Creating Web Pages: Lesson 3

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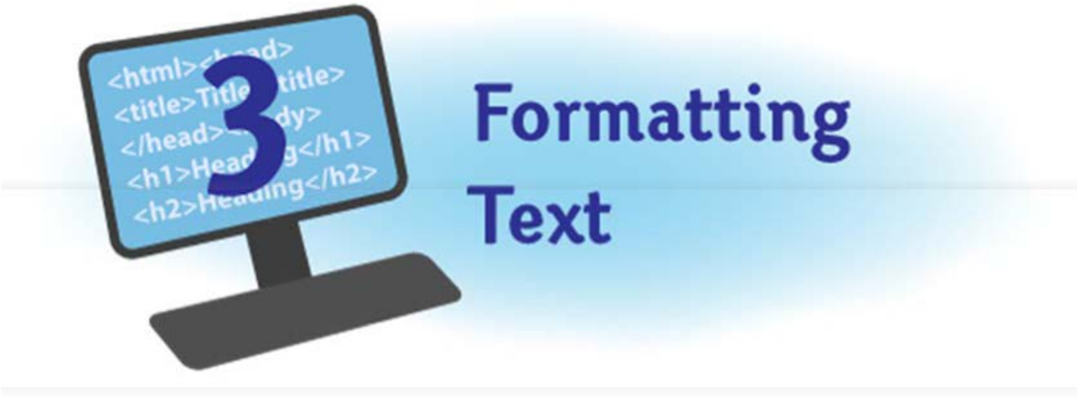
Chapter 1



Introduction

Welcome back! Today, we're going to build on what you learned in the first two lessons by addressing some more advanced skills for marking up text. The tags you learn about today will help you format your text like a pro, and you'll also be able to use them to add links to other pages.

As in previous lessons, I'll use TextEdit and Notepad as our working example editors. But feel free to use another program if you're comfortable with it.

If you're ready to start expanding your creative arsenal, come on over to Chapter 2 and let's get started!

Chapter 2

Start a New Page

In this lesson, we're going to start a new page for our website. We'll create a simple (and somewhat imaginary) recipe page. I realize that you may not want to publish recipes on the Web, but this is just a working example that'll provide a good vehicle for headings, lists, special characters, and links—which can apply to almost any kind of Web page. Let's start by creating a new page with a little content and all of the required tags.

1. Open your editor (TextEdit on a Mac, Notepad in Windows).

2. Type in all of the code and content shown in the image below:

```
<html>
<head>
<title>My Favorite Recipe</title>
</head>
<body>

<h1>Hot Dogs</h1>
<p>Here is my unique gourmet hot dog recipe.</p>

</body>
</html>
```

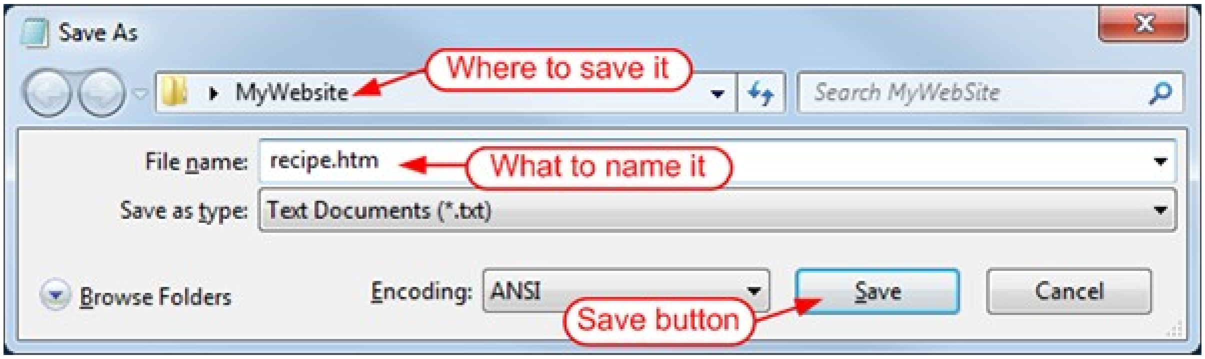
Tags and a little content for a new page

Note

I colored the content red and the tags black above, just to keep them separated visually. I'll do that a lot in this course. But remember, you can't, and don't need to, make anything red in your editor. You just need to type everything correctly in one color.

3. Save the page by choosing **File > Save**, or by using the CTRL + S or COMMAND + S shortcut. You can also close your editor and choose **Save** when asked about saving your work.

4. Put the file in your MyWebsite folder, and name it *recipe.htm*. The images below provide examples of how the Save As box might look, depending on whether you're using Windows or a Mac. Don't forget to click the **Save** button after specifying your file's location and name.

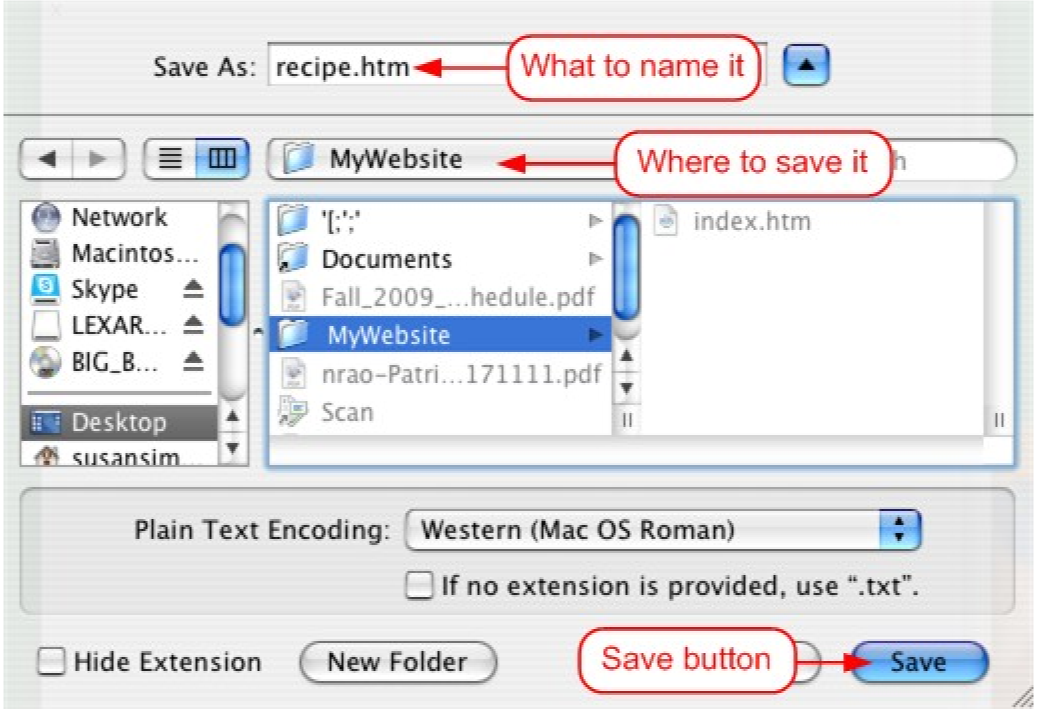


File name: recipe.htm

Save as type: Text Documents (*.txt)

Encoding: ANSI

Save recipe.htm in your MyWebsite folder (Windows)



Save As: recipe.htm

What to name it

Where to save it

Save button

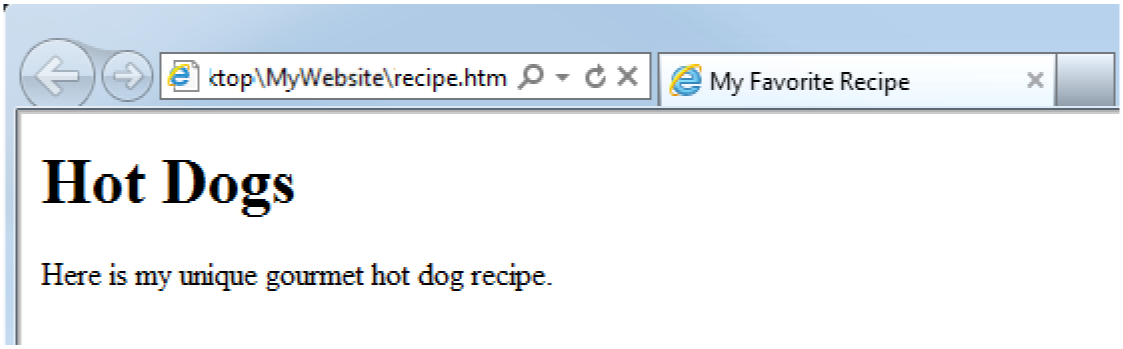
Plain Text Encoding: Western (Mac OS Roman)

□ If no extension is provided, use ".txt".

□ Hide Extension

Save recipe.htm in your MyWebsite folder (Mac)

To view the page in a browser, just open your MyWebsite folder and double-click the **recipe.htm** icon. The exact appearance depends on your browser. Basically, the title (My Favorite Recipe) appears somewhere in the browser window, the h1 heading (Hot Dogs) is larger text in the page, and the paragraph is more normal-sized text.



ktop\MyWebsite\recipe.htm

My Favorite Recipe

Hot Dogs

Here is my unique gourmet hot dog recipe.

Recipe.htm page in a Web browser

If your page looks a lot different from the one above, you may have typographical errors in your code. You may want to fix those before moving on. Otherwise, if you're ready to go, let's talk about headings.

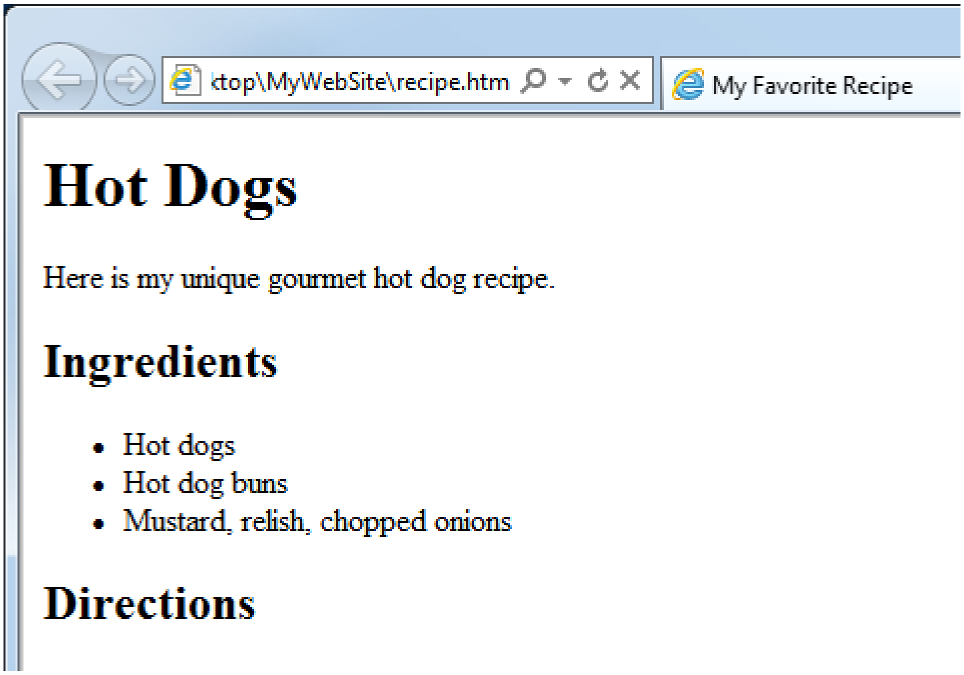
Headings

A heading is a short line of text that can act as a title to a website, book, magazine, or newspaper story—or a section within any of those. You've seen thousands of them, even if you've never paid much attention. The purpose of a heading is to let you know what the article story or section you're about to read is about.

