

<a>

# Understanding URLs & Addressing

OCI / CAIT

R. Scott Granneman

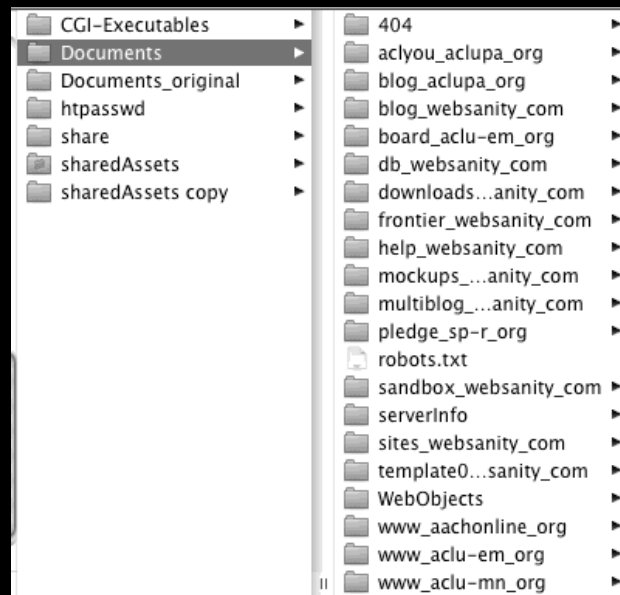
Jordan Lev

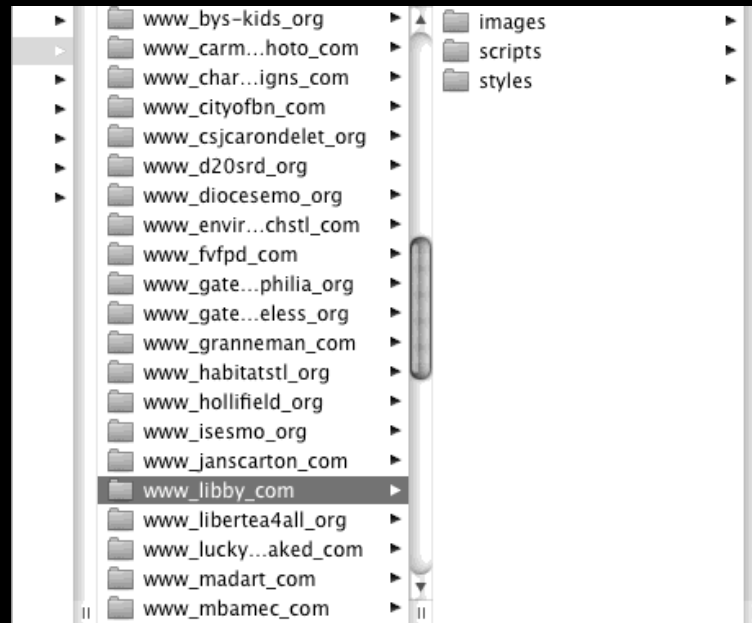
© 2008 Scott Granneman

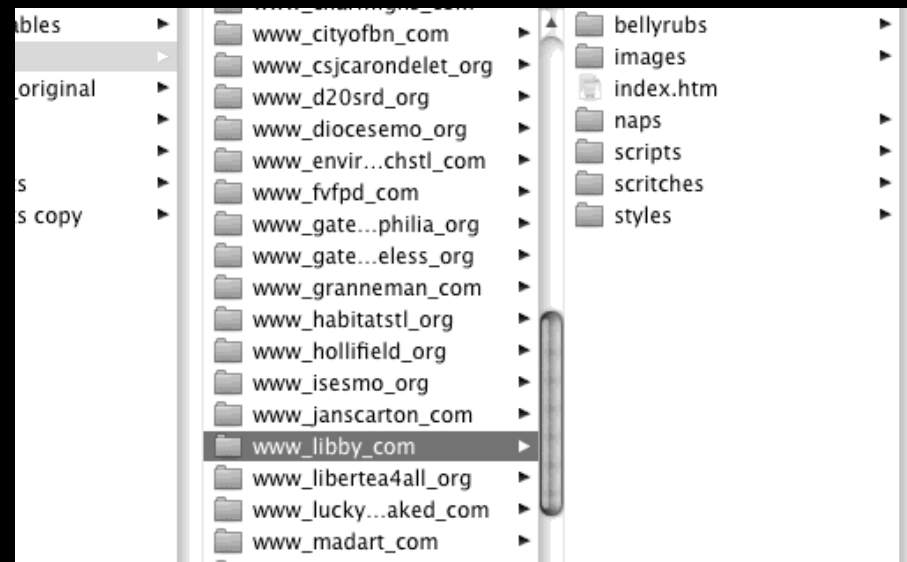
Last updated 20140120

