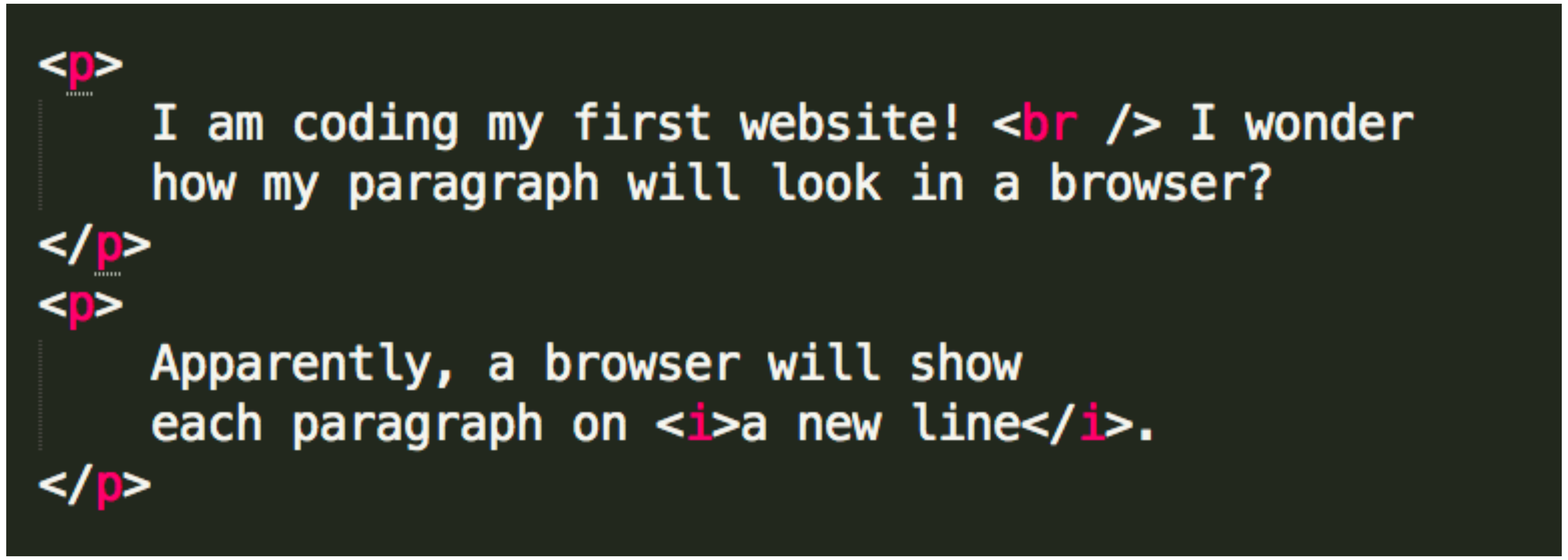
file:///Users/rutakruliauskaite/Desktop/3.%20Fordham%20Universi
Apps
TED
Various
Social
Facebook
Google
Read
TED

I am coding my *first website*! I wonder how my paragraph will look in a browser?

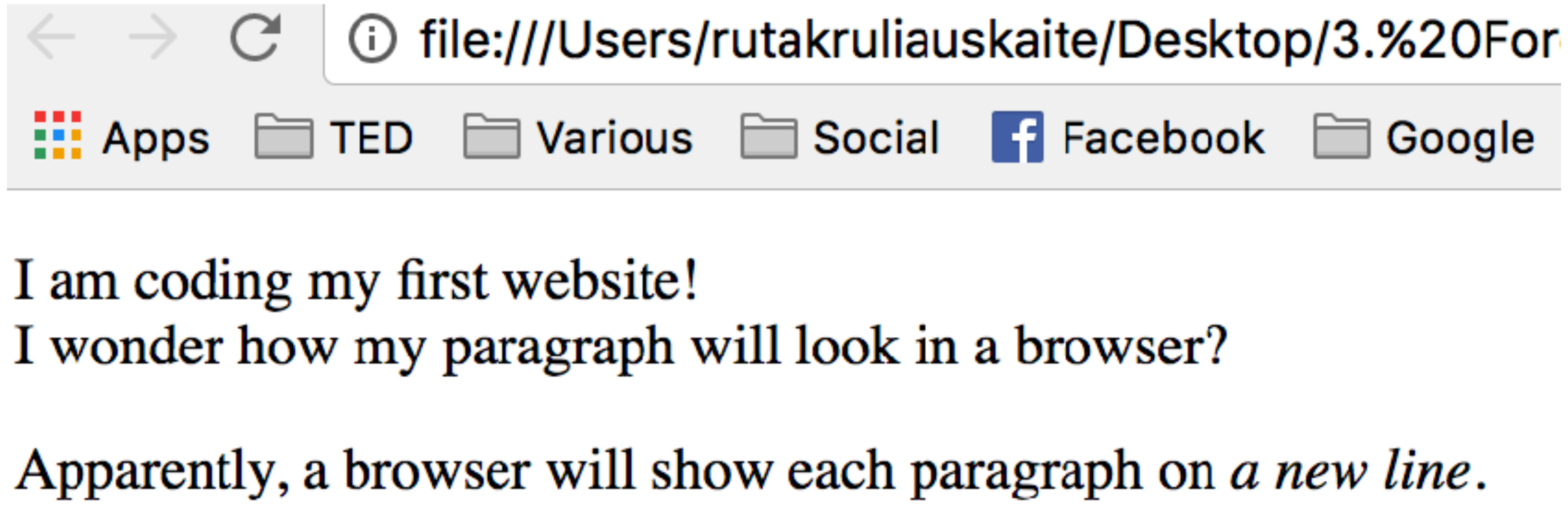
Apparently, a browser will show each paragraph on *a new line*.