You've already learned about level-1 headings, defined by <h1>…</h1> tags. A level-1 heading is the main title or headline at the top of a Web page or other document. HTML offers six levels of headings, and each uses similar tags as indicated below:

```
<h1>…</h1>

<h2>…</h2>

<h3>…</h3>

<h4>…</h4>

<h5>…</h5>

<h6>…</h6>
```

As with everything else in HTML, you type the heading text that you want to show between the opening and closing tag. Each heading level shows text in a slightly smaller size than the level above it, as illustrated here:



Hot Dogs

Here is my unique gourmet hot dog recipe.

Ingredients

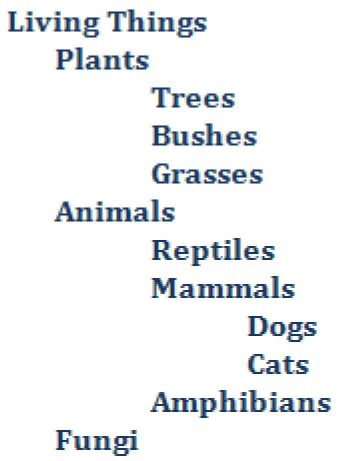
- Hot dogs
- Hot dog buns
- Mustard, relish, chopped onions

Directions

Text size for different headings

Many beginning Web developers look at that and think heading tags must exist to control the size of text. But that's not true at all. We use HTML to define what an element *is*, not how it *looks*. As you'll learn later, you use CSS (another language) to control how things look.

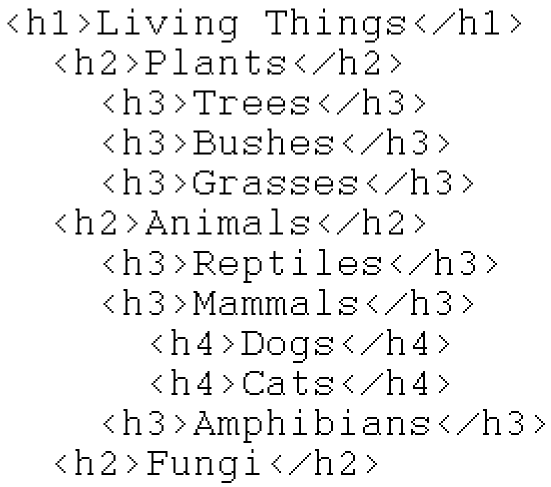
What an element *is*, in terms of headings, relates to its outline level. To really understand that, you may need to think back to high school or college when you were encouraged to create an outline before writing a paper. The purpose of the outline was to organize the paper in advance, to make it easier to write and easier for readers to understand. The outline was all about organizing topics and subtopics within topics, perhaps something like this:



- Living Things
  - Plants
    - Trees
    - Bushes
    - Grasses
  - Animals
    - Reptiles
    - Mammals
      - Dogs
      - Cats
    - Amphibians
  - Fungi

Outline of topics

Assuming that in your outline, each name is actually a section heading for your paper, you'd mark up the headings to reflect the outline level:



```
<h1>Living Things</h1>
  <h2>Plants</h2>
    <h3>Trees</h3>
    <h3>Bushes</h3>
    <h3>Grasses</h3>
  <h2>Animals</h2>
    <h3>Reptiles</h3>
    <h3>Mammals</h3>
      <h4>Dogs</h4>
      <h4>Cats</h4>
    <h3>Amphibians</h3>
  <h2>Fungi</h2>
```

Proper use of heading tags

In other words, h1 is the main title, and any subtitles would be h2 headings. If an h2 heading needs to be divided into two or more subtopics, their headings would be h3 titles. If an h3-level heading needs to be divided into two or more subtopics, those would be titled as h4 headings, and so forth down the line.

Of course, there'd be paragraphs of text in between each heading in the final paper. The headings just indicate the organization, not all of the content on the page. But the point is that we use heading tags to reflect that organization, not to just assign numbers to headings in sequence or to control the size of text.

Now you and I both know that most Web pages look nothing like term papers. Most websites contain more pictures than text, and they don't need a lot of headings and subheadings. So in real life, you probably won't be creating outlines or using many levels of headings in your text. But still, it's good to have a firm understanding of what the tags are and why they're in HTML. And the proper use of heading tags applies even if you have only one or two levels of headings.

The sample recipe.htm page we're creating here isn't long enough to need a whole lot of headings or subheadings. In fact, if we were to bother creating an outline for such a short page, we'd just have a couple of section headings under the main title like this:

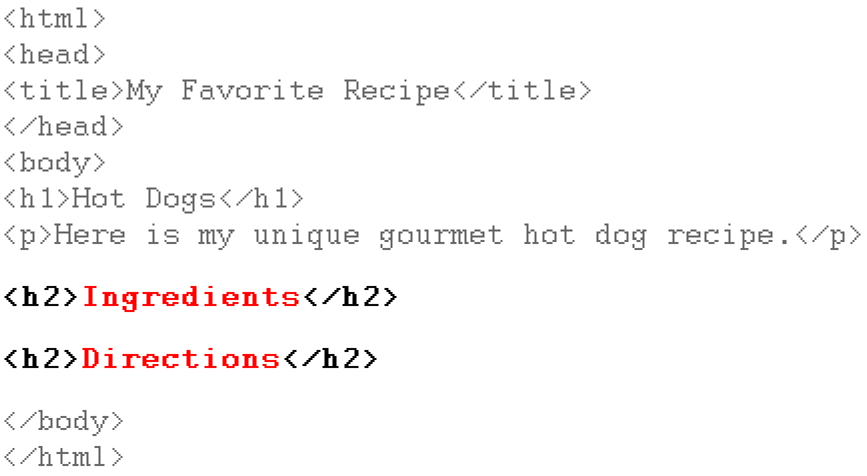
Hot Dogs
  Ingredients
  Directions

The first (main) title should always be an h1 heading. So under that, we'll just need two h2 headings. Again, this has nothing to do with how the headings *look* on the page. Rather, it's about telling the user agent that each is a subheading under the main heading, so a screen reader for the blind can better present the information to its user, search engine indexers can better organize the information, and so forth.

In our recipe page, we already put in the h1 heading. So now you just have to add the h2 headings. We'll put them under the first paragraph. You'll add some text under each heading a little later in this lesson. But for now, let's just get those two level-2 headings in place. Here are the steps:

1. If you still have recipe.htm open in an editor, switch to that window now. Otherwise, open recipe.htm in your editor. (If you've forgotten how to do that, no worries! See Lesson 2, Chapter 3.)

2. Under the first paragraph, type *<h2>Ingredients</h2>*, press ENTER a couple of times, and then type *<h2>Directions</h2>.* The image below shows the proper location for the new tags against the dimmed code and content you typed earlier.



```
<html>
<head>
<title>My Favorite Recipe</title>
</head>
<body>
<h1>Hot Dogs</h1>
<p>Here is my unique gourmet hot dog recipe.</p>

<h2>Ingredients</h2>

<h2>Directions</h2>

</body>
</html>
```

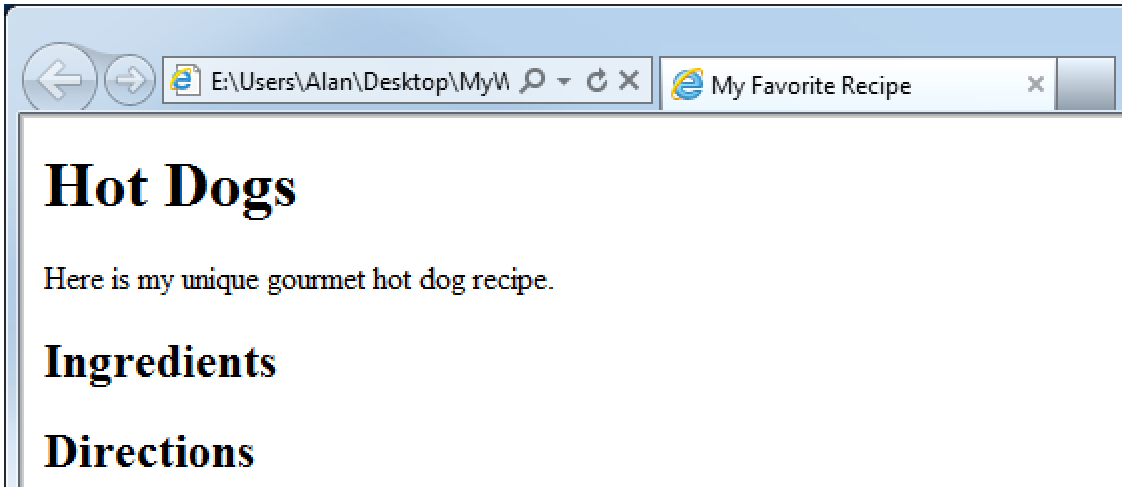
Two level-two headings added to recipe.htm

Double-check to make sure you typed everything correctly. Remember, there's really no margin for error when typing code. So you have to be careful when you type. Now, let's see how it looks in a Web browser.

3. Save the page (choose **File > Save**, or press CTRL + S or COMMAND + S, or close your editor and choose **Yes** or **Save** when asked if you want to save).

4. View the page in a Web browser (Refresh or Reload in the browser if the page is already open there, or double-click **recipe.htm** in your MyWebsite folder).

If you didn't make any mistakes, you now have two subheadings under the first paragraph of text in your page, as in the image below.



Hot Dogs

Here is my unique gourmet hot dog recipe.

Ingredients

Directions

Level-two headings in the Web browser

We need a little content under each heading. But paragraphs might not be the ideal element type for that. Lists might be better. Meet me in Chapter 3, and I'll show you how to create lists in your pages!

