

Internet and Web Principal

Week 4

HTML 1

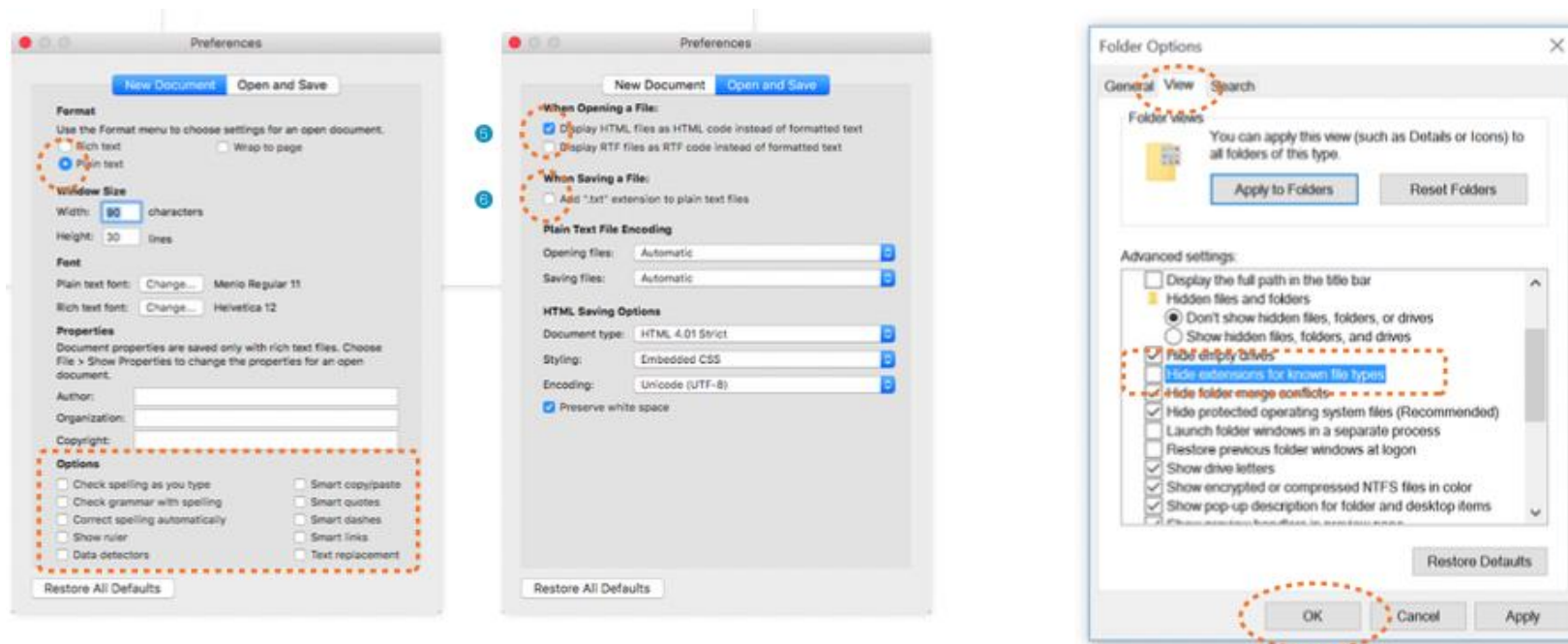
Content

1. HTML Document Setup
2. Text Elements
3. Links

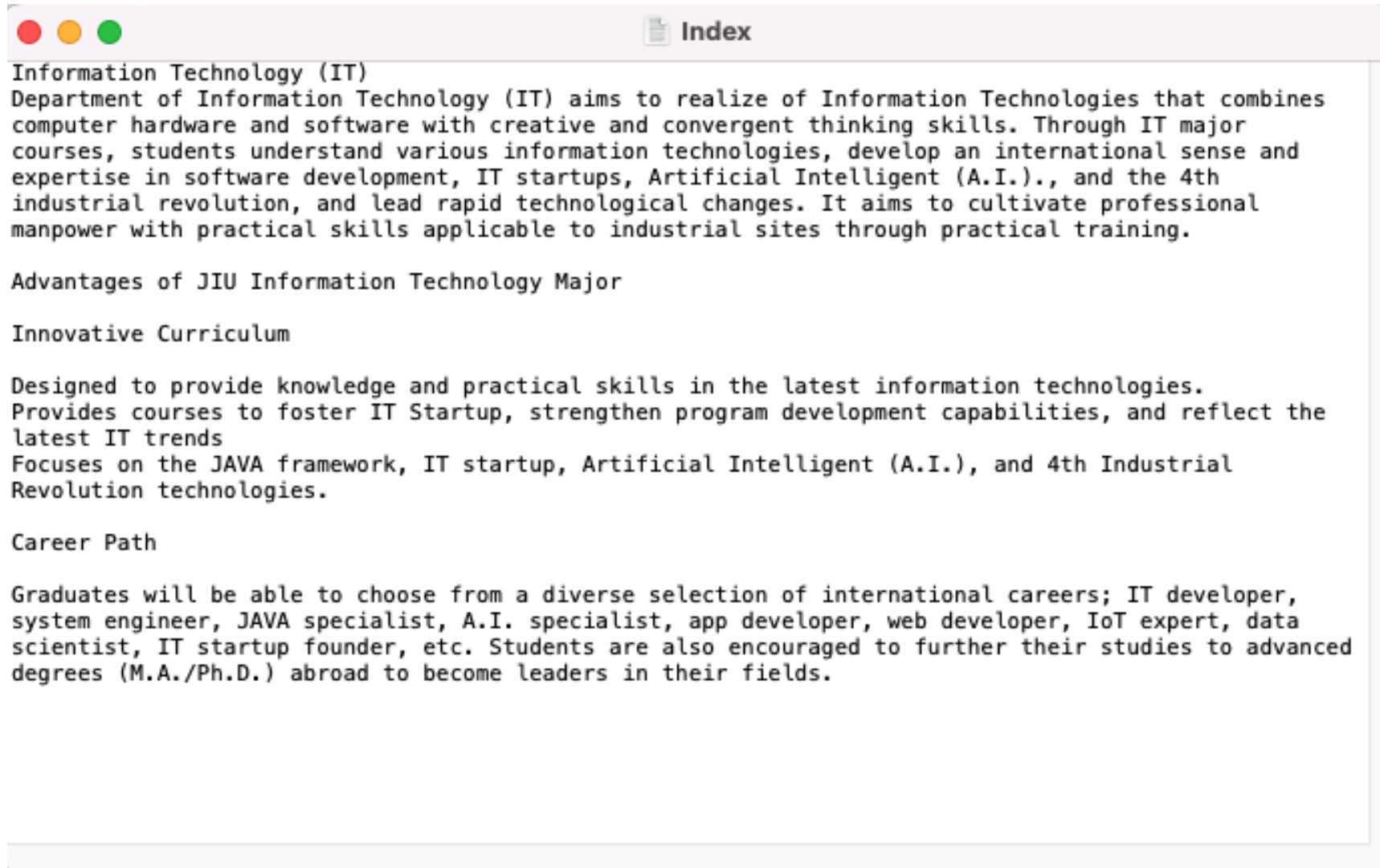
HTML Document Setup

Start with content

As a starting point, we'll write up raw text content into notepad (windows) or text editor (macosx) and do below configuration and see what browsers do with it.