Line breaks

- Used to make a break line in the middle of a paragraph
- Written using **<br />** tag (notice there's only one tag!)



```
<p>
    I am coding my first website! <br /> I wonder
    how my paragraph will look in a browser?
</p>
<p>
    Apparently, a browser will show
    each paragraph on <i>a new line</i>.
</p>
```

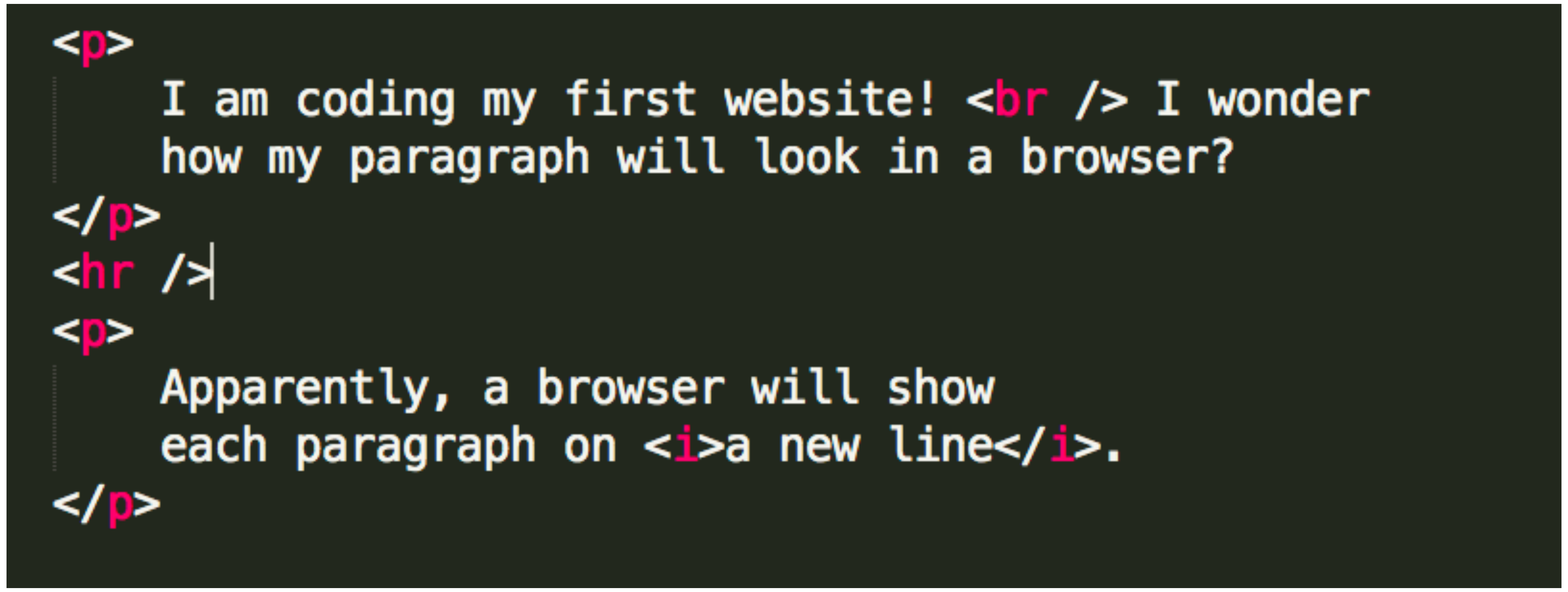


I am coding my first website!
I wonder how my paragraph will look in a browser?

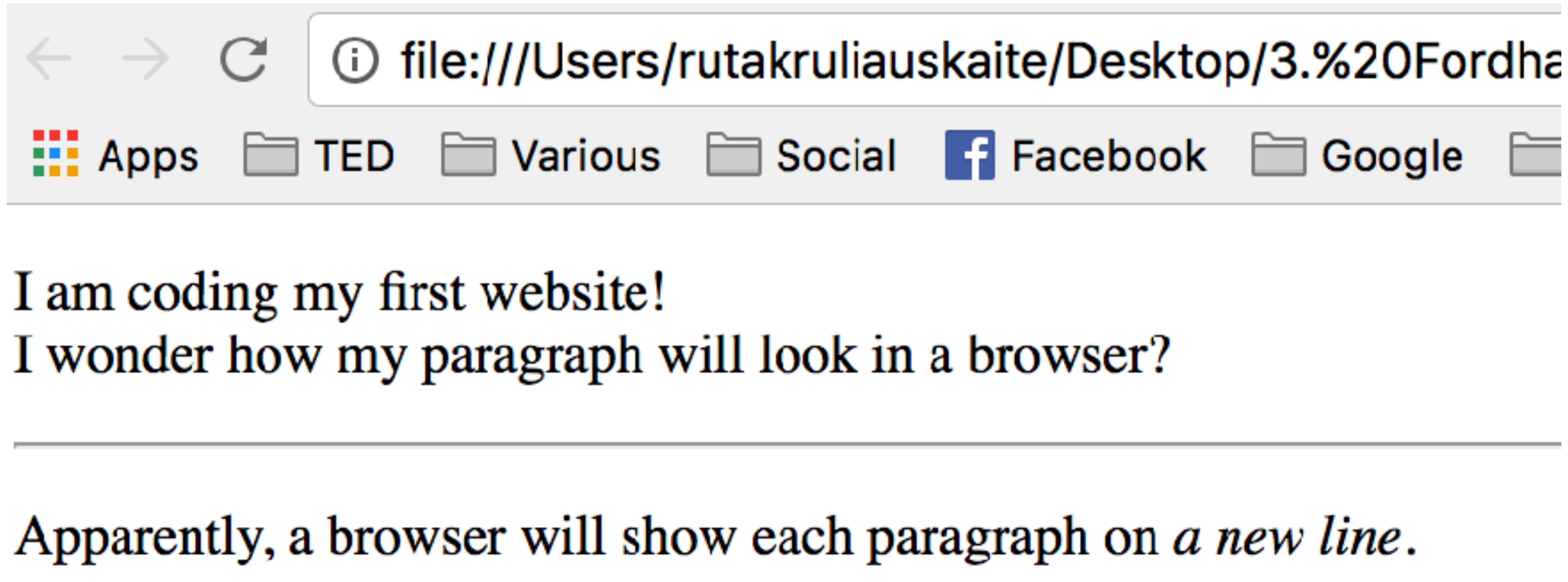
Apparently, a browser will show each paragraph on *a new line*.

