

# 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:

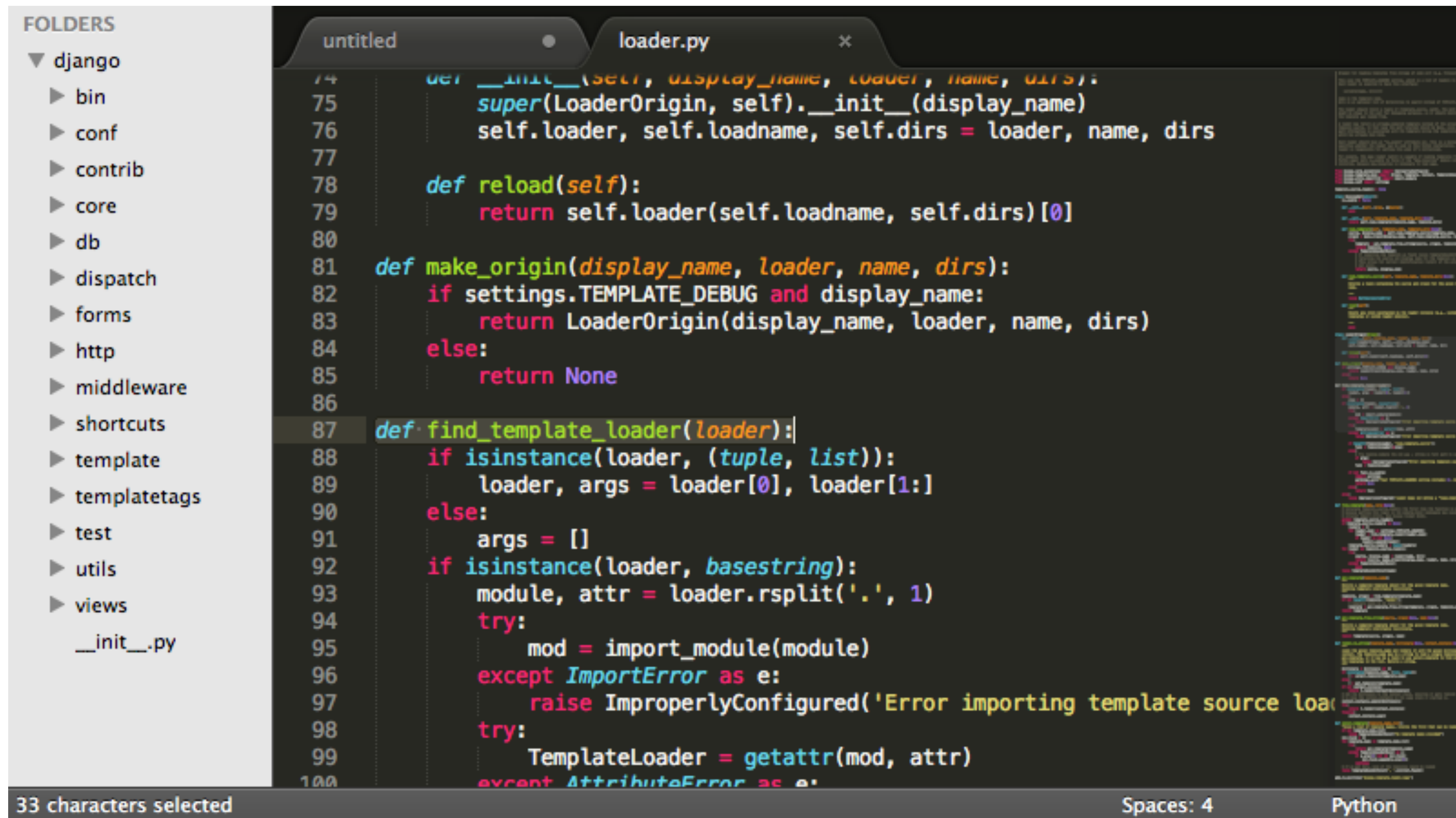
<http://bit.ly/2x8xhC2>

# Questions

**Long Live The Web**

# Intro to Sublime

# Download Sublime here



The screenshot shows the Sublime Text editor interface. On the left, a sidebar displays the 'FOLDERS' section with a tree view of a Django project structure. The main editor area shows a file named 'loader.py' with Python code. The code includes methods for initializing a loader, reloading, and finding template loaders. The status bar at the bottom indicates '33 characters selected', 'Spaces: 4', and 'Python'.

```
74 def __init__(self, display_name, loader, name, dirs):
75     super(LoaderOrigin, self).__init__(display_name)
76     self.loader, self.loadname, self.dirs = loader, name, dirs
77
78     def reload(self):
79         return self.loader(self.loadname, self.dirs)[0]
80
81 def make_origin(display_name, loader, name, dirs):
82     if settings.TEMPLATE_DEBUG and display_name:
83         return LoaderOrigin(display_name, loader, name, dirs)
84     else:
85         return None
86
87 def find_template_loader(loader):
88     if isinstance(loader, (tuple, list)):
89         loader, args = loader[0], loader[1:]
90     else:
91         args = []
92     if isinstance(loader, basestring):
93         module, attr = loader.rsplit('.', 1)
94         try:
95             mod = import_module(module)
96         except ImportError as e:
97             raise ImproperlyConfigured('Error importing template source load
98         try:
99             TemplateLoader = getattr(mod, attr)
100     except AttributeError as e:
```

