CMPT 165
Unit 2 – Markup & Unit 3 – CSS

May 25th, 2015

Today's Agenda

- Revisit some tags

- More details on absolute vs. relative URL

- Styling with CSS

<a> tag

<a>: anchor tag creates a hyperlink to a resource

Examples:

```
<p>This is a link to <a href="http://www.sfu.ca">SFU</a></p>
<p><a href="www.sfu.ca"><img src="http://abc.png" alt="abc"/></a></p>
```
content of anchors can be anything

Required attribute:

href: hyper reference

Optional attributes:

target: where the target page will be displayed

type: what type of resource **href** points to

Check here:http://www.w3schools.com/tags/

Hello students

Lorem ipsum dolor sit ar
neglegentur pro ne. Et vi
habemus oportere corru
legere legimus id, discere
Pri an agam assueverit.

This is a link to SFU

Attribute specification

- Assign attributes to elements:

```
name_of_attribute="value"

<a href="http://www.sfu.ca">SFU</a>

<img src="SFU_logo.png"
     alt="Library logo"
     width="500"
     height="400" />
```

- Always close the value with double quotes ("value")!

What's wrong?

`<a href="www.sfu.ca">here</a>`

`<a href="`**`http://`**`www.sfu.ca">here</a>`

(Any text in value of `href` without the protocol or "`/`" is assumed to be relative URL…

risk referencing to wrong file with same name)

`<img src="http://troy.lib.sfau.ca/screens/banner_left.jpg"`
                    `alt="The library logo">`

`<img src="http://troy.lib.sfau.ca/screens/banner_left.jpg"`
                    `alt="The library logo"`**`/>`**

`<img src="http://www.w3.org/2015/05/logoWWW2015.png"`
        `alt="Another logo" width=50%" height="25%" />`

`<img src="http://www.w3.org/2015/05/logoWWW2015.png"`
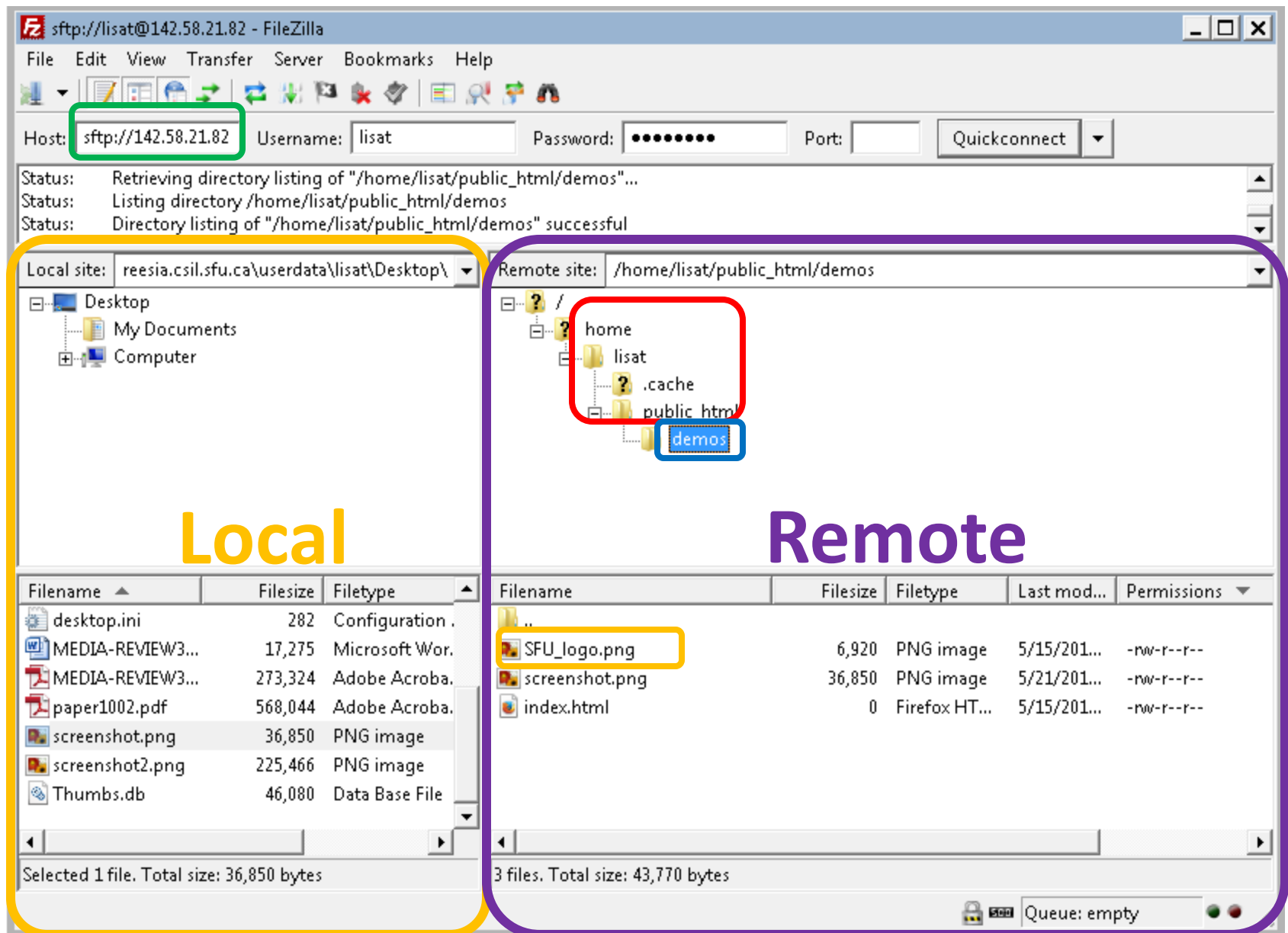   `alt="Another logo" width=`**`"`**`50%" height="25%" />`