Horizontal rules

- Used to create breaks between different sections
- Written using **<hr />** tag (notice there's only one tag!)



```
<p>
    I am coding my first website! <br /> I wonder
    how my paragraph will look in a browser?
</p>
<hr />
<p>
    Apparently, a browser will show
    each paragraph on <i>a new line</i>.
</p>
```



I am coding my first website!
I wonder how my paragraph will look in a browser?

Apparently, a browser will show each paragraph on *a new line*.

<br /> <hr />

A note on accessibility

- HTML does a good job being accessible for screen readers
- Screen readers describe what’s on the web for visually impaired
- It’s important to be familiar with accessibility tags and use them for websites that are going to go live
- **<em>** vs. **<i>**
- **<strong>** vs. **<b>**
- **<title>** text in img tags

HTML Text Summary

FROM JOHN DUCKET “HTML AND CSS”

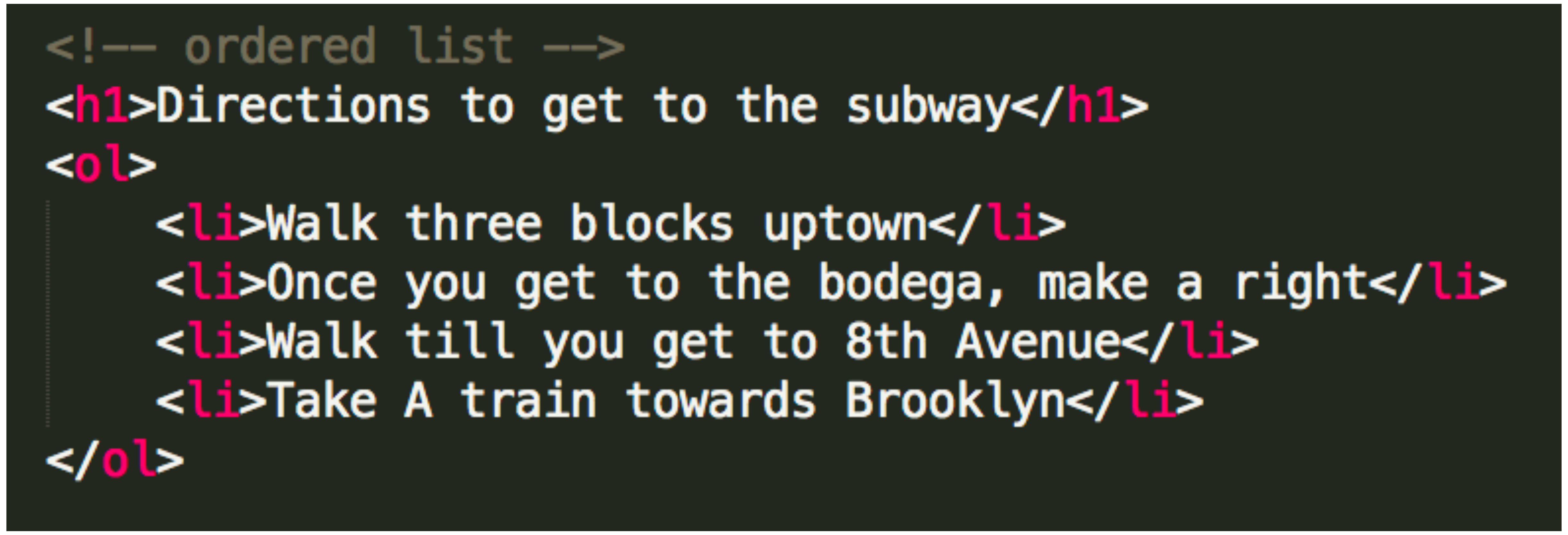
- HTML elements are used to describe the structure of the page (e.g. headings, subheadings, paragraphs)
- They also provide semantic information (e.g. where emphasis should be placed, the definition of any acronyms used, when given text is a quotation)
- *Note: We can use HTML for bold and italic but will eventually want to do that in CSS*