33 characters selected Spaces: 4 Python



# 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>

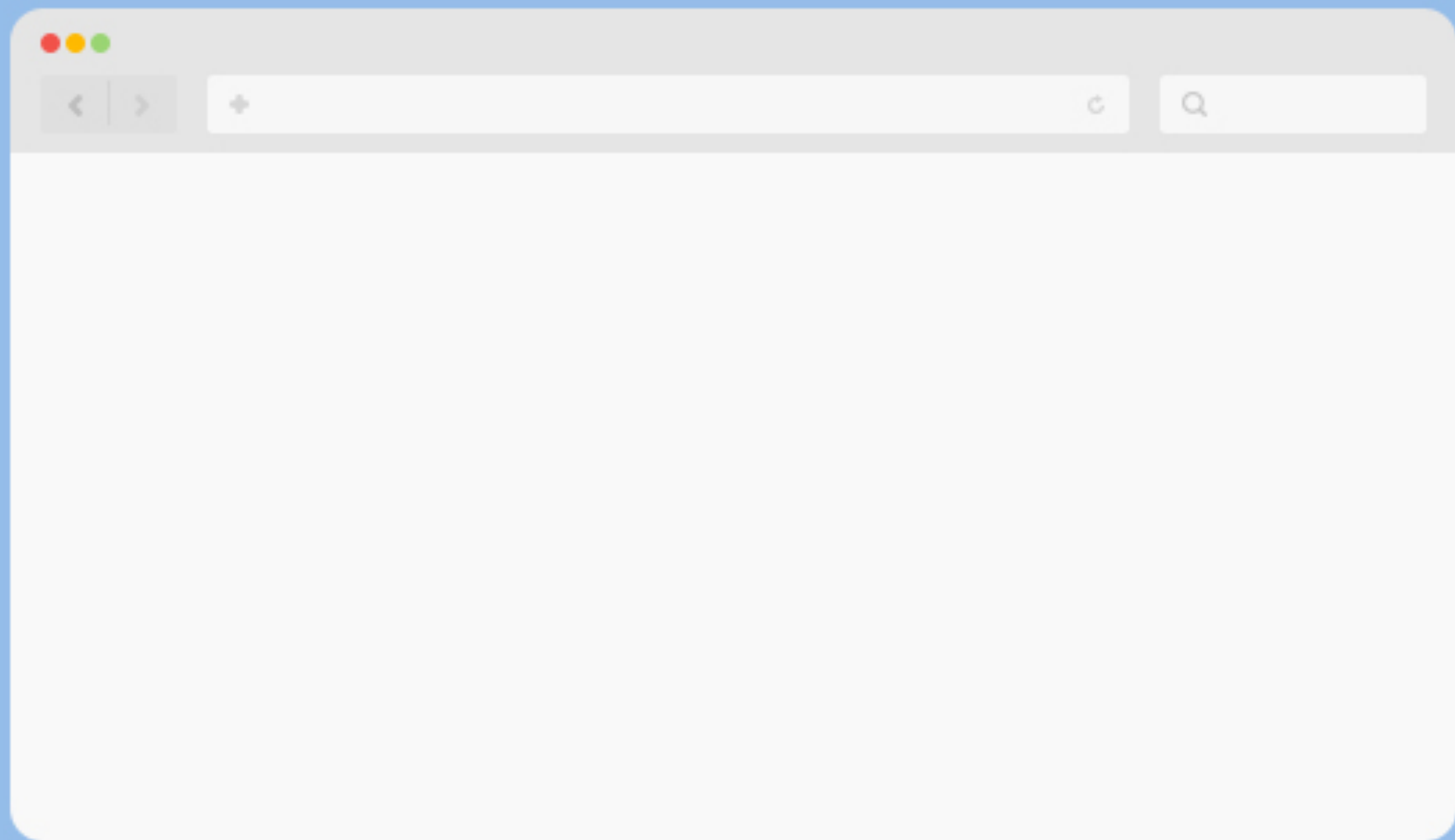
</html>
```

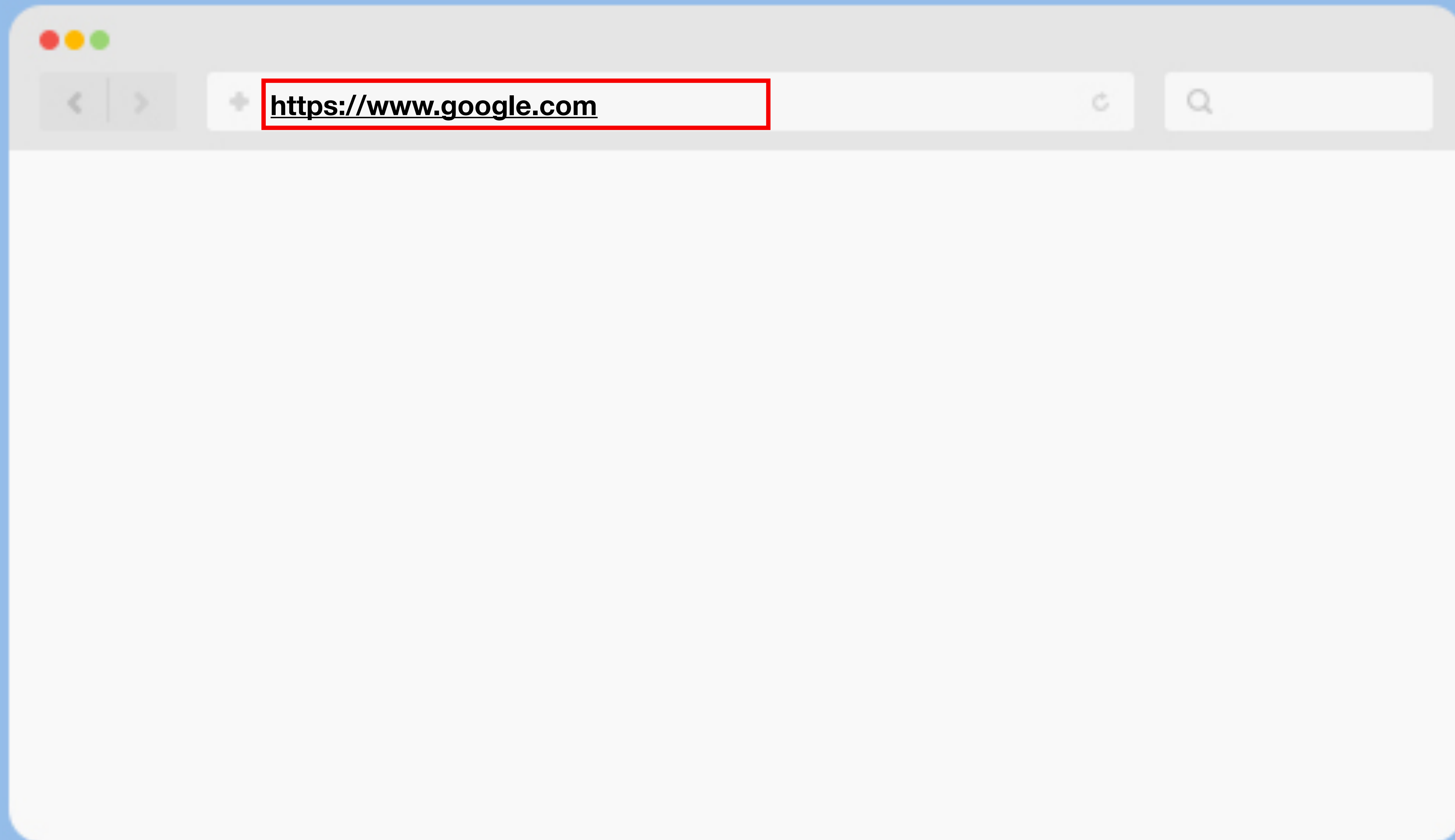