Today's Agenda

- Revisit some tags

- More details on absolute vs. relative URL

- Styling with CSS

http://cmpt165.cs.sfu.ca/~lisat/demos/SFU_logo.png

Local

Remote

Absolute vs. Relative URL

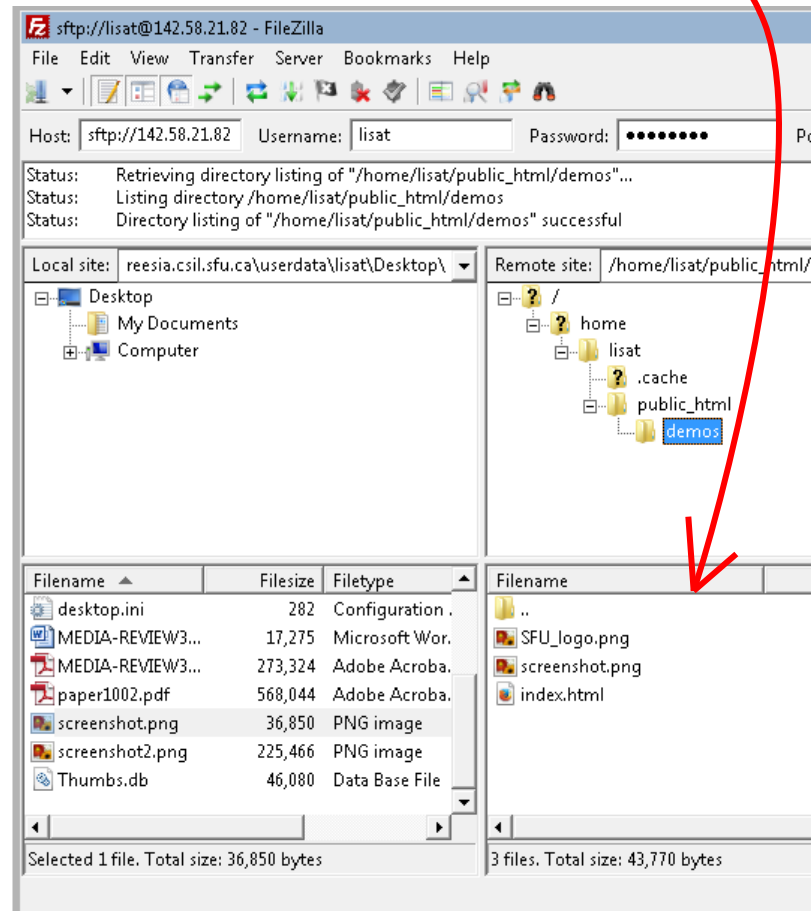## SFU_logo.png + index.html both in same "demos" folder

index.html:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html>
    <head><title>Title</title></head>

    <body>

        <h1>Heading</h1>
        <p>
        <img src="http://cmpt165.csil.sfu.ca/
            ~lisat/demos/SFU_logo.png" />
        </p>