Chapter 3

Creating Lists

In this chapter, you'll learn about lists and special characters. Lists are common in Web pages and print alike. You've probably seen thousands of them. They come in two basic varieties: the *unordered list* and the *ordered list*.

An unordered list works best when listing a set of facts (or ingredients) where the order doesn't matter. This style of list is sometimes called a *bulleted list*, because each item in the list starts with a small circle called a bullet. Here's an example:

- Great luxury at an affordable price

- Better gas mileage than most cars

- Highest resale value in its class

We use an ordered list when the order of the items in the list matters. This type of list is sometimes called a *numbered list*, because each item in the list starts with a sequential number. This type of list is used for step-by-step instructions, as in this example:

1. Put the key in ignition, and turn the key to start the motor.

2. Release the hand brake, and press the brake pedal on the floor.

3. Switch the gearshift lever to D (Drive).

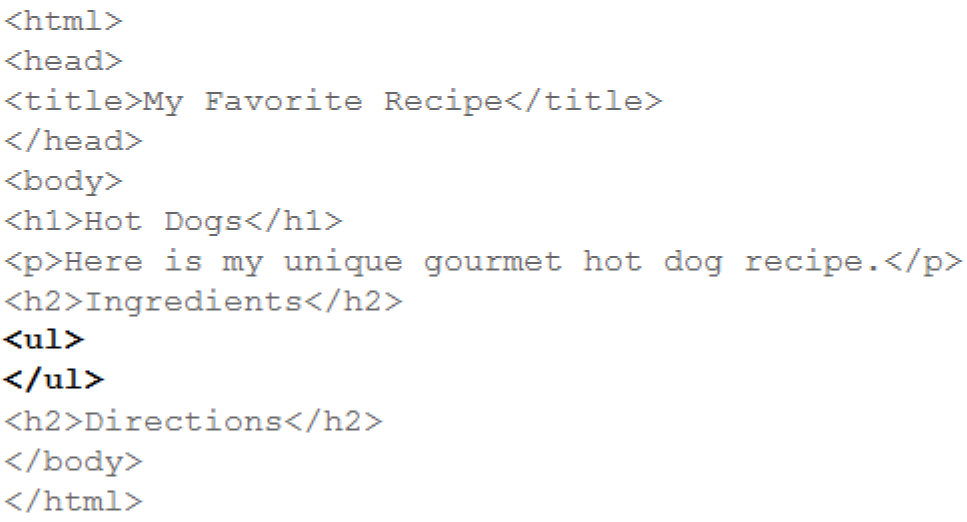
Both types of lists are so common that HTML has tags for them. We use <ul>…</ul> tags to define an unordered list. And we use <ol>…</ol> tags to define an ordered list. Regardless of which type of list you're creating, you use <li>…</li> tags to define each list item.

Notice that the tags indicate the type of element each creates. Use *ul* for an *u*nordered *l*ist, *ol* for an *o*rdered *l*ist, and *li* for each *l*ist *i*tem within either type of list. Now let's get to the specifics!

Create an Unordered List

Let's suppose we want to put an unordered list of ingredients under the Ingredients heading in recipe.htm. The first step, of course, is to open recipe.htm in an editor so you can make changes. Then, click where you want to start typing (just below the <h2>Ingredients</h2> heading). If there isn't a blank line under that heading, click at the end of the <h2>Ingredients</h2> line, and press ENTER to get the cursor under that heading.

To create the list, I suggest that you first type both the opening and closing ul tags, and put each on its own line. Technically, you're not required to type both the opening and closing tags at the same time. However, typing both right away is a good habit to get into, because one of the most common mistakes in HTML is forgetting to type the closing tag. If you type both tags right from the get-go, you won't have to worry about forgetting. So go ahead and type your <ul> and </ul> tags under the Ingredients heading now. Here's what this should look like (see the darker text in the image):



```
<html>
<head>
<title>My Favorite Recipe</title>
</head>
<body>
<h1>Hot Dogs</h1>
<p>Here is my unique gourmet hot dog recipe.</p>
<h2>Ingredients</h2>
<ul>
</ul>
<h2>Directions</h2>
</body>
</html>
```

Tags for unordered list added to recipe.htm

The <ul> tag marks the beginning of a list, and the </ul> tag marks the end of a list. Right now, it's an empty list, because we haven't typed any *list items* yet. A list can contain any number of list items. But it can only contain list items. It can't contain headings, paragraphs, or any other type of element.

Each item in the list must start with a <li> (list item) tag, and end with a </li> tag. To keep things simple, we'll add three items to our list. Here are the steps:

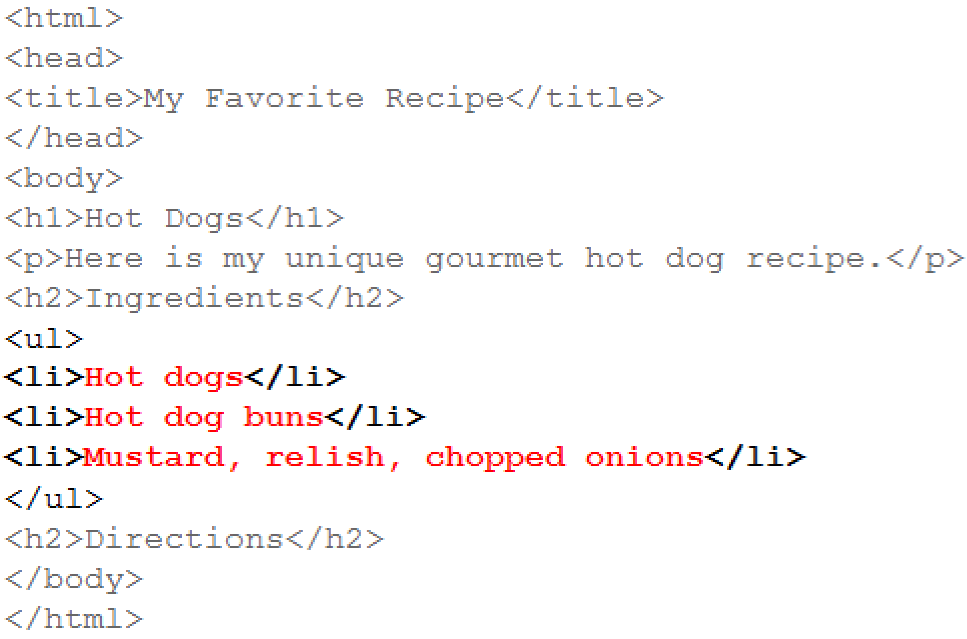
1. Click just past the opening <ul> tag, and press ENTER to start a new line under that tag.

2. Type *<li>Hot dogs</li>,* and press ENTER.

3. Type *<li>Hot dog buns</li>,* and press ENTER.

4. Type *<li>Mustard, relish, chopped onions</li>.*

5. Make sure you put all of the list items between the <ul> and </ul> tags, as shown below. Again, I made the text red and the code black to distinguish, but it will all be black when you type it.



```
<html>
<head>
<title>My Favorite Recipe</title>
</head>
<body>
<h1>Hot Dogs</h1>
<p>Here is my unique gourmet hot dog recipe.</p>
<h2>Ingredients</h2>
<ul>
<li>Hot dogs</li>
<li>Hot dog buns</li>
<li>Mustard, relish, chopped onions</li>
</ul>
<h2>Directions</h2>
</body>
</html>
```

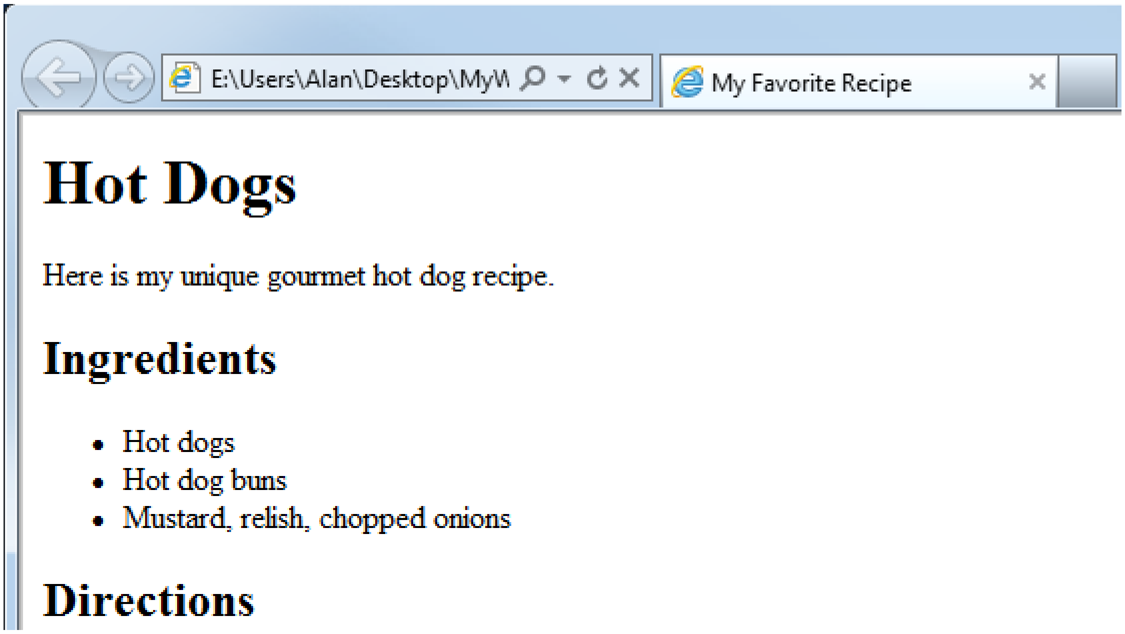
List items added to the unordered list

Let's have a peek in the browser:

6. Save the page.

7. Open it in a Web browser, or Reload/Refresh if the page is already visible in the browser.

If you typed everything correctly, you now have an unordered list of ingredients under your Ingredients heading, as in the image below. If yours looks a lot different, you probably mistyped a tag somewhere, or you might have put something in the wrong place. Try correcting it in your editor, and then save the page and view it in a browser again.



Hot Dogs

Here is my unique gourmet hot dog recipe.

Ingredients

- Hot dogs
- Hot dog buns
- Mustard, relish, chopped onions

Directions

Unordered list below the Ingredients heading

Looking at the rendered content in the page, and thinking back to the code you wrote, it all plays out like this:

- The <ul> tag marks the start of the unordered list. In the browser, the list has some blank space above it and is indented.
- An <li> tag marks the start of each item. In the browser, each item starts on a new line and has a bullet to its left.
- A </li> tag marks the end of each item in the list.
- The </ul> tag marks the end of the list. Text below the </ul> tag in the page no longer looks like list items.