# Starting project in Sublime

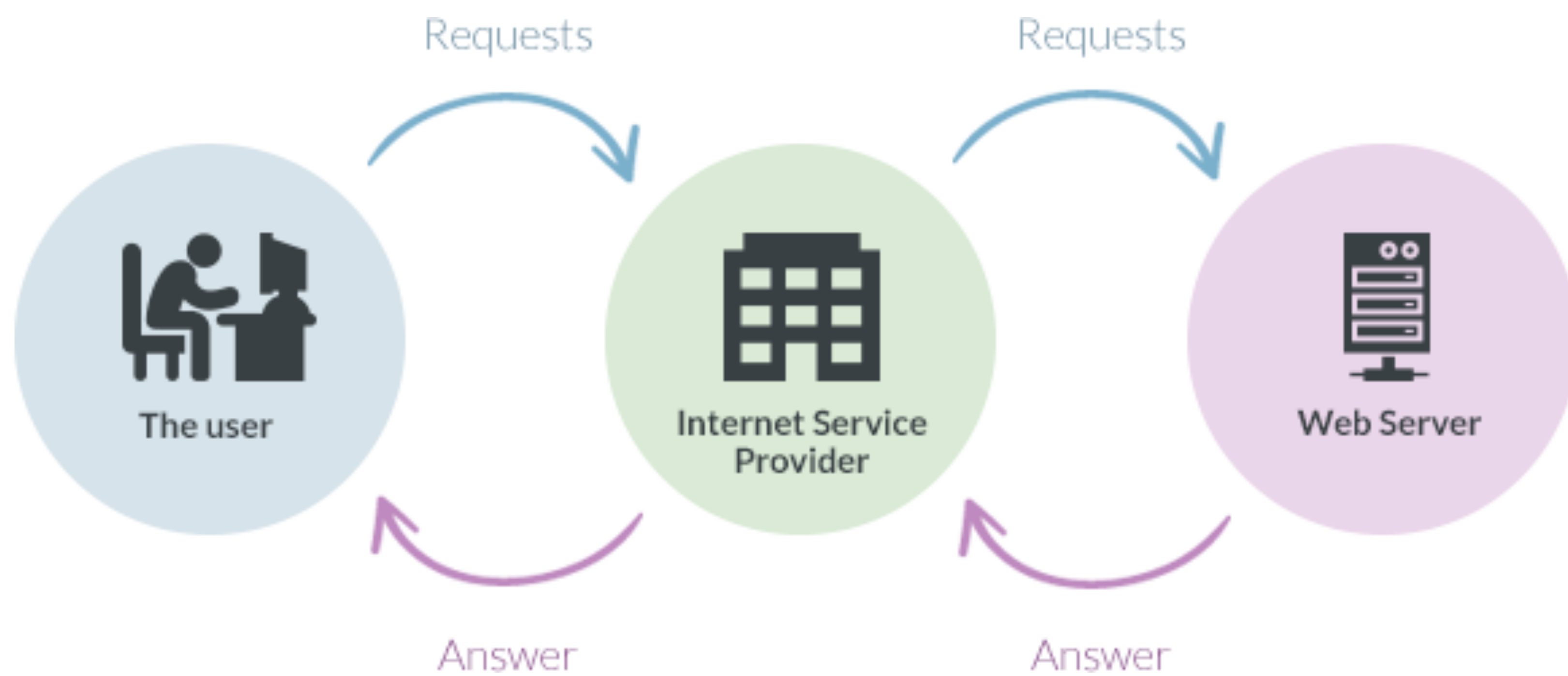
1. Option 1: Create a new index.html by going **File > New** and then saving that file as index.html
2. Option 2: If you're working from an example, download the folder. Then in Sublime, go to **File > Open** and work from there.

# 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







**HTML**



**CSS**



**JS**





# Web Page