HTML Lists

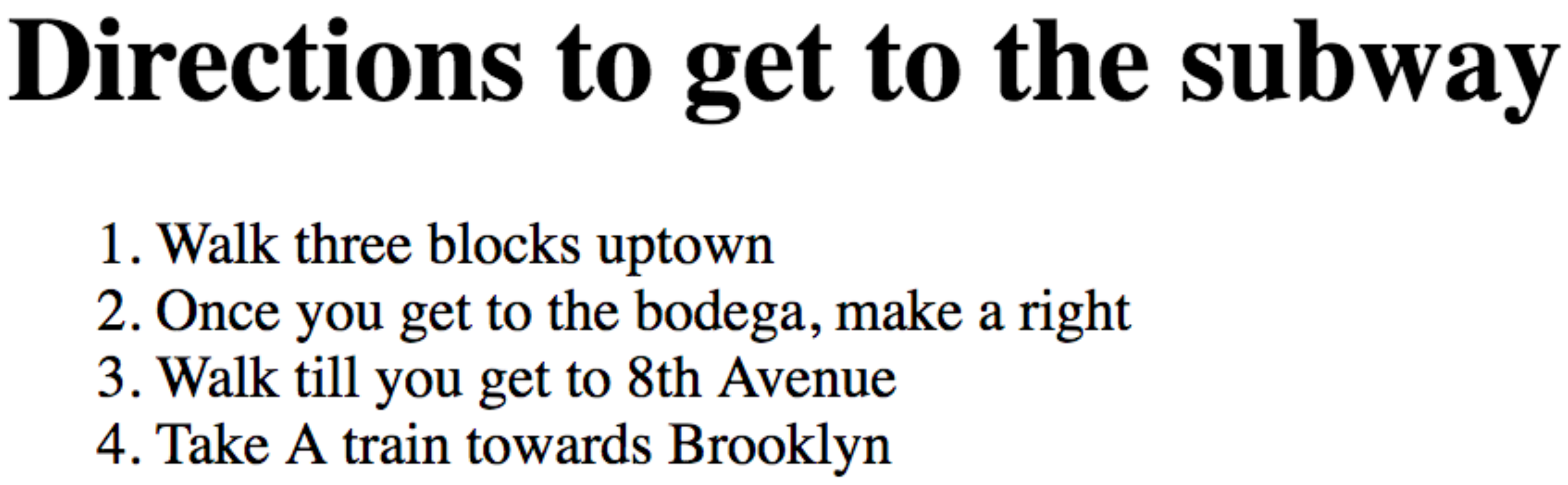
Ordered vs. Unordered Lists

- HTML has two kinds of lists: ordered and unordered lists
- **Unordered lists use bullet points**
  - Like this!
  - They use the tag **<ul>**
- **Ordered lists use numbers (1, 2, 3, 4)**
  - Use this when your list has a specific order
  - They use the tag **<ol>**
- Once you’ve declared which kind of list you’re using with the appropriate tag, each item in the list will use the **<li>** tag, which stands for list item

Ordered Lists = Order matters



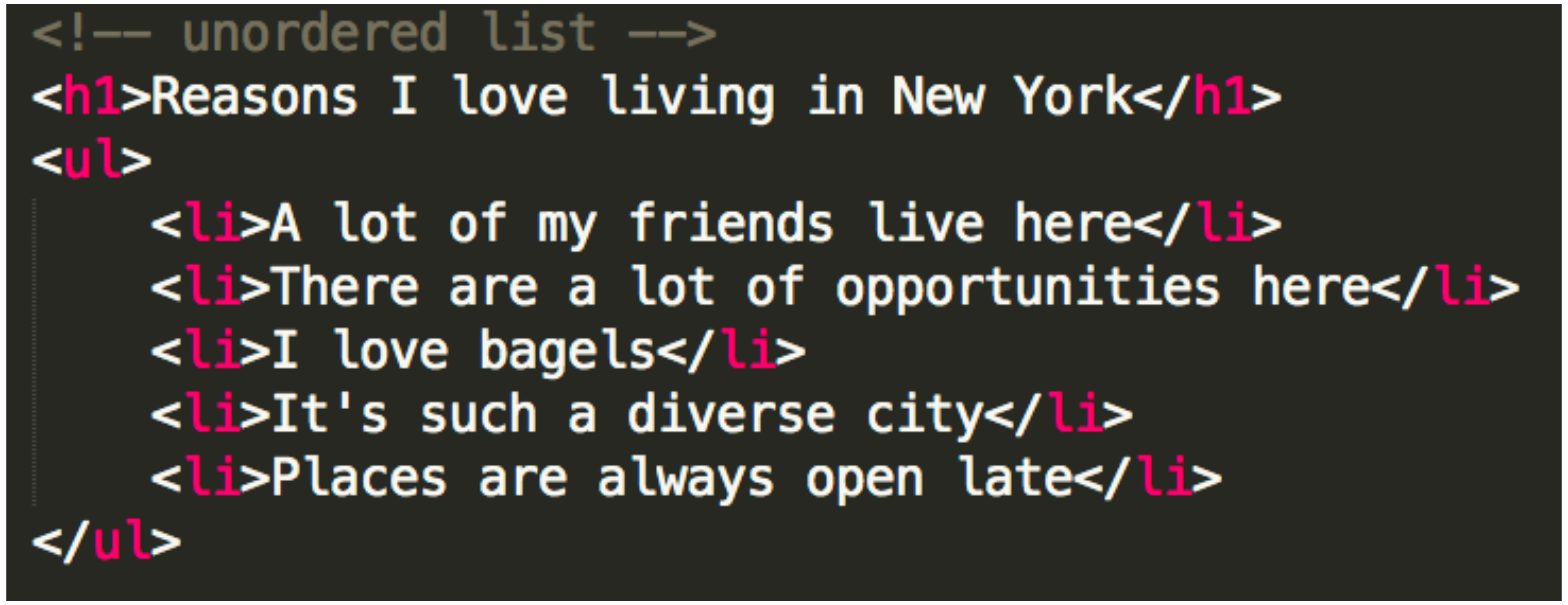
```html
<!-- ordered list -->
<h1>Directions to get to the subway</h1>
<ol>
    <li>Walk three blocks uptown</li>
    <li>Once you get to the bodega, make a right</li>
    <li>Walk till you get to 8th Avenue</li>
    <li>Take A train towards Brooklyn</li>
</ol>
```