Creating a Numbered List

The tags for an ordered (numbered) list are almost identical to those of an unordered list. The only difference is that the ordered list starts with <ol> and ends with </ol>. Let's add a numbered list to our recipe page. Here are the steps:

1. Open recipe.htm for editing, or switch to its window if it's already open.
2. Click to the right of the <h2>Directions</h2>, and press ENTER to put a new blank line under it.
3. Type both the <ol> and </ol> tags now (so you don't forget to type the closing tag later).
4. Put the cursor between the <ol> and </ol> tags.
5. Type *<li>Preheat grill to 350 degrees.</li>,* and press ENTER.

6. Type *<li>Place dogs on grill, roll occasionally for even cooking.</li>,* and press ENTER.

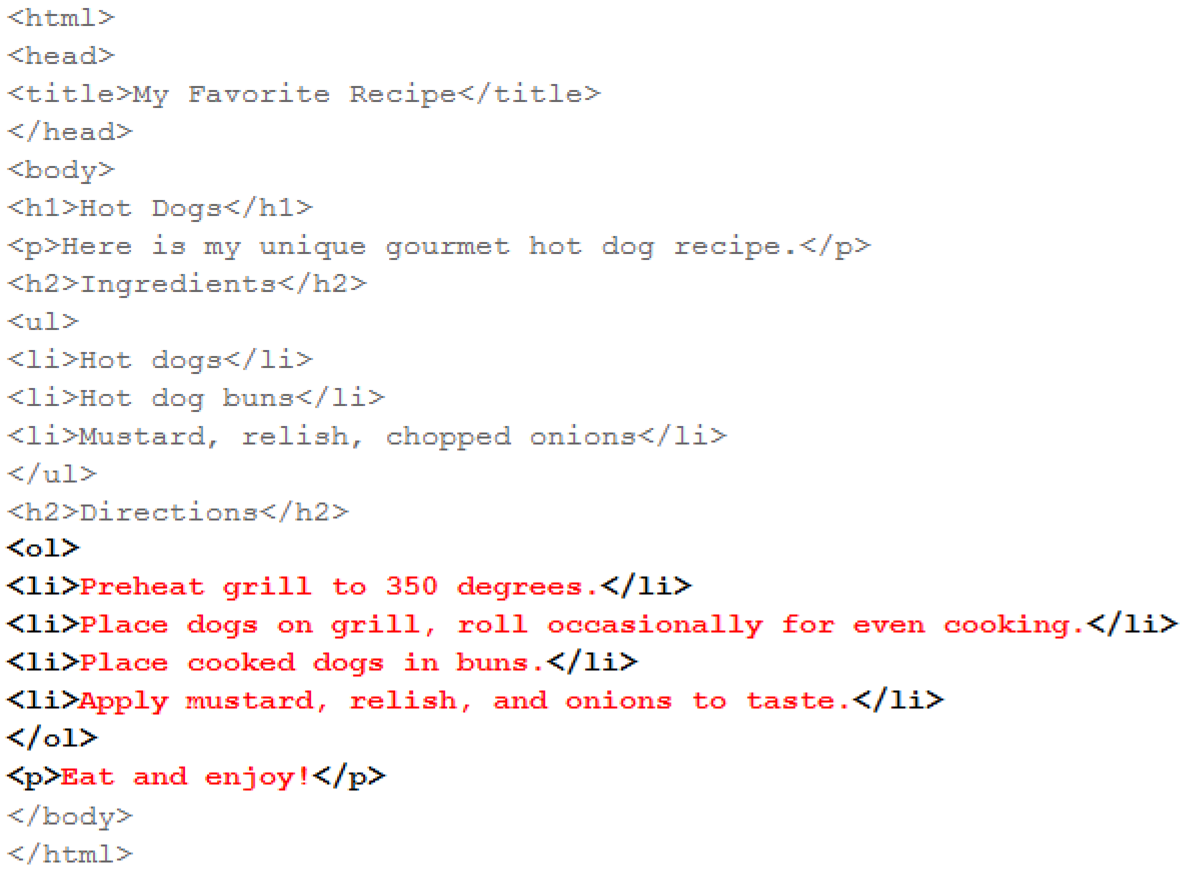
7. Type *<li>Place cooked dogs in buns.</li>,* and press ENTER.

8. Type *<li>Apply mustard, relish, and onions to taste.</li>,* and press ENTER.

9. Move the cursor down so it's just past the closing </ol> tag.

10. Press ENTER, and add the paragraph *<p>Eat and enjoy!</p>*.

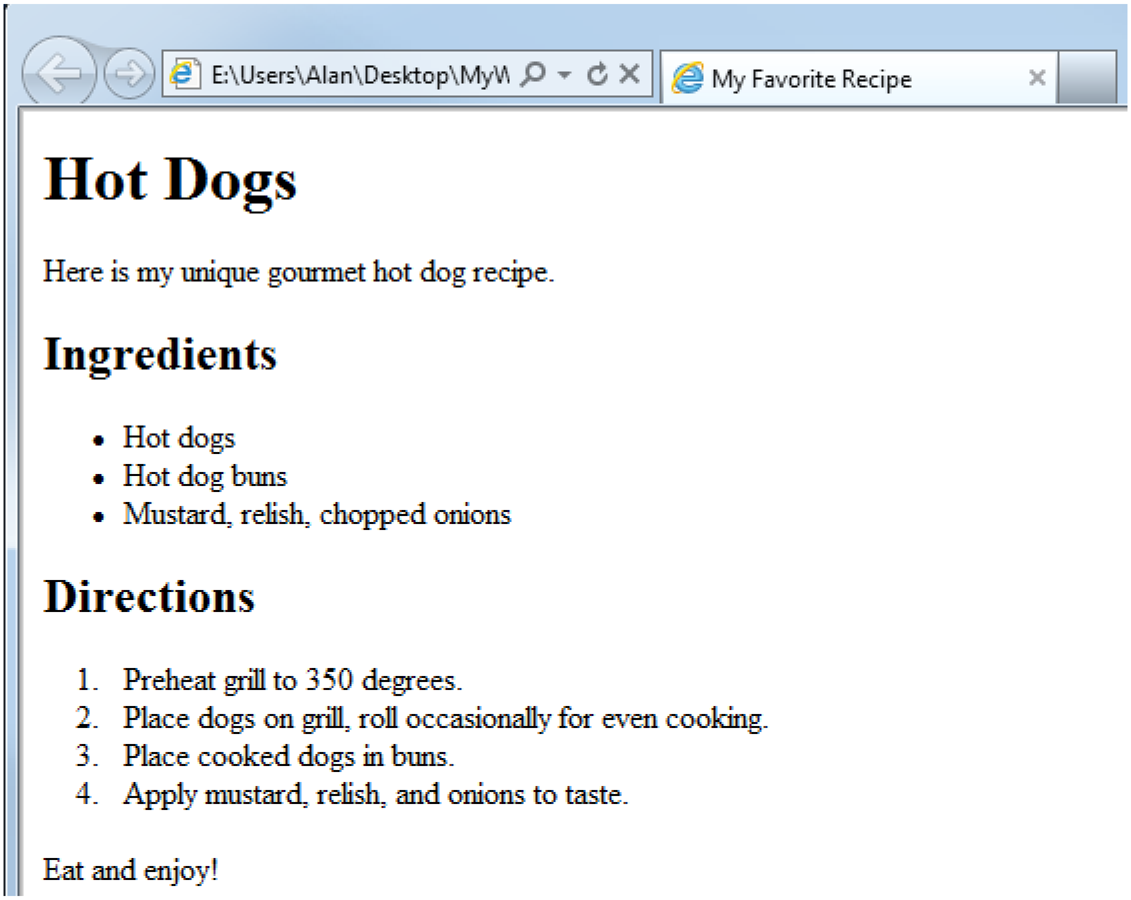
Your new ordered list and paragraph should be under the Directions heading, and above the </body> tag, as shown below.



```
<html>
<head>
<title>My Favorite Recipe</title>
</head>
<body>
<h1>Hot Dogs</h1>
<p>Here is my unique gourmet hot dog recipe.</p>
<h2>Ingredients</h2>
<ul>
<li>Hot dogs</li>
<li>Hot dog buns</li>
<li>Mustard, relish, chopped onions</li>
</ul>
<h2>Directions</h2>
<ol>
<li>Preheat grill to 350 degrees.</li>
<li>Place dogs on grill, roll occasionally for even cooking.</li>
<li>Place cooked dogs in buns.</li>
<li>Apply mustard, relish, and onions to taste.</li>
</ol>
<p>Eat and enjoy!</p>
</body>
</html>
```

Ordered list and paragraph added to recipe.htm

Now let's take a look in the browser. Remember the drill? Save the page in your editor. Then open it in your Web browser, or Refresh/Reload the Web browser if the page is already showing there. If you typed everything correctly and in the right place, the page should look something like the image below. If yours looks a lot different, there's likely a typographical error in your code somewhere that you need to fix.



Hot Dogs

Here is my unique gourmet hot dog recipe.

Ingredients

- Hot dogs
- Hot dog buns
- Mustard, relish, chopped onions

Directions

1. Preheat grill to 350 degrees.
2. Place dogs on grill, roll occasionally for even cooking.
3. Place cooked dogs in buns.
4. Apply mustard, relish, and onions to taste.

Eat and enjoy!

Ordered list and paragraph added under Directions heading

So that's how you do lists in HTML. Use <ul> to start an unordered list, or <ol> to start a numbered list. Use <li> to start each item in the list, and </li> to end each list. Use </ul> to end the entire unordered list, or </ol> to end the entire ordered list. Unordered lists are sometimes called *bulleted lists*, because each list item starts with a bullet (small circle). Ordered lists are sometimes called *numbered lists*, because each item in the list is numbered in sequential order. We often use numbered lists for step-by-step instructions.

Now let's turn our attention to something else you may need to do occasionally in your text—type characters that aren't on your keyboard.

Special Characters

Every letter, number, and punctuation mark that you can type at the keyboard is a *character*. You can type quite a few characters right from your keyboard. But every now and then, you may need one that you can't find on your keyboard, such as © for copyright. We call these *special characters*.

HTML *character entities* are special codes you can type to make special characters show on your page.

Each special character can be represented by brief name or numbers. And each starts with an ampersand (&) and ends with a semicolon (;). If you use the number rather than the name, you must follow the ampersand with a # (pound) character. There are hundreds of character entities, but to get you started, I'll just show you the most commonly used (below). You'll find a link to the complete set in the Supplementary Material for this lesson.