HTML Document Setup





HTML Document Setup



Information Technology (IT) Department of Information Technology (IT) aims to realize of Information Technologies that combines computer hardware and software with creative and convergent thinking skills. Through IT major courses, students understand various information technologies, develop an international sense and expertise in software development, IT startups, Artificial Intelligent (A.I.), and the 4th industrial revolution, and lead rapid technological changes. It aims to cultivate professional manpower with practical skills applicable to industrial sites through practical training. Advantages of JIU Information Technology Major Innovative Curriculum Designed to provide knowledge and practical skills in the latest information technologies. Provides courses to foster IT Startup, strengthen program development capabilities, and reflect the latest IT trends Focus: on the JAVA framework, IT startup, Artificial Intelligent (A.I.), and 4th Industrial Revolution technologies. Career Path Graduates will be able to choose from a diverse selection of international careers; IT developer, system engineer, JAVA specialist, A.I. specialist, app developer, web developer, IoT expert, data scientist, IT startup founder, etc. Students are also encouraged to further their studies to advanced degrees (M.A./Ph.D.) abroad to become leaders in their fields.

HTML Document Setup

Start with content

Our page isn't looking too great right now. The text has been run together into a single block, which is not how it appeared when we put it into the original document. The browser ignores line breaks in the source content, which is the first thing that becomes clear.

Second, we notice that simply entering some content and naming the index.html is enough. While the browser can display the text from the file, we have not highlighted the content's structure. This is when HTML plays a role.

HTML Document Setup

HTML Structure

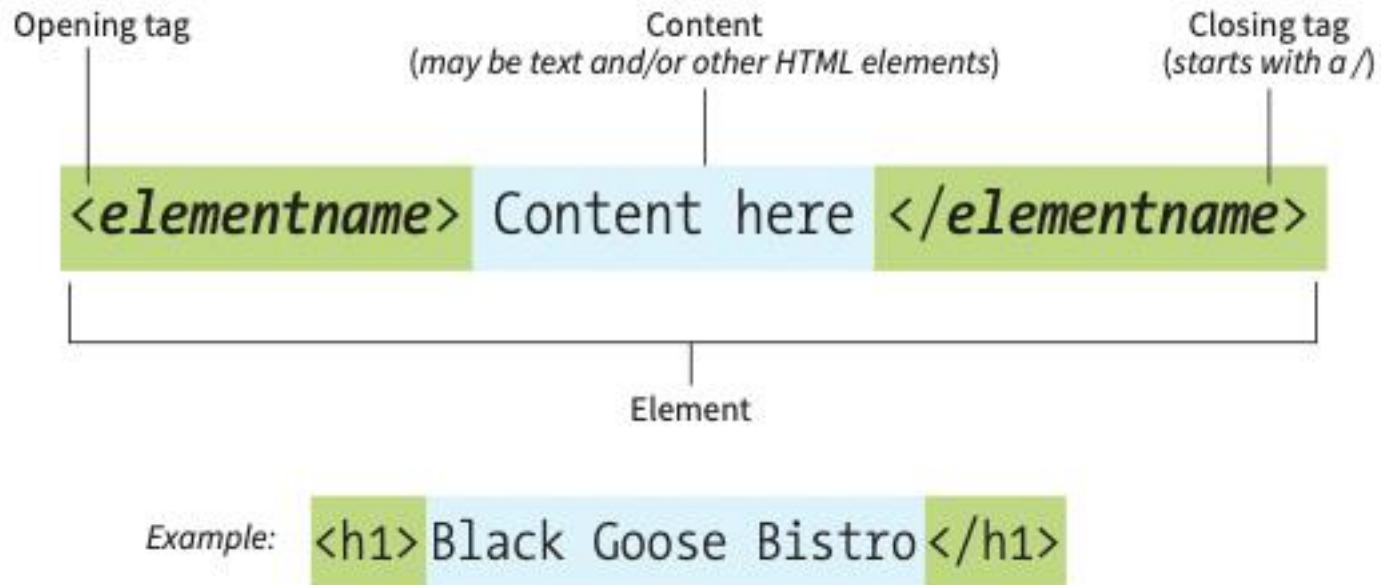


FIGURE 4-6. The parts of an HTML container element.