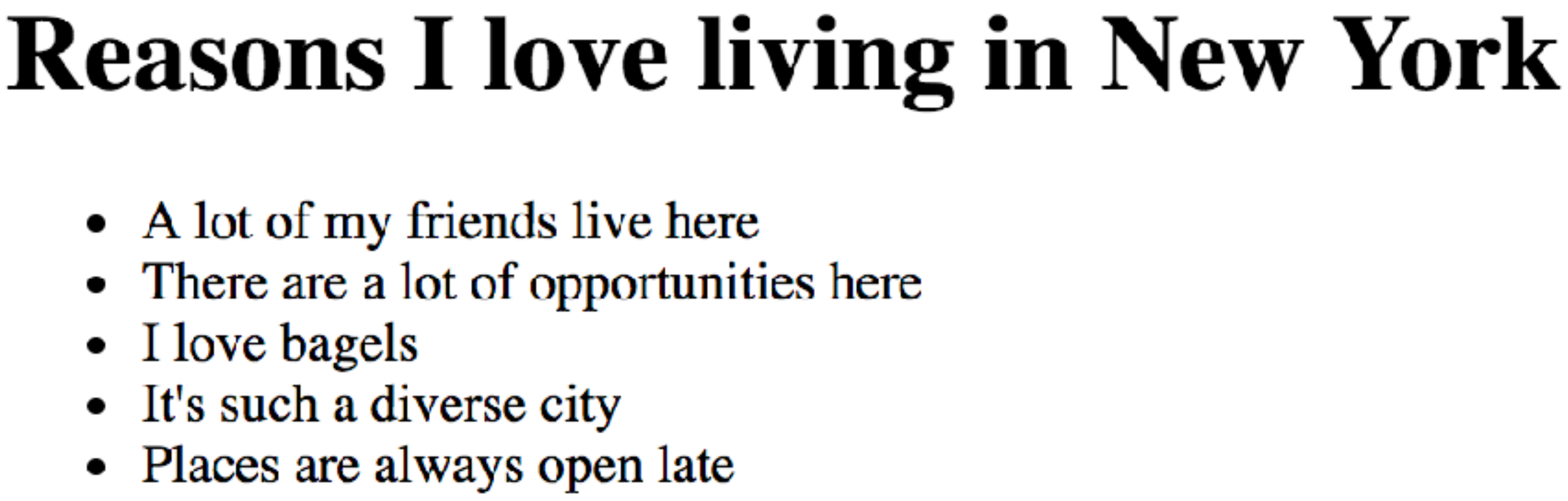
Directions to get to the subway

1. Walk three blocks uptown
2. Once you get to the bodega, make a right
3. Walk till you get to 8th Avenue
4. Take A train towards Brooklyn

Unordered Lists = Order doesn’t matter



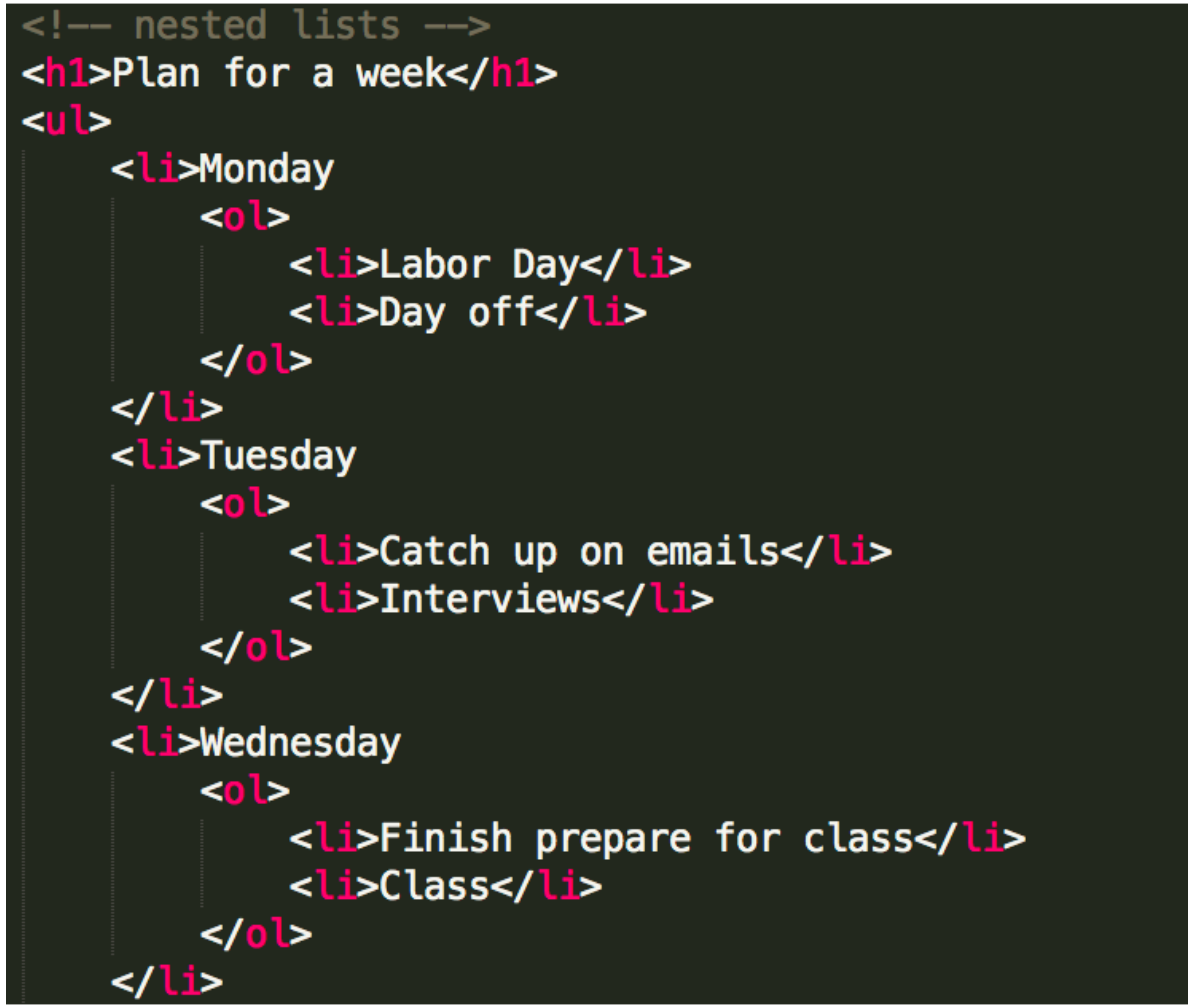
```
<!-- unordered list -->
<h1>Reasons I love living in New York</h1>
<ul>
    <li>A lot of my friends live here</li>
    <li>There are a lot of opportunities here</li>
    <li>I love bagels</li>
    <li>It's such a diverse city</li>
    <li>Places are always open late</li>
</ul>
```