```
graph TD; WP[Web Page] --- HTML[HTML]; WP --- CSS[CSS]; WP --- JS[JavaScript]; HTML --- HTML_Sub[Content & Structure]; CSS --- CSS_Sub[Presentation]; JS --- JS_Sub[Behavior]; HTML_Sub --- HTML_Examples[Headings, Paragraphs, Lists]; CSS_Sub --- CSS_Examples[Font, Color, Background color, Border]; JS_Sub --- JS_Examples[dynamic display, widgets, user interaction, click to open a popup];
```

## HTML

### Content & Structure

Headings,  
Paragraphs  
Lists

## CSS

### Presentation

Font  
Color  
Background color  
Border

## JavaScript

### Behavior

dynamic display  
widgets  
user interaction  
click to open a popup

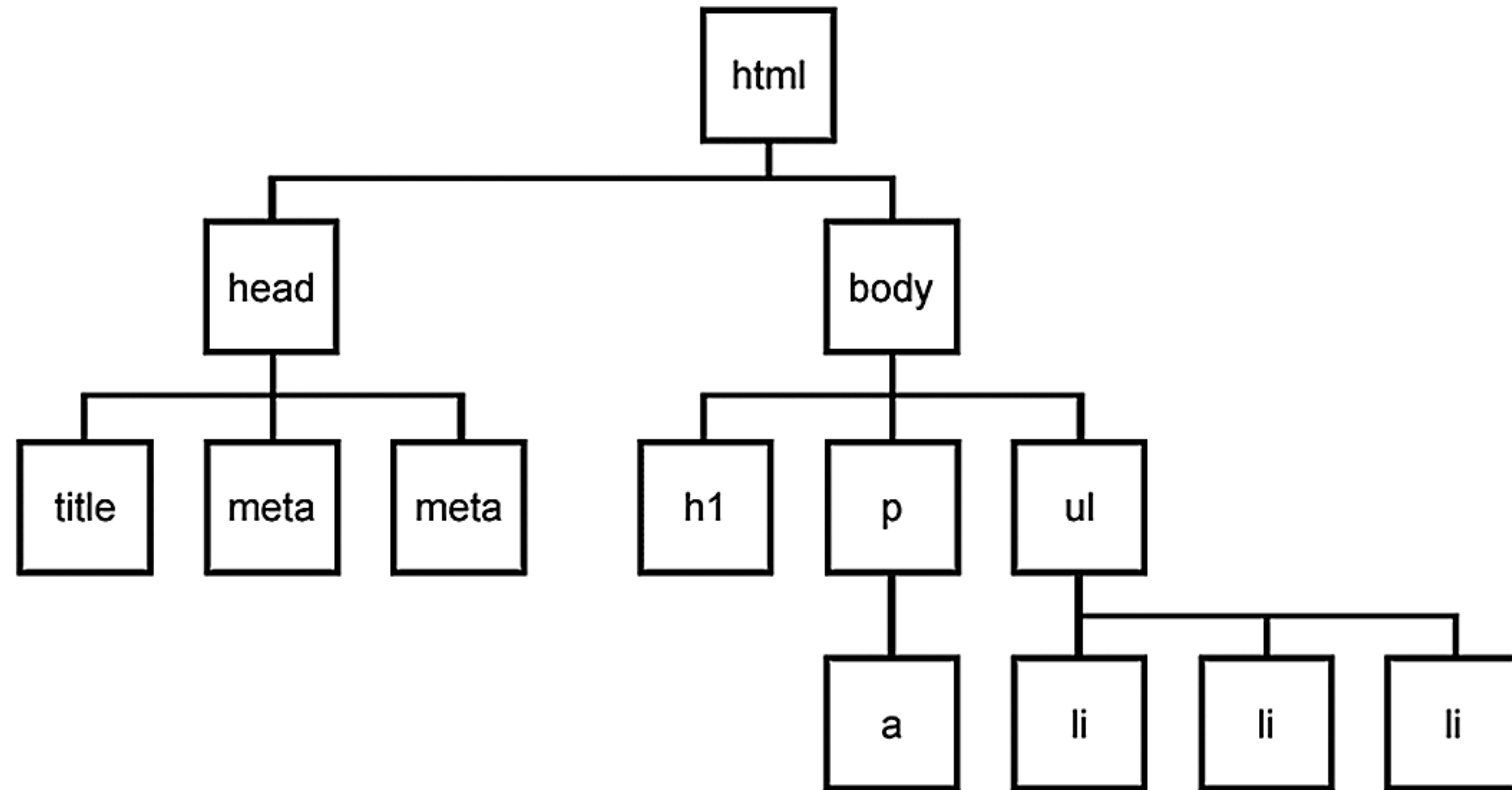
# Intro to HTML

# What is HTML?

**HTML** is “Hypertext Markup Language”

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





# HTML Structure

**HTML uses elements  
to describe the  
structure of pages**

# HTML Elements / Tags, Attributes, Content

- Elements and tags used interchangeably



# 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** `</>`!

index.html