        <p><img src="SFU_logo.png" /></p>

    </body>

</html>
```

Absolute vs. Relative URL

`SFU_logo.png` + `index.html` not in same folder

Q: what is the relative URL for the `SFU_logo.png` file?

index.html:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html>
    <head><title>Title</title></head>

    <body>

        <h1>Heading</h1>
        <p>
        <img src="http://cmpt165.csil.sfu.ca/
            ~lisat/SFU_logo.png" />
        </p>

        <p><img src="../SFU_logo.png" /></p>

    </body>

</html>
```

Answer: use ".."
("parent" directory)

`public_html/SFU_logo.png`

`public_html/demos/index.html`

"parent" directory

Absolute vs. Relative URL

`SFU_logo.png` + `index.html` not in same folder

Q: what is the relative URL for the `SFU_logo.png` file?

index.html:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html>
    <head><title>Title</title></head>

    <body>

      <h1>Heading</h1>
      <p>
      <img src="http://cmpt165.csil.sfu.ca/
          ~lisat/SFU_logo.png" />
      </p>

      <p><img src="../../SFU_logo.png" /></p>


    </body>


</html>
```
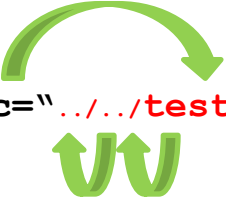
`public_html/SFU_logo.png`

`public_html/d1/d2/index.html`

"grandparent" directory?

Absolute vs. Relative URL

`SFU_logo.png` now moved to another subfolder `test`

Q: what is the relative URL for the `SFU_logo.png` file?

index.html:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html>
    <head><title>Title</title></head>

    <body>

      <h1>Heading</h1>
      <p>
      <img src="http://cmpt165.csil.sfu.ca/
          ~lisat/test/SFU_logo.png" />
      </p>

      <p><img src="../../test/SFU_logo.png"/></p>

    </body>

</html>
```

`public_html/test/SFU_logo.png`

`public_html/d1/d2/index.html`

"grandparent" directory?

Unit2: highlights

- Tags examined so far:
  - List   **
<dl><dt><dd>**
  - Image   **<img>**
  - Anchor   **<a>**
  - http://www.w3schools.com/tags/
- Key concepts:
  - Attributes
  - Relative vs. absolute URL

Good Webpage (Design)

CONTENT

- Messages to your audience

→ You provide. Check grammar ☺

INTERACTION

- Provide responses to audience

→ Web-programming (Python)

STRUCTURE

- Give meaning to each element
- "Meta" data (meta=about)
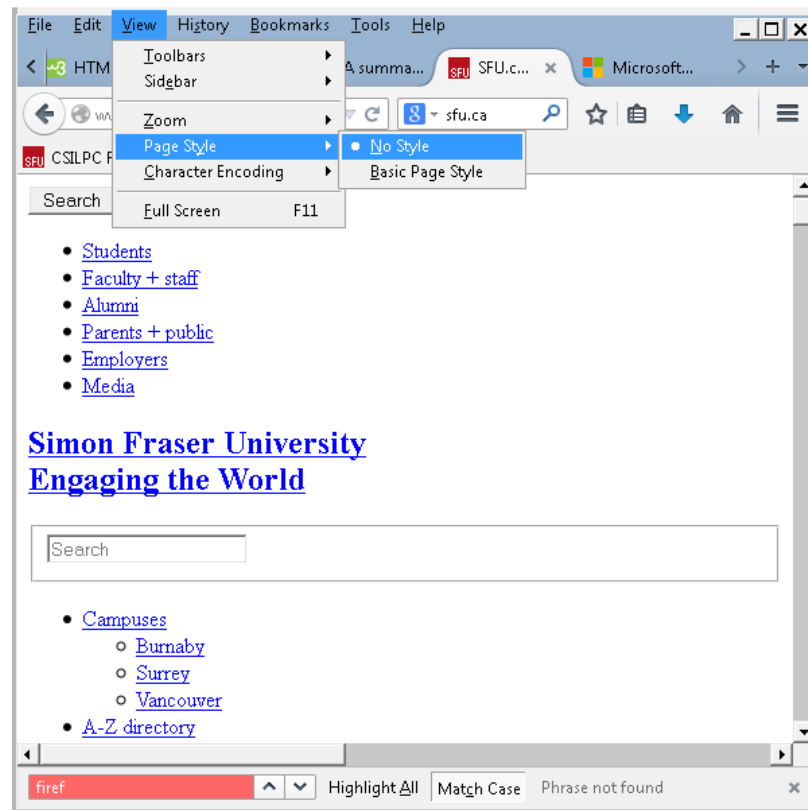
→ Markup, i.e. XHTML, HTML5

STYLE

- Describe visual properties of each element

→ Cascading Style Sheets (CSS)

Affect of styling

- What do sites look like without style?
- To turn on/off:

Cascading Style Sheets (CSS)

A sheet defining styles … ☺

Why "cascading"?