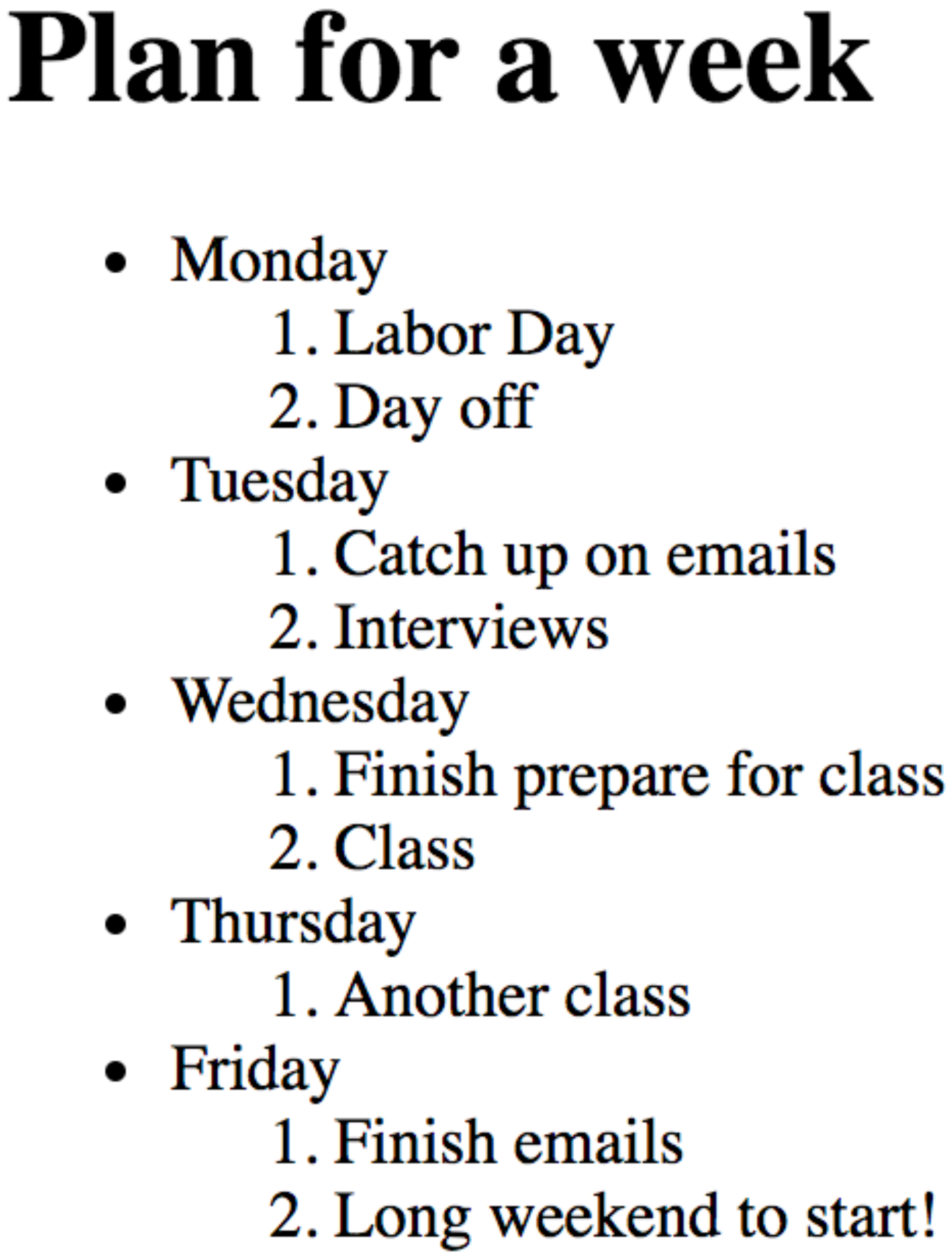
Reasons I love living in New York

- A lot of my friends live here
- There are a lot of opportunities here
- I love bagels
- It's such a diverse city
- Places are always open late