```
1  <!doctype html>
2  <html>
3      <head>
4          <title>First html exercise</title>
5          <!-- all information about the site -->
6      </head>
7      <body>
8          <!-- content and structure of a site -->
9      </body>
10 </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

```
<!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

```
<!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 WEBBBBBB </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

```
<!-- 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-->


<!--Or with size specs -->

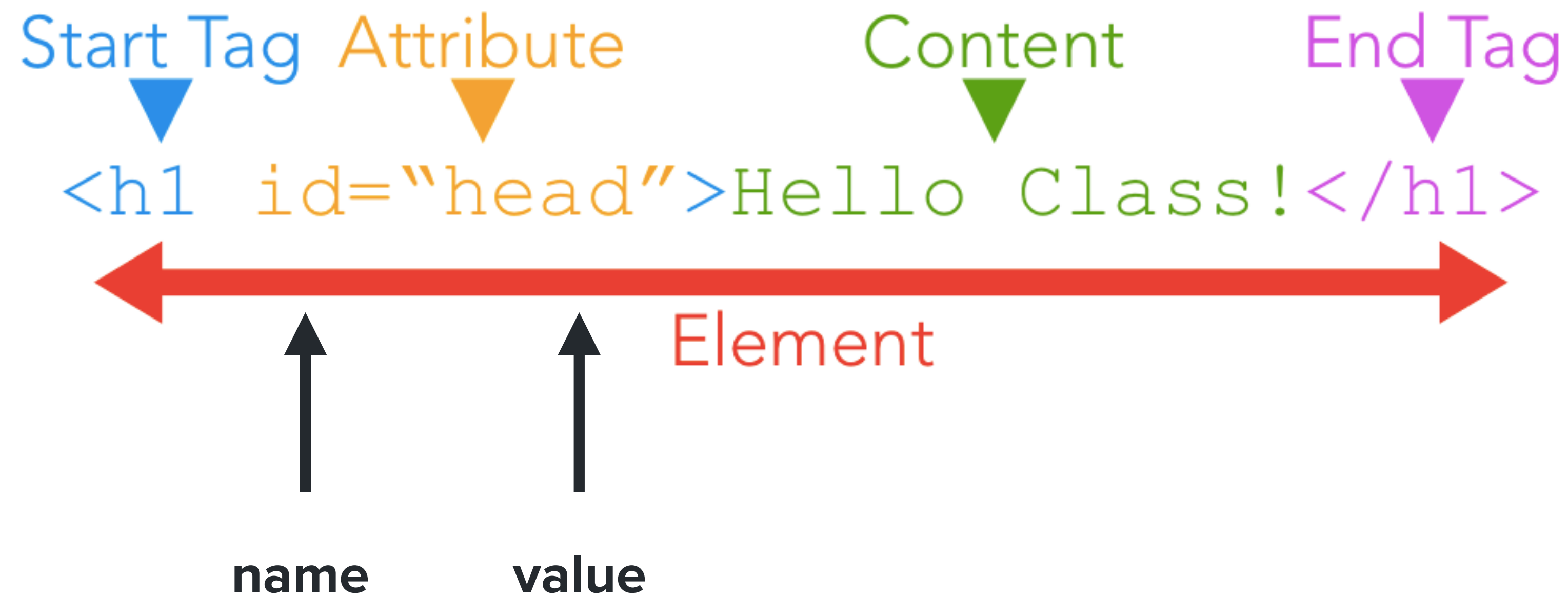

<!--Image from another site-->