– Answered later

Why CSS?

– You should know ☺

– E.g. Imagine your webpage contains 2 paragraphs and you want all to have "center alignment"

```
<p align="center">
```

\<style\> tag

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
<html>
    <head>
         <title>Title</title>
    </head>
<body>
  <h1>Heading</h1>
        <p align="center">This is Paragraph1.</p>
        <p align="center">This is Paragraph2.</p>
    </body>
</html>
```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <title>Title</title>
        <style type="text/css">
p {
  text-align: center;
}
        </style>
    </head>
    <body>
        <h1>Heading</h1>
        <p>This is a paragraph.</p>
        <p>This is another paragraph.</p>
    </body>
</html>
```

Demo

<style> tag

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <title>Title</title>
        <style type="text/css"  media="all"  >
        p {        Required attribute  Optional attribute
          text-align: center;
          }

        h1 {
          text-align: center;
          color: red;
          }
        </style>
    </head>
    <body>
        <h1>Heading</h1>
        <p>This is a paragraph.</p>
        <p>This is another paragraph.</p>
    </body>
</html>
```

CSS syntax

Selector: HTML element that you want to style

```
selector1 {
        property_1: value_1;
        property_2: value_2;
        …
        property_N: value_N;
}
selector2 {
        property_1: value_1;
        property_2: value_2;
        …
        property_M: value_M;
}
```

Declaration

Note: declarations are separated by semicolons!

```
ol {
list-style-type: circle;
start: a;
}


p {
text-align: center;
}
```

vs.
"Attribute specification"
in older versions of HTML

`name_of_attribute="value"`

`<p align="center">`

Ways to define styles

1. In the header

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01
Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<html>
   <head>
        <title>Title</title>
        <style type="text/css">
         p{
             text-align: center;
             color: blue;
         }
        </style>
   </head>
   <body>
        <h1>Heading</h1>
        <p>This is a paragraph.</p>


   </body>
</html>
```

2. "Inline" (FYI)

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01
Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<html>
   <head>
        <title>Title</title>



   </head>
   <body>
     <h1>Heading</h1>
     <p style="text-align: center;
     color: blue;">This is a
     paragraph.</p>

   </body>
</html>
```

Ways to define styles

1. In the header

2. Inline

3. In a separate CSS file:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
<html>
    <head>
        <title>Title</title>
        <style type="text/css">
        p {
          text-align: center;
        }
        </style>
    </head>
    <body>
        <h1>Heading</h1>
        <p>This is a paragraph.</p>
        <p>This is another paragraph.</p>
    </body>
</html>
```

remove

Linking to an external stylesheet

second_page.html

ind

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html>
    <head>
        <title>Page 2</title>
        <link href="my_style.css" type="text/css" />
    </head>
    <body>
        <h1>Heading</h1>
        <p>This is yet another page.</p>
    </body>
</html>
```
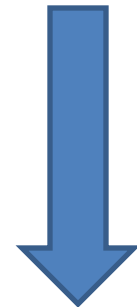
```
<!DOC
<htm
    <

    <
    <
            <p>This is another paragraph.</p>
    </body>
</html>
```

my_style.css

```
p {
  text-align: center;
 }
```

3 ways to styling markup

Amount of work?

1. Inline
2. In the header
3. In a separate CSS file

Most

least

CSS: Summary

What?

"Cascading" stylesheet?

– "Cascading": answered later

Why CSS?

– You should know ☺

How?

`<style>`

`<link>`

Key items learned so far

- Tags:

  List   `<ol><ul><li><dl><dt><dd>`

  Image   `<img>`

  Anchor   `<a>`

  Linking to external data   `<link>`

  Styling   `<style>`

  http://www.w3schools.com/tags/

- Key concepts:

  – Relative vs. Absolute URL

  – Attribute specification vs. Stylesheet

  – attribute="value" vs. selector | property | value

Lab exercise 2

- XHTML + CSS

- Due this Thursday 23:59pm

- TA office hours today and Wed.