Character	Name	Entity	Decimal
©	Copyright sign	&copy;	&#169;
™	Trademark	&trade;	&#8482;
®	Registered trademark	&reg;	&#174;
°	Degrees	&deg;	&#176;
é	Lowercase *e* with acute	&eacute;	&#233;
í	Lowercase *i* with acute	&iacute;	&#237;
ñ	Lowercase *n* with tilde	&ntilde;	&#241;
	Nonbreaking space	&nbsp;	&#160;

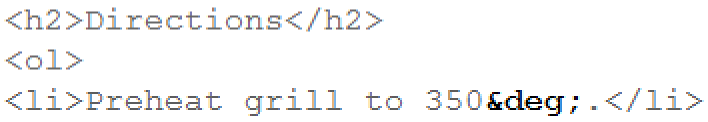
Let's get some practice using one of the character entities. Let's replace the word *Degrees* in recipe.htm with the character entity for the degree sign. Here are the steps:

1. Open recipe.htm for editing (or switch to that window if it's still open).

2. Right after the 350 in the directions, delete the space and the word *degrees*.

3. Type *&deg;* to replace the word you just deleted.

The image below shows the &deg; entity in the correct place. I didn't show the whole page this time, but all the code that's already in the page needs to stay there. I'm only showing code and text near the change to make it easier for you to see this one small change.



```
<h2>Directions</h2>
<ol>
<li>Preheat grill to 350&deg;.</li>
```

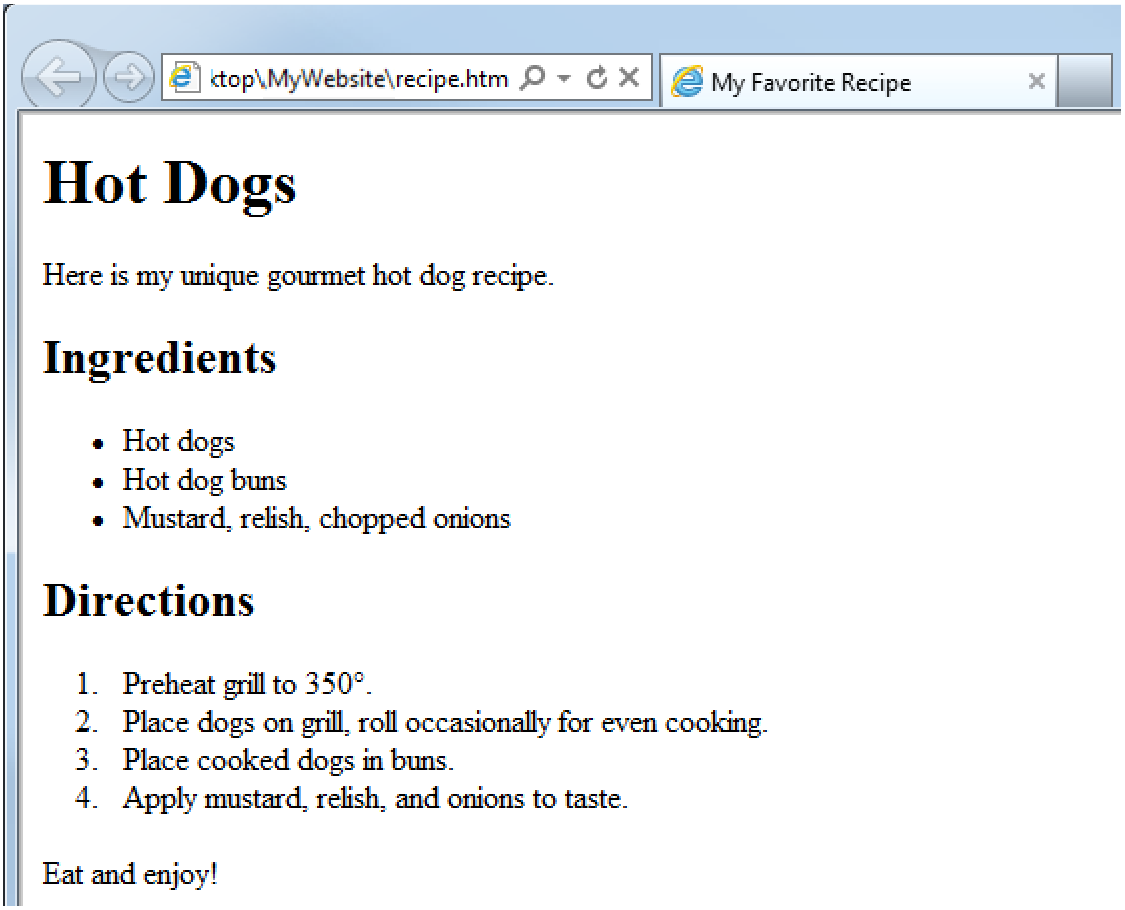
Character entity for degrees in recipe.htm

You can see the results using the same method you've used every other time in this course (and this is the same method that you'll use every time in the future!):

1. Save the document.

2. Open in a Web browser. Or, if the page is already open in a browser, Refresh or Reload the browser.

The image below shows the entire page. The tiny degrees symbol shows right after 350 in the numbered list under the Directions heading.



Hot Dogs

Here is my unique gourmet hot dog recipe.

Ingredients

- Hot dogs
- Hot dog buns
- Mustard, relish, chopped onions

Directions

1. Preheat grill to 350°.
2. Place dogs on grill, roll occasionally for even cooking.
3. Place cooked dogs in buns.
4. Apply mustard, relish, and onions to taste.

Eat and enjoy!

Special character used for degrees

Well, you're making some great progress here. Let's meet in Chapter 4 where you'll learn to add links to your pages!

Chapter 4

Creating Hyperlinks

In this chapter, you'll learn to add *hyperlinks* (also called links) to your site. You've undoubtedly used hyperlinks many times before, because they're what allow you to get from one place to another with a simple click of the mouse or tap on a touch screen. Now you'll learn how to create links within your own Web pages. You can create links to other peoples' pages. And if your site contains multiple pages, you can put in links to other pages within your own site. You can even create links to other documents, such as PDF files, for people to download.

To create a link, you need to provide two pieces of information:

- **The link text:** The text that shows on the page for the user to click.
- **The target:** The address of the page that opens when the user clicks the link.

The link text is the word or words that appear on the screen for a person to click (or tap). That part is easy. You just type it between <a> and </a> tags. The *a* stands for anchor point, which may seem like a strange name for a link. But, in a sense, it's an anchor point because once the user clicks the link, they're sent to some other page. But they can always click the Back button in their browser to return to the page that contains your original link.

The <a>…</a> tags alone aren't enough though. For example, suppose I put something like this on a page:

```
<a>More Recipes</a>
```

There's some link text between <a>…</a> tags. But there's nothing there that says what should happen when the user clicks the link text. The computer can't read our minds and just come up with some target destination on its own. We have to tell it what the target is. We do that by adding an href *attribute* to the <a> tag. Attributes are part of the HTML language and are used by some (but not all) tags to store additional information about an element. They're important enough to deserve a little discussion of their own. So let's focus on that important concept for a moment.

Attributes

An attribute is additional code that codes inside some tags. There are several attributes and several tags that use them, as you'll see throughout this course. But for now, the important thing is to understand that attributes have rules of *syntax*, like all other code. For attributes, the syntax is this:

```
attributename="value"
```

Whenever you see *italic* text in a syntax description, the italic text is just a *placeholder*—not text that you type literally. In other words, the proper syntax for an attribute is for you to first correctly type an attribute name, followed by an equal sign, followed by some value enclosed in quotation marks. The *attribute name* and *value* will vary depending on what you're doing at the moment, as you'll see throughout this course.

Though it doesn't show in the syntax above, you also have to precede the attribute name with at least one space. I'll show you an example in a moment.

The attribute we use to specify where a link should take the user is href, short for *h*ypertext *ref*erence. The value is the address of the page that the user should be taken to. And that address can be either an *absolute reference* or *a relative reference*. I know it seems like we're getting pretty technical here, but bear with me. It's not as complicated as it sounds.

Absolute Reference

An absolute reference is a URL (Uniform Resource Locator) or FQDN (Fully Qualified Domain Name). These are fancy technical terms for a complete Web address that starts with http://. Every page on the Web has such an address. So you can link to any page once you know that address.

Relative Reference

A relative reference is a reference to a resource *within your own website.* You can use a relative reference to make links to other pages within your site. And you can work right on your own computer while you're building the site, even if you don't have an http:// address for your site yet. That's because a relative reference doesn't need to be a URL or FQDN. It just has to be a *path* to the resource, relative to the page that contains the link. If the page that contains the link, and the page that you're linking to, are in the same folder on your site, then the relative path is just the filename of the file that you're linking to.

Let's get to some specific examples to illustrate. To practice, we'll add an absolute reference, linking to the popular AllRecipes website from our recipe.htm page. The URL for that page is http://www.allrecipes.com, so that'll be our absolute reference. We'll put the new link in its own separate paragraph (<p>…</p> tags), so there's some space between it and the last paragraph that's currently on the page. Follow these steps to create the tag:

1. Open recipe.htm for editing (or if it's still open for editing, just switch to that window).

2. Click just after the last </p> tag but just above the </body> tag, and press ENTER.

3. Type <p></p> to insert a new paragraph. (Type the closing tag in now so you don't forget to type it later!)

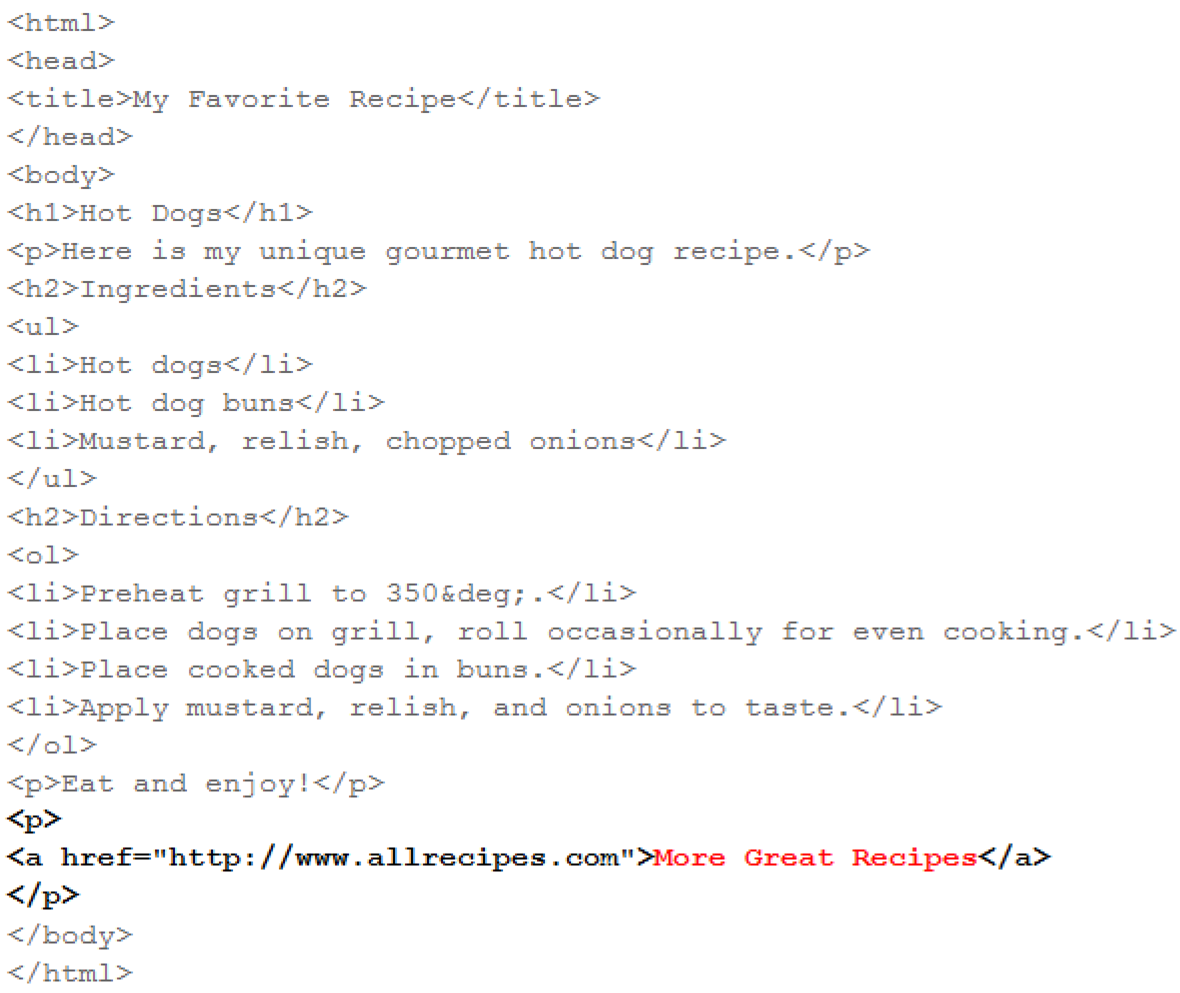
4. Put the cursor between the <p> and </p> tags, and press ENTER.

5. Type the link tag shown below:

```
<a href="http://www.allrecipes.com">More Great Recipes</a>
```

6. Press ENTER.

The link tag is a little more complex than other tags you've typed, so do type carefully. Remember, when it comes to typing code, there's really no margin for error. Make sure you include the blank space before the href attribute. The image below shows all the new tags in place in recipe.htm. As usual, I used some red color to separate the content from the code, but it will all be black text in your editor.



```
<html>
<head>
<title>My Favorite Recipe</title>
</head>
<body>
<h1>Hot Dogs</h1>
<p>Here is my unique gourmet hot dog recipe.</p>
<h2>Ingredients</h2>
<ul>
<li>Hot dogs</li>
<li>Hot dog buns</li>
<li>Mustard, relish, chopped onions</li>
</ul>
<h2>Directions</h2>
<ol>
<li>Preheat grill to 350&deg;.</li>
<li>Place dogs on grill, roll occasionally for even cooking.</li>
<li>Place cooked dogs in buns.</li>
<li>Apply mustard, relish, and onions to taste.</li>
</ol>
<p>Eat and enjoy!</p>
<p>
<a href="http://www.allrecipes.com">More Great Recipes</a>
</p>
</body>
</html>
```

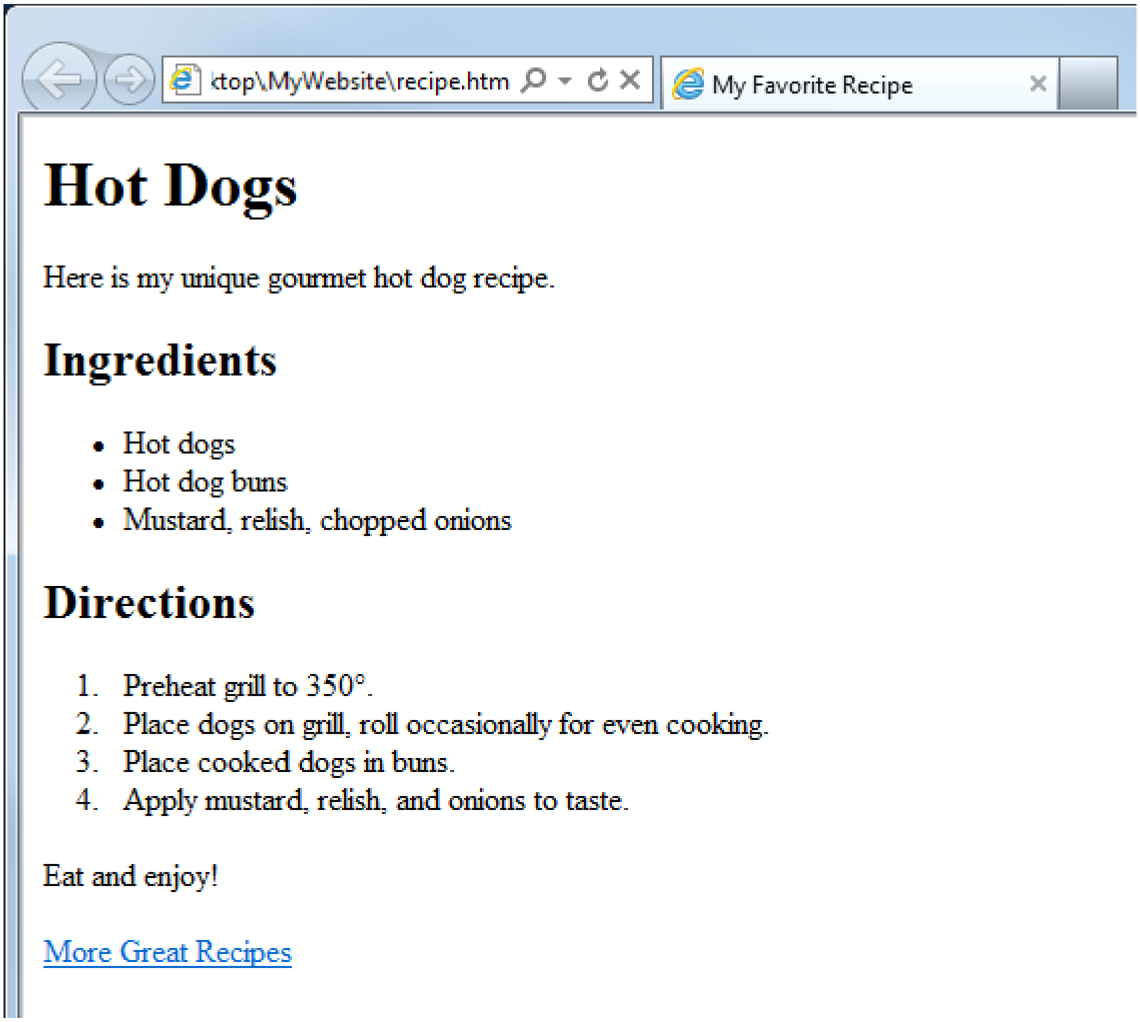
Link at bottom of recipes.htm

Okay, let's take if for a spin:

1. Save the page (choose **File > Save** from the menu, or press CTRL + S or COMMAND+S).

2. Open recipe.htm in a Web browser (or, if it's already open in a browser, Refresh or Reload the page there).

At the bottom of the page, you see the link as its own paragraph on a new line with some blank space above.



Hot Dogs

Here is my unique gourmet hot dog recipe.

Ingredients

- Hot dogs
- Hot dog buns
- Mustard, relish, chopped onions

Directions

1. Preheat grill to 350°.
2. Place dogs on grill, roll occasionally for even cooking.
3. Place cooked dogs in buns.
4. Apply mustard, relish, and onions to taste.

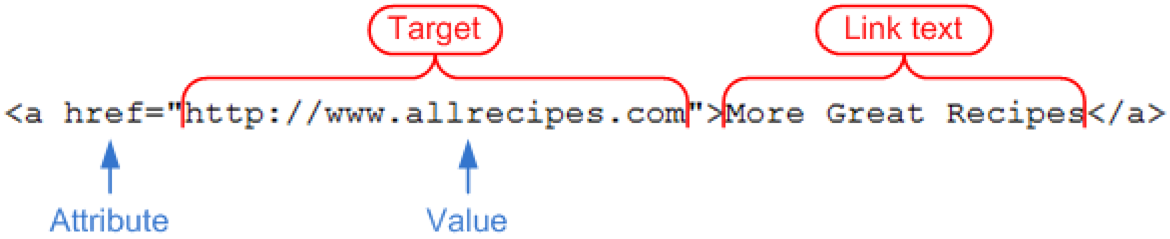
Eat and enjoy!

More Great Recipes

Link at bottom of recipes.htm

To test the link, click it. If you typed the link code correctly, you should be taken to the AllRecipes site home page. To return to your own page from AllRecipes, click the Back button near the upper left corner of your browser's program window. If your link doesn't work, make sure you clicked *on* the link (not just *near* the link), and make sure you typed your code correctly, exactly as shown in the instructions above.

Once your link works, congratulations! They say practice makes perfect. So in the assignment for this lesson, I'll have you add a couple of more links to your site—one link from your home page to recipe.htm, and another from recipe.htm back to your home page. Both links, and every link you type for the rest of your life, will follow the same basic syntax as the link you just created, as illustrated below.



```
<a href="http://www.allrecipes.com">More Great Recipes</a>
```

Anatomy of a link

Let's review what we just discussed before we move on to Chapter 5:

- The link starts with an <a> tag.
- The <a> tag uses an href attribute whose value defines the target of the link (where the link takes the user). There must be a space before the href, an = sign after it, and the value must be enclosed in quotation marks.
- After the <a> tag comes the link text, the text that's visible on the page that the user will click.
- The </a> tag comes after the link text and marks the end of the link.

Keep in mind that there is no rule that says the link has to be on one line. You can break it into two or more lines if you prefer, like this:

```
<a href="http://www.allrecipes.com">
More Great Recipes
</a>
```

Just be careful not to break it up inside a tag or inside the quotation marks. If you want to break a line, it's best to do it just after the > of a tag, rather than inside the < and > characters that define the tag.

When you're happy with your code, you can close your text editor and save the page. You can also close the copy of the page that's showing in a Web browser, if you have it open.

Excellent work today! I'll see you in Chapter 5 for a brief summary of this lesson.

Chapter 5

Summary

In today's lesson, you've learned about some important element types that apply to many kinds of pages and documents. You've probably seen them used in print and on many websites in the past.

There are six levels of headings defined by the tags <h1> through <h6>. These should always correspond to outline levels, with h1 being the main title, h2 being the first level subheadings, and so forth. Don't use heading tags for appearance only. You'll learn to control the appearance of all heading tags later in this course.