HTML Document Setup

HTML Structure

On HTML elements are identified by tags (angle brackets (< >)) in the text source. Any text within brackets is hidden and not displayed in the browser window. the element name appears in the opening tag (also called a start tag) and again in the closing (or end) tag preceded by a slash (/).

The tags added around content are referred to as the markup. It is important to note that an element consists of both the content and its markup (the start and end tags).

HTML Document Setup

1. The first line is a document type declaration (also called DOCTYPE declaration) that lets modern browsers know which HTML specification to use to interpret the document. This DOCTYPE identifies the document as written in HTML5.
2. The entire document is contained within an html element. The html element is called the root element because it contains all the elements in the document, and it may not be contained within any other element.
3. Within the html element, the document is divided into a head and a body. The head element contains elements that pertain to the document that are not rendered as part of the content, such as its title, style sheets, scripts, and metadata.

HTML Document Setup

4. meta elements provide document metadata, information about the document. In this case, it specifies the character encoding used in the document as Unicode version UTF-8

5. Also in the head is the mandatory title element. According to the HTML specification, every document must contain a descriptive title.

6. Finally, the body element contains everything that we want to show up in the browser window.

HTML Document Setup

Add the Structure

```
Index
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8">
  <title>Information Technology (IT)</title>
</head>
<body>
  Department of Information Technology (IT) aims to realize of Information Technologies that combines computer hardware and software with creative and convergent thinking skills. Through IT major courses, students understand various information technologies, develop an international sense and expertise in software development, IT startups, Artificial Intelligent (A.I.), and the 4th industrial revolution, and lead rapid technological changes. It aims to cultivate professional manpower with practical skills applicable to industrial sites through practical training.

  Advantages of JIU Information Technology Major

  Innovative Curriculum

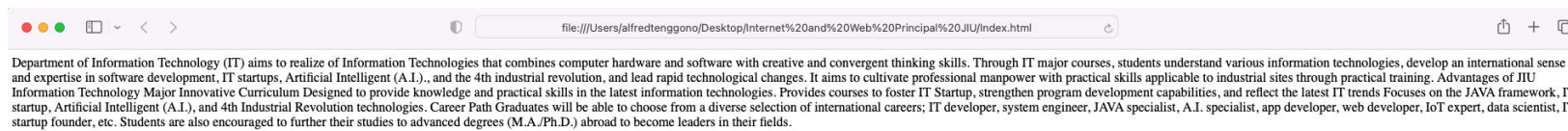
  Designed to provide knowledge and practical skills in the latest information technologies.
  Provides courses to foster IT Startup, strengthen program development capabilities, and reflect the latest IT trends
  Focuses on the JAVA framework, IT startup, Artificial Intelligent (A.I.), and 4th Industrial Revolution technologies.

  Career Path

  Graduates will be able to choose from a diverse selection of international careers; IT developer, system engineer, JAVA specialist, A.I. specialist, app developer, web developer, IoT expert, data scientist, IT startup founder, etc. Students are also encouraged to further their studies to advanced degrees (M.A./Ph.D.) abroad to become leaders in their fields.
</body>
</html>
```

HTML Document Setup

Add the Structure



HTML Document Setup

Add the Structure

As you can see there is not much has changed in the page after setting up the document, but the browser now displaying the title of the document in the top bar. If the page is bookmarked, that title would be added to Bookmarks or Favorites list as well. But the content still runs together because we haven't given the browser any indication of how it should be structured.

Text Element

Now our content is ready! and we have added the structure to the document (<!DOCTYPE>, html, head, title, meta charset, and body), On this topic we are ready to identify the elements in the content. There probably aren't as many of them as you might think, and really just a handful that you'll use with regularity.

Text Element

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Text Element

<p>...</p>

Paragraphs are the most basic components of a text document. Insert an opening `p>` tag at the beginning of the paragraph and a closing `/p>` tag after it to indicate a paragraph

Horizontal Rule

If you wish to indicate that one topic is finished and another is starting, use the `hr` element to insert what the spec describes a "paragraph-level thematic break." The `hr` element creates a logical separation between sections of a page or paragraphs without adding a new heading level.