```

|

# 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](#).



# 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>
```



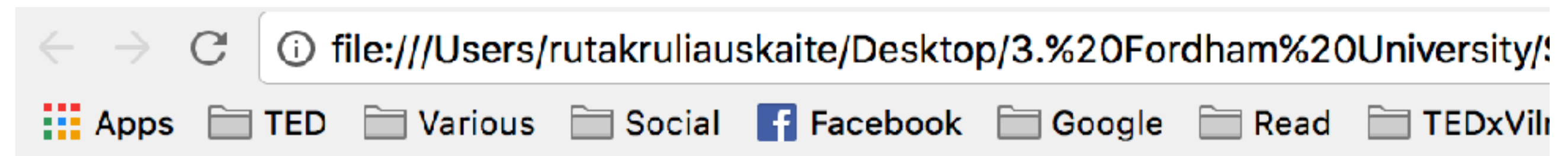
I am coding my first website! I wonder how my paragraph will look in a browser?

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>
```



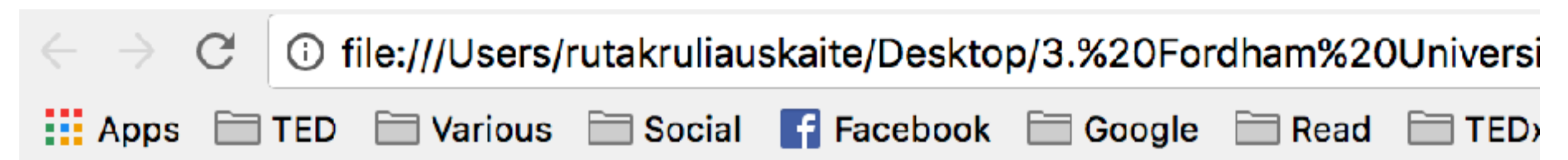
I am coding my **first website**! I wonder how my paragraph will look in a browser?

