

LECTURE 22

HTML

MCS 260 Fall 2020

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REMINDERS

- Worksheet 8 available, Quiz 8 coming soon
- Project 3 description to be released on Friday
- Quiz 5,6,7 solutions available
- Quiz 7 grades to be released today

OLD BUSINESS

The built-in functions `max(iterable)` and `min(iterable)` find the largest or smallest element of an iterable (e.g. list, tuple, string, dict).

Lists in Python also have a method `list.sort()` that modifies the list to put it in increasing order.

The function `sorted(iterable)` takes one iterable and returns another. The returned iterable yields the items from the argument, but in increasing order.

The function `reversed(iterable)` takes one iterable and returns another. The returned iterable yields the items from the argument, but in reverse order.

The functions `sort()`, `sorted()`, `max()`, `min()` accept another parameter called `key`, a function which turns items into the values that should be sorted.

`key` is a common use for `lambda`.

HTML

Hypertext Markup Language or HTML was first developed in 1993 by physicist Tim Berners-Lee. It is the format for documents designed to be displayed in a (web) browser.

HTML has had many revisions over the years. We will talk about HTML5 (dating from 2014).

WHY?

Project 3 is about building a program to convert a text file with special formatting to a HTML file.

Basic familiarity with HTML will be helpful in working on the project, but the project description will also document everything you need to know.

DOCTYPE

A HTML5 document is a text file that begins with:

```
<!doctype html>
```

This part is not case sensitive, so `<!DOCTYPE html>` is also OK.

The rest of a HTML file consists of **tags**. Tags are like parentheses; there is a start symbol, an end symbol, and stuff inside.

A "foo" tag starts with `<foo>` and ends with `</foo>`.

Between these are the text and tags inside the foo tag.

The format for other tags is analogous, though foo is not a real HTML tag. What are some real tags?

Minimal HTML document:

```
<!doctype html>
<html>
  <head>
    <title>Document title</title>
    other tags with info about the document
  </head>
  <body>
    Hello browser!
    other document content
  </body>
</html>
```

Indenting is totally optional.

A FEW USEFUL TAGS

p paragraph

ul unordered (bullet) list

li item in a list

strong important text to be emphasized

A FEW USEFUL TAGS

h1, h2, ..., h6	headings (outline levels)
-----------------	---------------------------

a	link
---	------

img	image
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The `a` and `img` tags require **attributes** in the start tag to be useful.

CSS

HTML is for a document's **content**, with logical parts indicated by tags.

CSS is a related language for specifying **style** (spacing, color, typeface, etc.)

REFERENCES

- In *Downey*:
 - Section 10.6 discusses the `list.sort()` method
 - Section 10.12 discusses the `sorted()` built-in function
- HTML tutorial from W3Schools (all in browser)
- A Guide to HTML5 and CSS3 - no-cost PDF ebook from 2014; must enter email address to download

REVISION HISTORY

- 2020-10-14 Additional reminders
- 2020-10-13 Initial publication