Times

Description and history of the Times typeface.

Georgia

Description and history of the Georgia typeface.

Text Element

h1 — **Type Design**

h2 — **Serif Typefaces**

Serif typefaces have small slabs at the ends of letter strokes. In general, serif fonts can make large amounts of text easier to read.

h3 — **Baskerville**

h4 — **Description**

Description of the Baskerville typeface.

h4 — **History**

The history of the Baskerville typeface.

h3 — **Georgia**

Description and history of the Georgia typeface.

h2 — **Sans-serif Typefaces**

Sans-serif typefaces do not have slabs at the ends of strokes.

Headings

There is six levels of heading from h1 to h6. When you add headings to content, the browser uses them to create a page's document outline. Screen readers and other assistive reading devices use the document outline to help users swiftly scan and move through a page.

Text Element

Lists

HTML provides elements for marking up three types of lists:

Unordered lists, Collections of items that appear in no particular order

Ordered lists, Lists in which the sequence of the items is important

Description lists, Lists that consist of name and value pairs, including but not limited to terms and definitions

Text Element

Lists

HTML provides elements for marking up three types of lists:

Unordered lists, Collections of items that appear in no particular order. To identify an unordered list, mark it up as a ul element. The opening tag goes before the first list item, and the closing tag goes after the last item. Then, to mark up each item in the list as a list item (li), enclose it in opening and closing li tags

Ordered lists, Lists in which the sequence of the items is important. They work just like the unordered lists described earlier, but they are defined with the ol. Instead of bullets, the browser automatically inserts numbers before ordered list items, so you don't need to number them in the source document. This makes it easy to rearrange list items without renumbering them.

Description lists, Lists that consist of name and value pairs, including but not limited to terms and definitions, The whole description list is marked up as a dl element. The content of a dl is some number of dt elements indicating the names, and dd elements for their respective values.

Text Element

Courses

- Colleges Math
- Internet and Web Principal
- Introduction to IT
- Introduction to Computing

Lecturer

1. Alfred Tenggono, S.Kom., M.Kom
2. Riovan Styx, S.T., M.Kom
3. Lee Jihoon, Ph.d.
4. Jonatan Kim, Ph.d

Main Topics

Artificial Intelligence

Ut consequat lorem ut ex mattis eleifend. Integer iaculis neque at finibus ultricies. Mauris urna erat, efficitur nec quam at, scelerisque varius enim. Aenean ac posuere dui.

Software Development

Ut consequat lorem ut ex mattis eleifend. Integer iaculis neque at finibus ultricies. Mauris urna erat, efficitur nec quam at, scelerisque varius enim. Aenean ac posuere dui.

Let's Try and see the result!

TABLE 5-1. Text-level semantic elements

Element	Description
a	An anchor or hypertext link (see Chapter 6 for details)
abbr	Abbreviation
b	Added visual attention, such as keywords (bold)
bdi	Indicates text that may have directional requirements
bdo	Bidirectional override; explicitly indicates text direction (left to right, ltr , or right to left, rtl)
br	Line break
cite	Citation; a reference to the title of a work, such as a book title
code	Computer code sample
data	Machine-readable equivalent dates, time, weights, and other measurable values
del	Deleted text; indicates an edit made to a document
dfn	The defining instance or first occurrence of a term
em	Emphasized text
i	Alternative voice (italic) or alternate language
ins	Inserted text; indicates an insertion in a document
kbd	Keyboard; text entered by a user (for technical documents)
mark	Contextually relevant text
q	Short, inline quotation
ruby, rt, rp	Provides annotations or pronunciation guides under East Asian typography and ideographs
s	Incorrect text (strike-through)
samp	Sample output from programs
small	Small print, such as a copyright or legal notice (displayed in a smaller type size)
span	Generic phrase content
strong	Content of strong importance
sub	Subscript
sup	Superscript
time	Machine-readable time data
u	Indicates a formal name, misspelled word, or text that would be underlined
var	A variable or program argument (for technical documents)
wbr	Word break