You also learned about two types of lists: the unordered (or bulleted) list, defined by <ul>…</ul> tags; and the ordered (or numbered) list, defined by <ol>…</ol> tags. Between the tags, you use <li>…</li> tags to define each item in the list.

Special characters like © and ® aren't on your keyboard. But you can use HTML character entities like &copy; and &reg; to show them on your pages.

Hyperlinks allow you to provide links to other pages. These require that you use an href= attribute inside the tag to specify where the link should take the reader. The link can be an absolute reference (an address that starts with http://), which is required when linking to a page outside your own site. And the link can also be a relative reference, which links to a page within your site. You'll create a couple of links with relative references in the assignment for this lesson!

After you complete the assignment, you may want to test yourself with the quiz for this lesson. And don't forget to take a look at the Frequently Asked Questions, because there are lots of common questions about the information we covered in this lesson. Stop by the Discussion Area to ask your own questions—or to help out other students who may be asking about things you already know the answer to.

I'll see you in Lesson 4!

Supplementary Material

Please see this page for updated Supplementary Material links.

FAQs

Q: How can I center headings and text?

A: Use CSS text-align:center. We'll talk about how and why a little later in the course. But if you're in a hurry and don't really care about understanding the code, you can just put style="text-align:center" inside any tag where you want to center text. Just make sure you put a space before the *style* attribute, like this:

```
<h1 style="text-align:center">
```

Q: Can I change the color of links?

A: Yes! You'll use CSS to do that. We'll discuss how later in the course.

Q: Are all of the tags the same in XHTML as they are in HTML?

A: Yes, as are most other tags. You'll see differences a little later in this course.

Q: Where can I see more special characters?

A: See the second link in the Supplementary Material for this lesson. From here, click **Lessons** near the top or bottom of this page, then click the link for Lesson 3, and then click **Supplementary Material**.

Q: What are some common mistakes to avoid when typing complex tags like links?

A: The most common mistakes involve omitting some important characters. Here are some examples of one done correctly, and several done incorrectly:

Tags	Mistakes
<a href="index.htm">Home</a>	Correct (no problems)
<a>Home</a>	Missing target
<a href="index.htm"> </a>	Missing link text
<ahref="index.htm">Home</a>	Missing space before attribute
<a href=index.htm">Home</a>	Missing a quotation mark
<a href="index.htm>Home</a>	Missing a quotation mark
<a href=index.htm>Home</a>	Missing two quotation marks
<a href="index.htm">Home<a>	Missing /
<a href="index.htm">Home<\a>	Has \ instead of /
<a href="index.htm">Home	Missing closing tag
<a herf="index.htm">Home</a>	Attribute name misspelled

<a href="index . htm">Home</a>	Extra spaces in filename

Assignment

In this assignment, you'll get some hands-on practice working with links. We'll start by adding a link from the home page (index.htm) to the recipes page (recipe.htm). And then we'll add a link from the recipe page back to the home page. Unlike the lesson, where we used an absolute reference to link to a page outside our site, these links will use relative references. We can use relative references, because both pages are within the same website.

I'll take you through all the steps for this assignment, because I know this is likely all very new to you—and we haven't done any links with relative references yet. Here are the steps:

1. If you haven't already done so, open your MyWebsite folder.

2. Use your usual method to open index.htm for editing using (right-click or CTRL + Click, choose **Open With**, and then your editor).

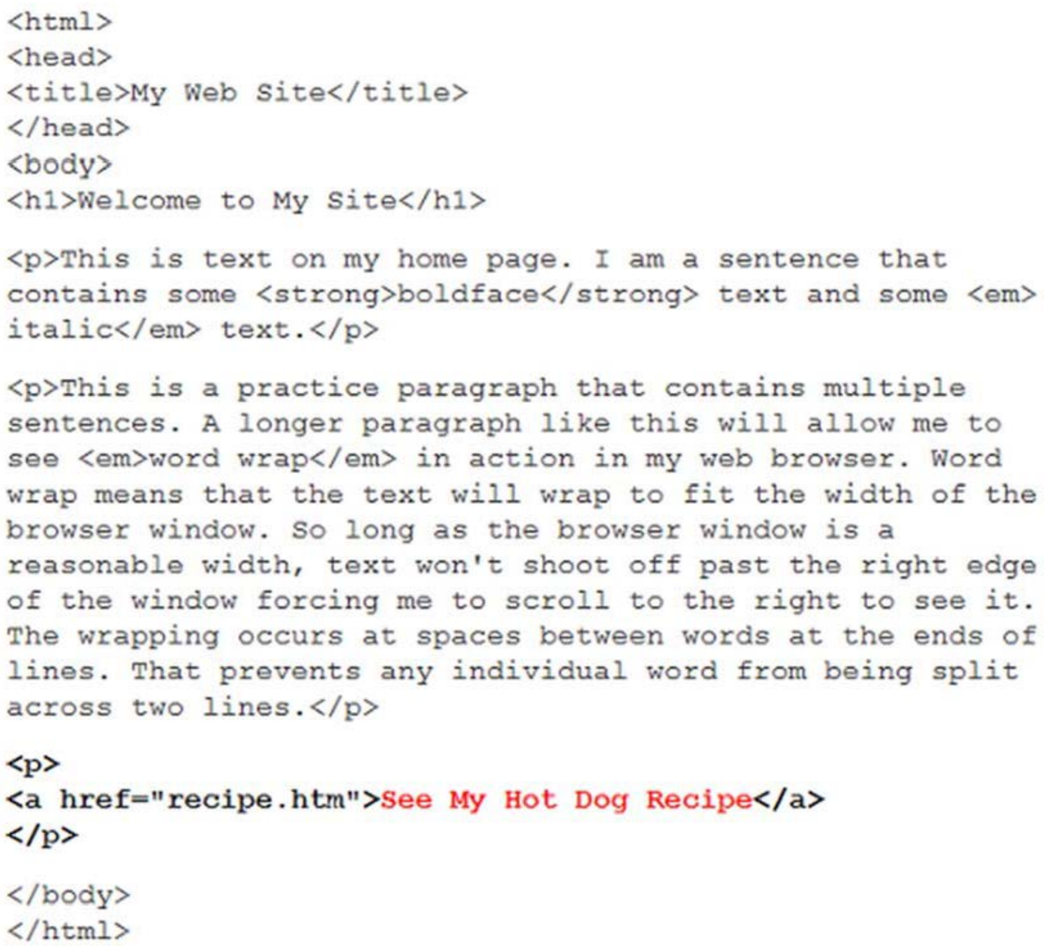
3. Move the cursor to the end of the last paragraph in the page, so the cursor is somewhere between the last </p> and the </body> tag.

4. Press ENTER, and then type the tags for a new, empty paragraph (<p> and </p>). You can press ENTER to put those tags on two separate lines.

5. Between the new <p> and </p> tags you just typed, add the following link:

```
<a href="recipe.htm">See My Hot Dog Recipe</a>
```

The image below shows the new tags on the page, against the code that was already in there (shown dimmed). As usual, the content is in red so that it's visually separate from the code. It won't be red on your screen!



```
<html>
<head>
<title>My Web Site</title>
</head>
<body>
<h1>Welcome to My Site</h1>

<p>This is text on my home page. I am a sentence that
contains some <strong>boldface</strong> text and some <em>
italic</em> text.</p>

<p>This is a practice paragraph that contains multiple
sentences. A longer paragraph like this will allow me to
see <em>word wrap</em> in action in my web browser. Word
wrap means that the text will wrap to fit the width of the
browser window. So long as the browser window is a
reasonable width, text won't shoot off past the right edge
of the window forcing me to scroll to the right to see it.
The wrapping occurs at spaces between words at the ends of
lines. That prevents any individual word from being split
across two lines.</p>

<p>
<a href="recipe.htm">See My Hot Dog Recipe</a>
</p>

</body>
</html>
```

Link in a paragraph near the end of index.htm

Check to make sure that you typed your code correctly and put it in the right place. Then, continue on with the steps below:

6. Close the page, and save your work (click the **red X** in the upper right corner of Notepad's window, or the **red circle** in the upper left corner of TextEdit's window). Choose **Save** when asked if you want to save your changes.

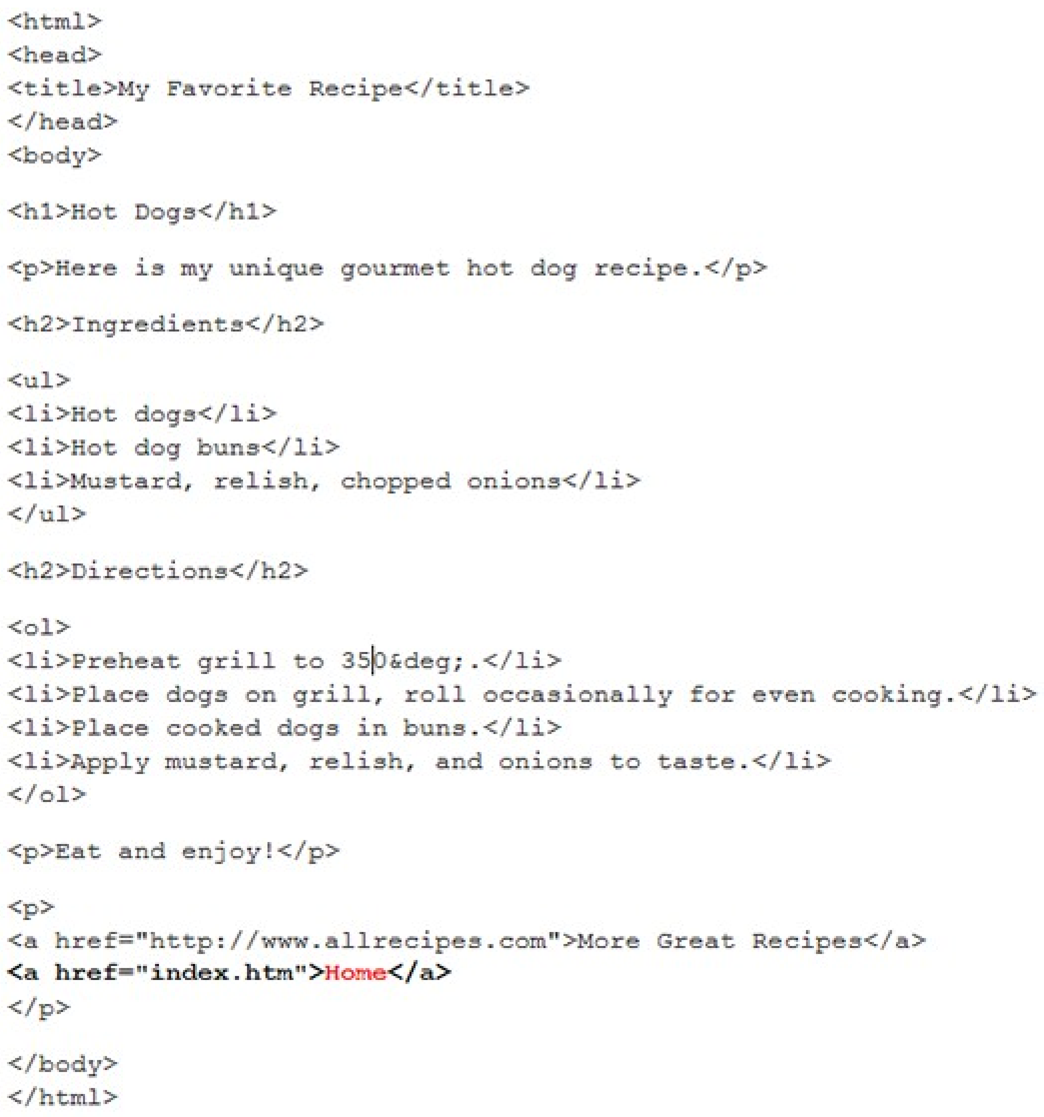
7. In your MyWebsite folder, open recipe.htm for editing (right-click or CTRL + Click its icon, and choose **Open With** to open it in Notepad or TextEdit, unless you're using some other authoring tool on your own).