Nested Lists = Lists within Lists



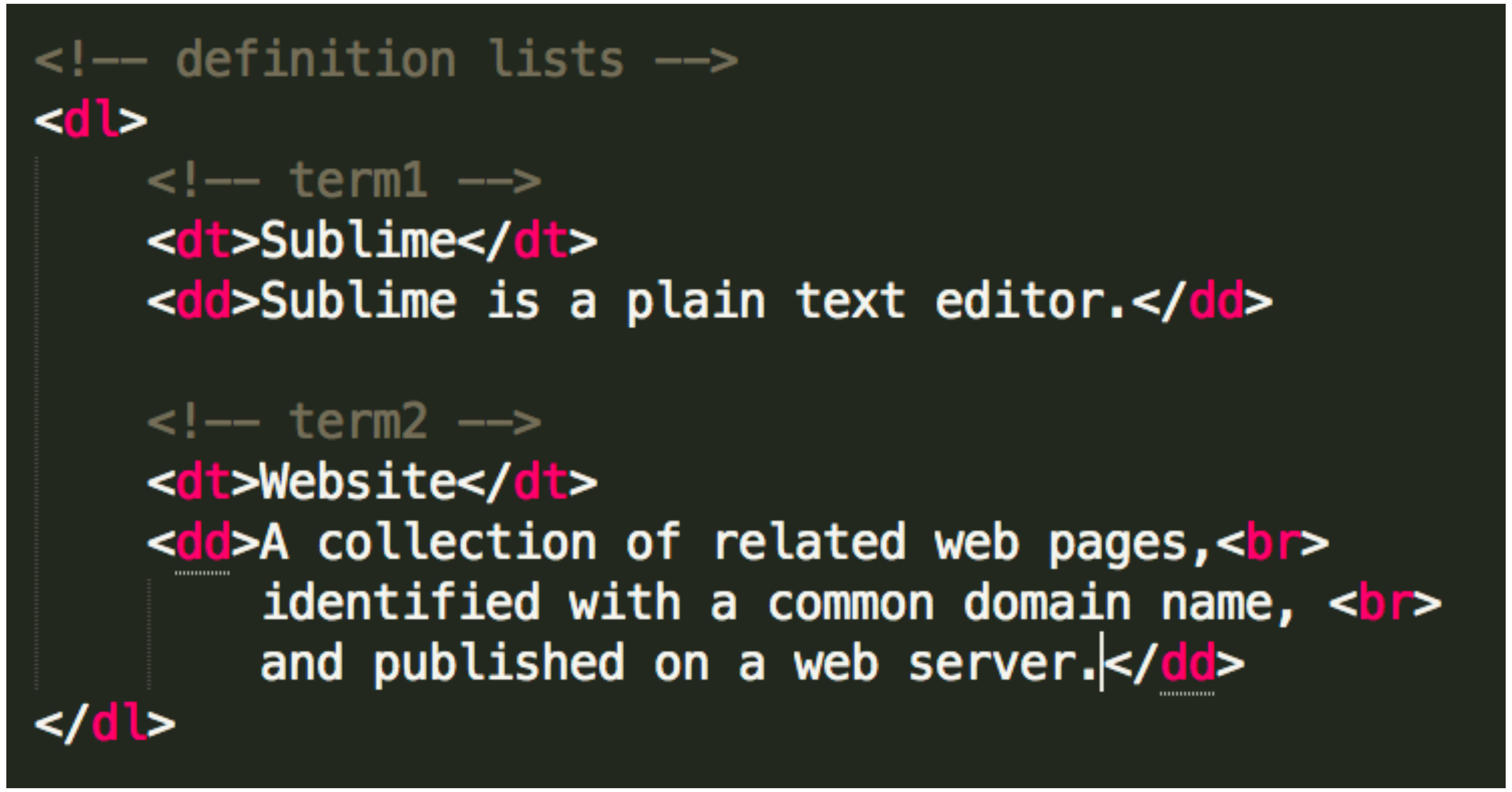
```
<!-- nested lists -->
<h1>Plan for a week</h1>
<ul>
    <li>Monday
        <ol>
            <li>Labor Day</li>
            <li>Day off</li>
        </ol>
    </li>
    <li>Tuesday
        <ol>
            <li>Catch up on emails</li>
            <li>Interviews</li>
        </ol>
    </li>
    <li>Wednesday
        <ol>
            <li>Finish prepare for class</li>
            <li>Class</li>
        </ol>
    </li>
```



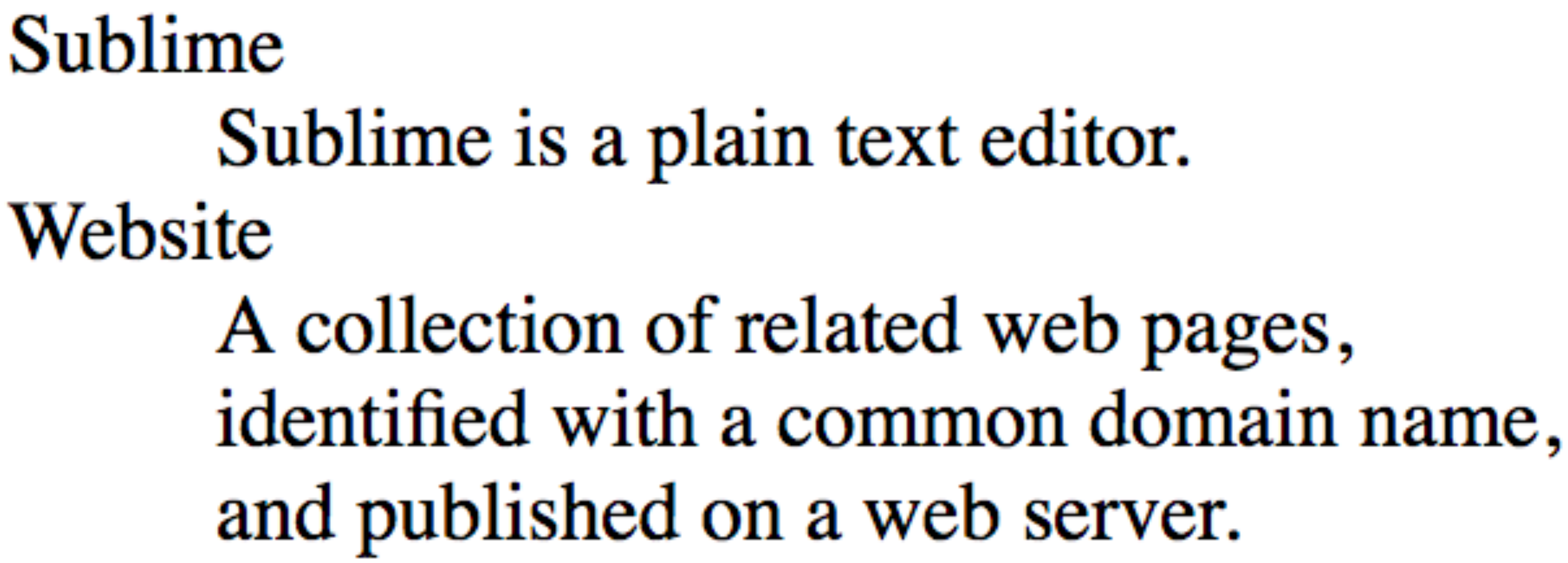
Plan for a week

- Monday
  1. Labor Day
  2. Day off
- Tuesday
  1. Catch up on emails
  2. Interviews
- Wednesday
  1. Finish prepare for class
  2. Class
- Thursday
  1. Another class
- Friday
  1. Finish emails
  2. Long weekend to start!