Text Element

Text-Level (Inline) Elements

Despite all the types of information you could add to a document, there are only a couple dozen text-level semantic elements. As long as we’re talking about bold and italic text, let’s see what the old **b** and **i** elements are up to now. The elements **b**, **i**, **u**, **s**, and **small** were introduced in the old days of the web as a way to provide typesetting instructions (bold, italic, underline, strike-through, and smaller text, respectively).

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del	Deleted text; indicates an edit made to a document
dfn	The defining instance or first occurrence of a term
em	Emphasized text
i	Alternative voice (italic) or alternate language
ins	Inserted text; indicates an insertion in a document
kbd	Keyboard; text entered by a user (for technical documents)
mark	Contextually relevant text
q	Short, inline quotation
ruby, rt, rp	Provides annotations or pronunciation guides under East Asian typography and ideographs
s	Incorrect text (strike-through)
samp	Sample output from programs
small	Small print, such as a copyright or legal notice (displayed in a smaller type size)
span	Generic phrase content
strong	Content of strong importance
sub	Subscript
sup	Superscript
time	Machine-readable time data
u	Indicates a formal name, misspelled word, or text that would be underlined
var	A variable or program argument (for technical documents)
wbr	Word break

Let's use a few element and see the result!

Text Element

GENERIC ELEMENTS (DIV AND SPAN)

The **div** and **span** elements have no inherent presentation qualities of their own, but you can use style sheets to format them however you like. In fact, generic elements are a primary tool in standards-based web design because they enable authors to accurately describe content and offer plenty of “hooks” for adding style rules. They also allow elements on the page to be accessed and manipulated by JavaScript.

Use the **div** element to create a logical grouping of content or elements on the page.

A **span** offers the same benefits as the **div** element, except it is used for phrase elements and does not introduce line breaks. Because **spans** are inline elements, they may contain only text and other inline elements (in other words, you cannot put headings, lists, content-grouping elements, and so on, in a **span**).

Text Element

In this example, a **div** element is used as a container to group an image and two paragraphs into a product “listing”:

```
<div class="listing">
  
  <p><cite>The Complete Manual of Typography</cite>, James Felici</p>
  <p>A combination of type history and examples of good and bad type
  design.</p>
</div>
```

Here is another common use of a **div** used to break a page into sections for layout purposes. In this example, a heading and several paragraphs are enclosed in a **div** and identified as the “news” division:

```
<div id="news">
  <h1>New This Week</h1>
  <p>We've been working on...</p>
  <p>And last but not least,... </p>
</div>
```

There is no **telephone** element, but we can use a **span** to give meaning to telephone numbers. In this example, each telephone number is marked up as a **span** and classified as “tel”:

```
<ul>
  <li>John: <span class="tel">999.8282</span></li>
  <li>Paul: <span class="tel">888.4889</span></li>
  <li>George: <span class="tel">888.1628</span></li>
  <li>Ringo: <span class="tel">999.3220</span></li>
</ul>
```

Links

To convert text to a link, just wrap the text with `<a>...` tags and use href attribute to provide the URL target. By default, nearly all graphical browsers display linked text as blue and highlighted. Some older browsers have a blue border around connected photos, however the majority of modern versions do not.

There are two ways to specify the URL:

Absolute URLs

Absolute URLs provide the full URL for the document, including the protocol (`http://` or `https://`), the domain name, and the pathname as necessary.

Relative URLs

Relative URLs describe the pathname to a file relative to the current document. Relative URLs can be used when you are linking to another document on your own site

Links



FIGURE 6-2. An example of a long URL. Although it may make the anchor tag look confusing, the structure is the same.