8. Move the cursor down to between the last </a> tag and </p> tag, and press the SPACEBAR to insert a blank space. This will serve as a blank space between the link that's in the page already and the new link you're about to add.

9. Type the link shown here:

```
<a href="index.htm">Home</a>
```

The image below shows the new code in place within the last paragraph. It's not absolutely necessary to put the new link on a new line like that, or to have the <p>…</p> tags on their own lines. I just did it that way to unclutter things and make the new code and text easier to see. And as usual, I dimmed the old code and content and made the code for this assignment darker with the new code in black and the new content (text) in red.



```
<html>
<head>
<title>My Favorite Recipe</title>
</head>
<body>

<h1>Hot Dogs</h1>

<p>Here is my unique gourmet hot dog recipe.</p>

<h2>Ingredients</h2>

<ul>
<li>Hot dogs</li>
<li>Hot dog buns</li>
<li>Mustard, relish, chopped onions</li>
</ul>

<h2>Directions</h2>

<ol>
<li>Preheat grill to 350&deg;.</li>
<li>Place dogs on grill, roll occasionally for even cooking.</li>
<li>Place cooked dogs in buns.</li>
<li>Apply mustard, relish, and onions to taste.</li>
</ol>

<p>Eat and enjoy!</p>

<p>
<a href="http://www.allrecipes.com">More Great Recipes</a>
<a href="index.htm">Home</a>
</p>

</body>
</html>
```

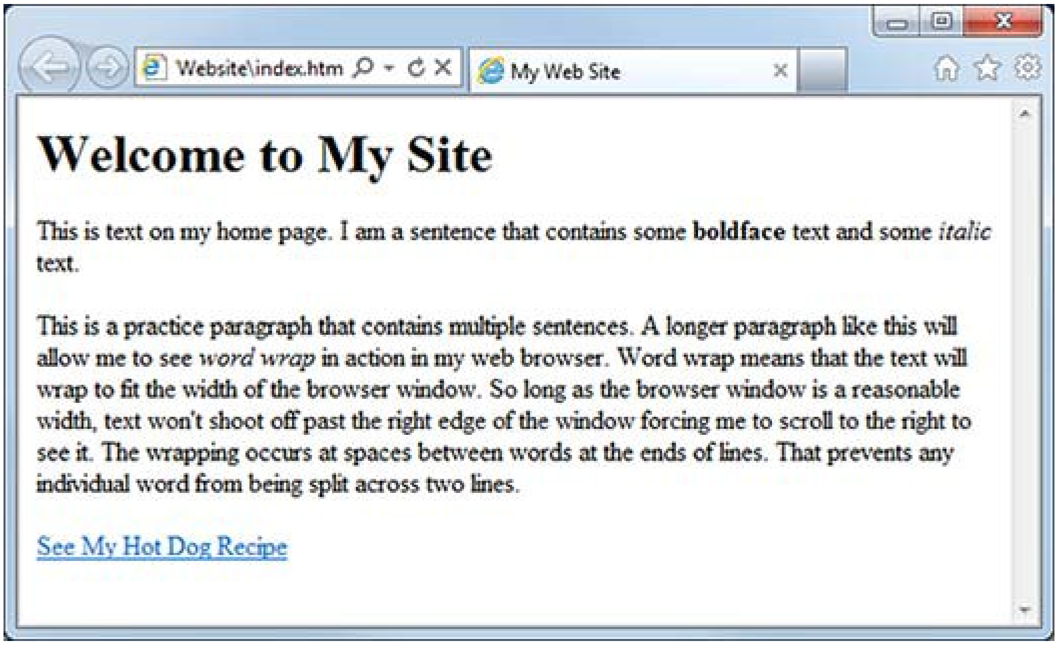
Second link added to recipe.htm

Again, I used a simple relative reference, index.htm, because index.htm is in the same folder (MyWebsite) as the page that we typed the link in (recipe.htm). Verify that you've typed your code correctly and in the right place. Then . . .

10. Close and save the page in the usual manner (click the **red circle** or **red X**, and choose **Save** when asked if you want to save).

Ready to test it out? That part should be easy:

Double-click **index.htm** to open it in a browser. You should see your new link at the bottom of the page, something like the one below.



Welcome to My Site

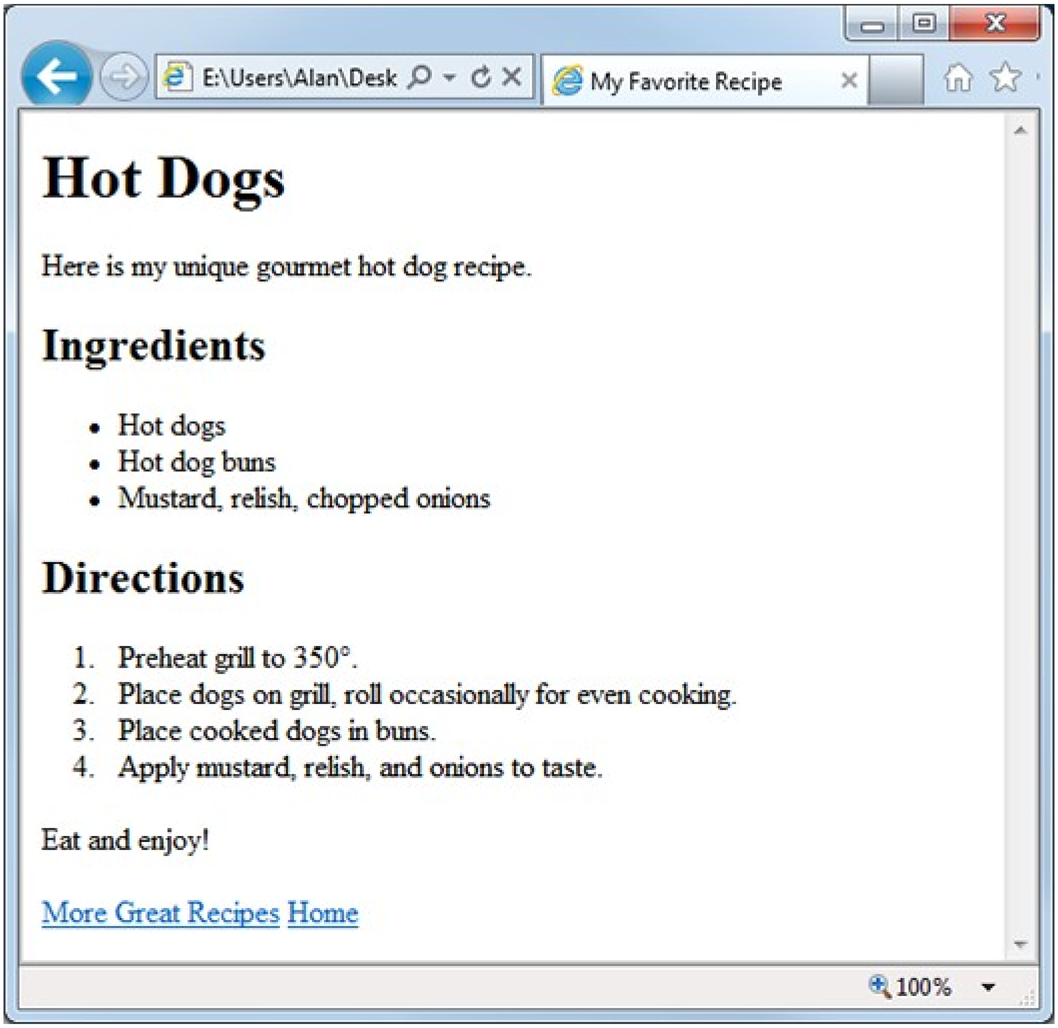
This is text on my home page. I am a sentence that contains some **boldface** text and some *italic* text.

This is a practice paragraph that contains multiple sentences. A longer paragraph like this will allow me to see *word wrap* in action in my web browser. Word wrap means that the text will wrap to fit the width of the browser window. So long as the browser window is a reasonable width, text won't shoot off past the right edge of the window forcing me to scroll to the right to see it. The wrapping occurs at spaces between words at the ends of lines. That prevents any individual word from being split across two lines.

See My Hot Dog Recipe

Index.htm page with new link

Click that link, and it should open the recipe.htm page. And you should see a new Home link at the bottom of that page, as below.



Hot Dogs

Here is my unique gourmet hot dog recipe.

Ingredients

- Hot dogs
- Hot dog buns
- Mustard, relish, chopped onions

Directions

1. Preheat grill to 350°.
2. Place dogs on grill, roll occasionally for even cooking.
3. Place cooked dogs in buns.
4. Apply mustard, relish, and onions to taste.

Eat and enjoy!

More Great Recipes Home

Recipe.htm page with new link

When you click the Home link at the bottom of recipe.htm, you'll be returned to index.htm, which is your site's home page.

Links in your pages may turn (or already be) magenta in color. This is because the standard coloring is blue for links to pages that you've never visited, and magenta for links to pages that you have visited in the page. That's normal behavior and nothing to worry about.

If your links don't work at all, there's probably a typographical error in your code somewhere. You may want to compare what you've typed to what's in the lesson. Keep in mind that the filenames in the tags must exactly match your actual filenames. For example, if you named your recipes page *recipe.html* rather than *recipe.htm*, then href="recipe.htm" won't work in a tag. It has to be href="recipe.html". Likewise, if you named your home page *index.html*, then you need to use href="index.html" rather that href="index.htm" in your <a> tag.