Definition lists = terms & definitions



```
<!-- definition lists -->
<dl>
    <!-- term1 -->
    <dt>Sublime</dt>
    <dd>Sublime is a plain text editor.</dd>

    <!-- term2 -->
    <dt>Website</dt>
    <dd>A collection of related web pages,<br>
        identified with a common domain name, <br>
        and published on a web server.</dd>
</dl>
```



```
Sublime
        Sublime is a plain text editor.
Website
        A collection of related web pages,
        identified with a common domain name,
        and published on a web server.
```

HTML Lists Summary

FROM JOHN DUCKET “HTML AND CSS”

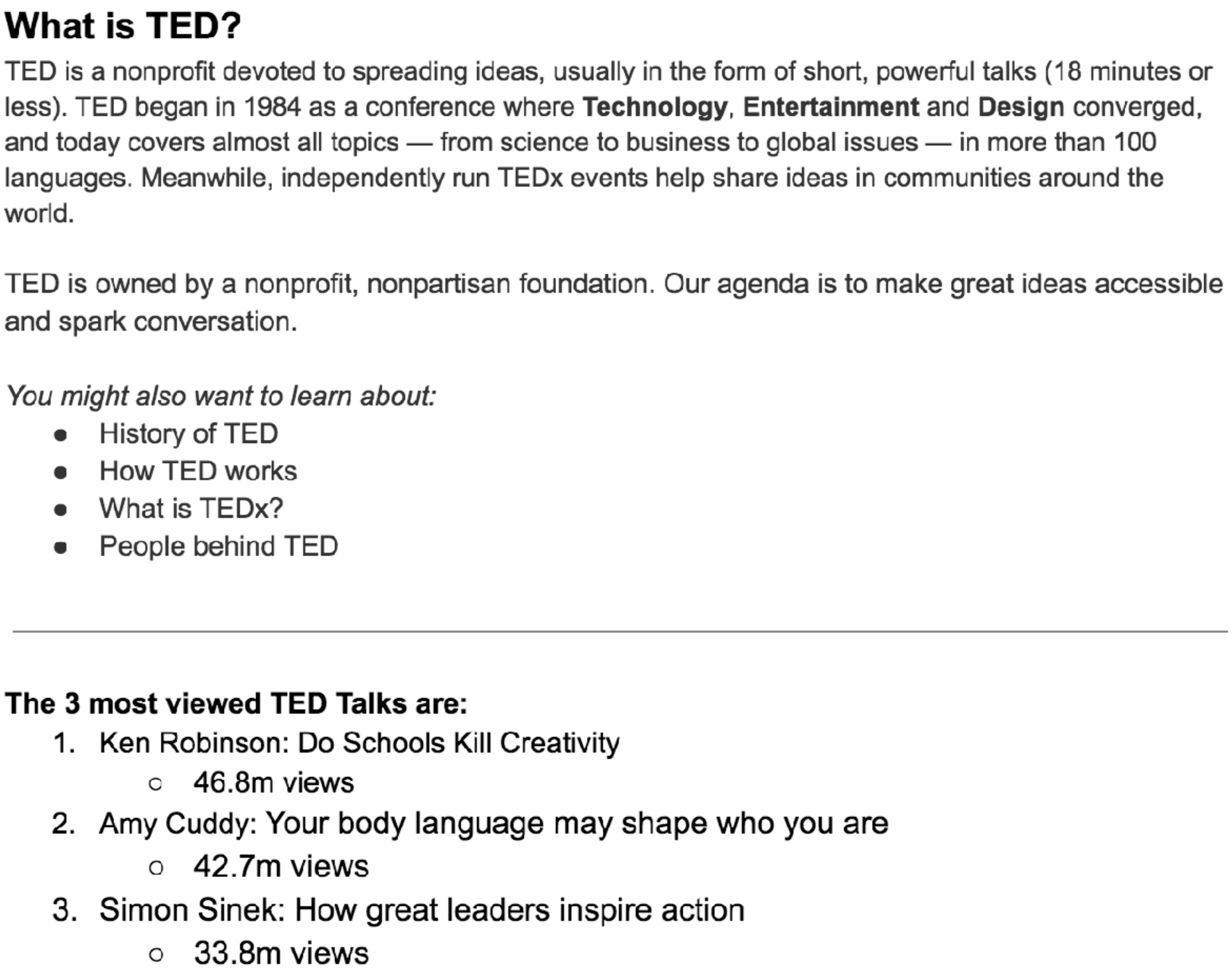
- There are three types of HTML lists: ordered, unordered, and definition
- Ordered lists use numbers
- Unordered lists use bullets
- Definition lists are used to define terminology
- Lists can be nested inside one another

Exercise

HTML = Structure

- Exercise to recreate structure from a Word document to HTML page
- Use tags: h1-6, p, ul, ol, b, i, br, hr
- 15min

TEXT FROM TED.COM



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   - 46.8m views
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   - 42.7m views
3. Simon Sinek: How great leaders inspire action
   - 33.8m views

Student presentations

For next class

Homework for Thursday class

1. Finish exercise
2. Review the slides
3. Sign up for Monday’s web review presentation