Links

Linking Within a Directory

`About the site...`

Linking to a Lower Directory

`Garlic Salmon`

Linking to a Higher Directory

`<p>[Back to home page]</p>`

Linking with Site Root Relative Pathnames

`Garlic Salmon`

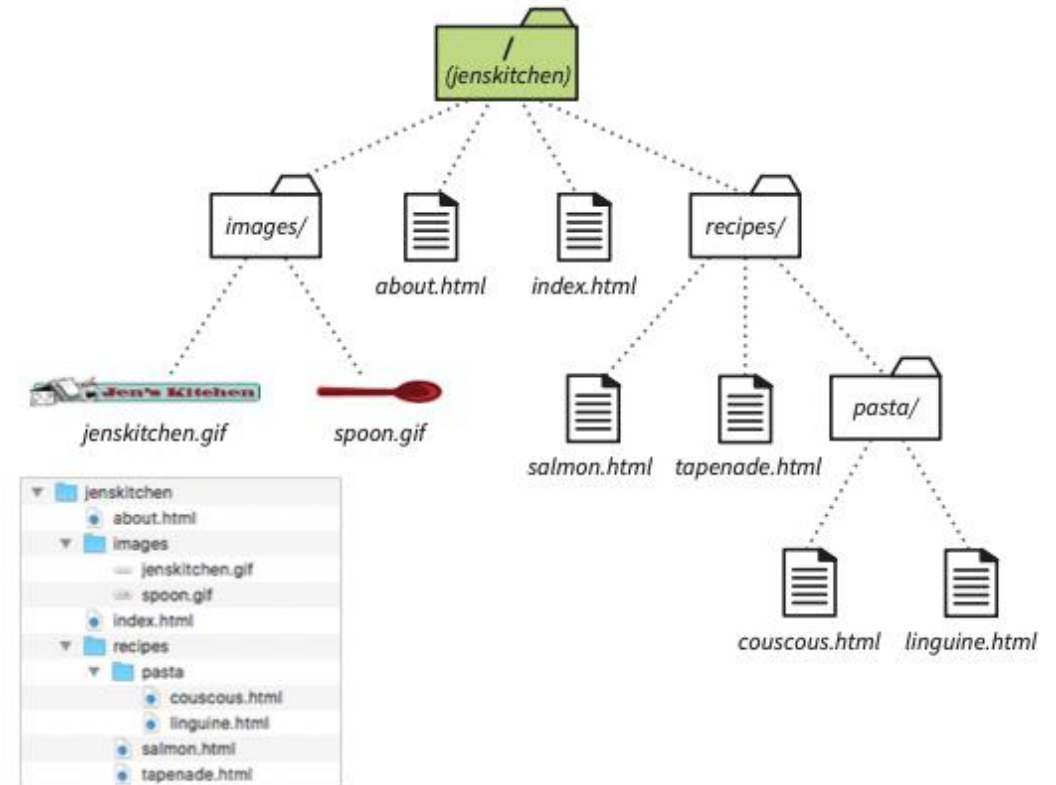


FIGURE 6-4. A diagram of the *jenskitchen* site structure.

Links

MAIL LINKS

When the user clicks a **mailto** link, the browser opens a new mail message preaddressed to that address in a designated mail program

`Contact Al Klecker`

TELEPHONE LINKS

When mobile users tap the link, what happens depends on the device: Android launches the phone app; BlackBerry and IE11 Mobile initiate the call immediately; and iOS launches a dialog box giving the option to call, message, or add the number to Contacts.

`Call us free at (800) 555-1212`

Thank You

Alfred Tenggono, S.Kom., M.Kom.

alfred.tenggono@jiu.ac

Reference

- Learning Web Design, Jennifer Niederst Robbins, O'Reilly Media, Inc., 2018, ISBN: 978-1-491-96020-2
- Computer Networking first-step, Wendell Odom, CISCO Pers, 2004, ISBN: 1-58720-101-1