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>
```



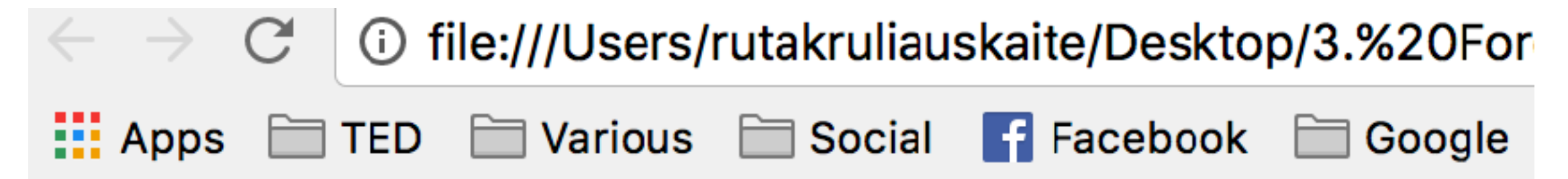
I am coding my *first website*! I wonder how my paragraph will look in a browser?

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?

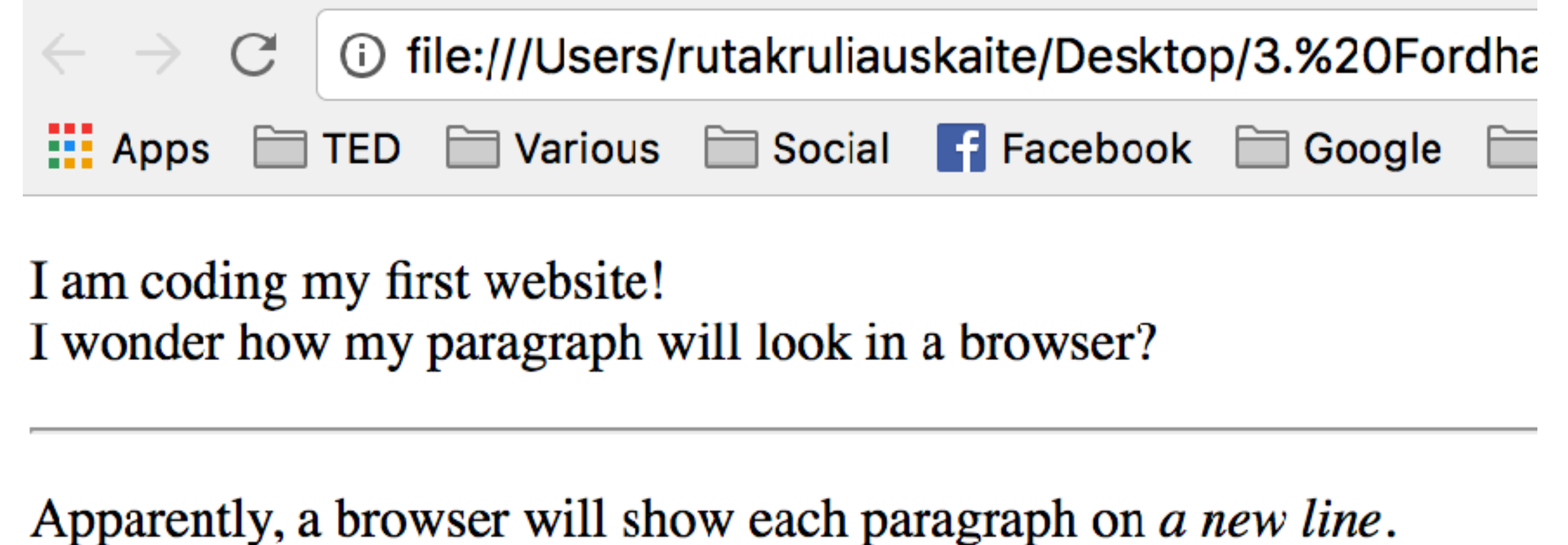
Apparently, a browser will show each paragraph on *a new line*.



# 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>
```



<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

```
<!-- 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>
  <li>Thursday
    <ol>
      <li>Another class</li>
    </ol>
  </li>
  <li>Friday
    <ol>
      <li>Finish emails</li>
      <li>Long weekend to start!</li>
    </ol>
  </li>
</ul>
```

## 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

## What is TED?

TED is a nonprofit devoted to spreading ideas, usually in the form of short, powerful talks (18 minutes or less). TED began in 1984 as a conference where **Technology**, **Entertainment** and **Design** converged, and today covers almost all topics — from science to business to global issues — in more than 100 languages. Meanwhile, independently run TEDx events help share ideas in communities around the world.

TED is owned by a nonprofit, nonpartisan foundation. Our agenda is to make great ideas accessible and spark conversation.

*You might also want to learn about:*

- History of TED
- How TED works
- What is TEDx?
- People behind TED

---

## The 3 most viewed TED Talks are:

1. Ken Robinson: Do Schools Kill Creativity
  - 46.8m views
2. Amy Cuddy: Your body language may shape who you are
  - 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