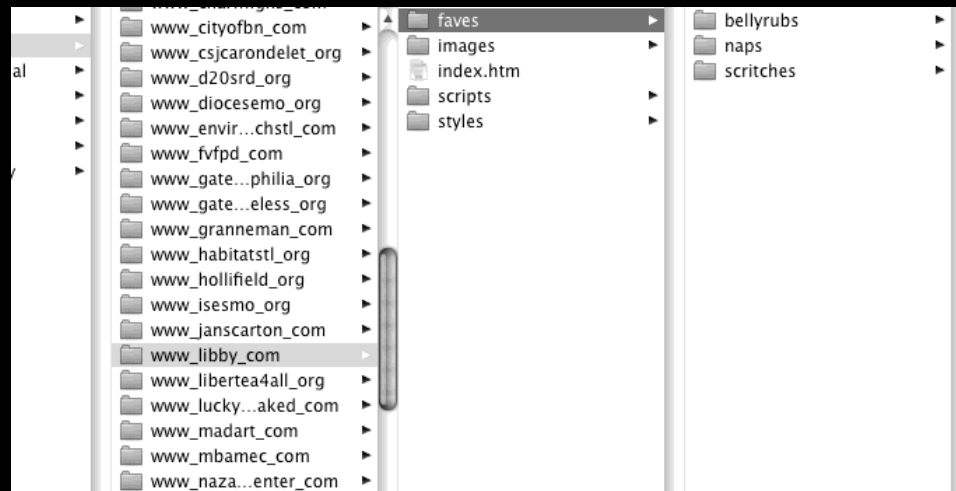
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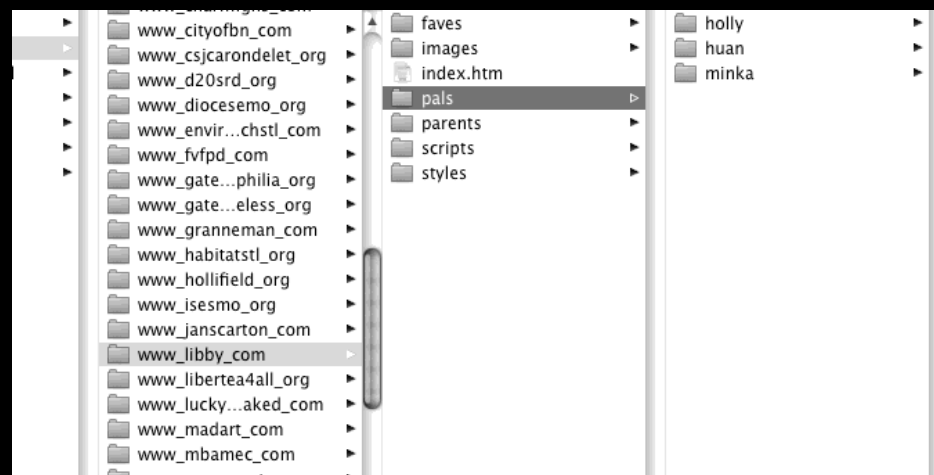
# Default Folder Structure

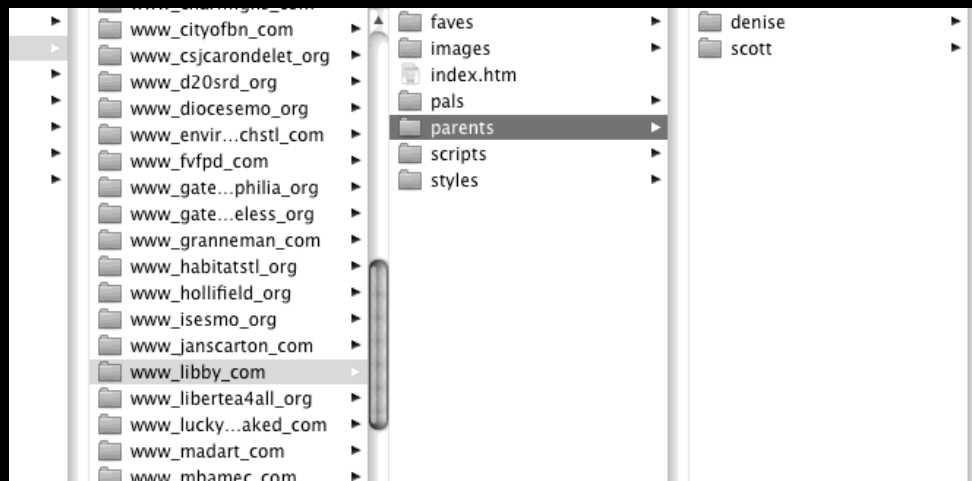




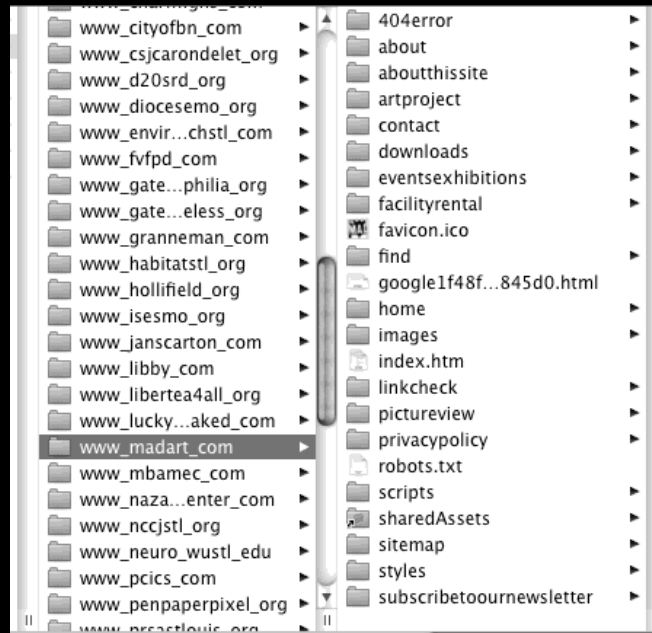


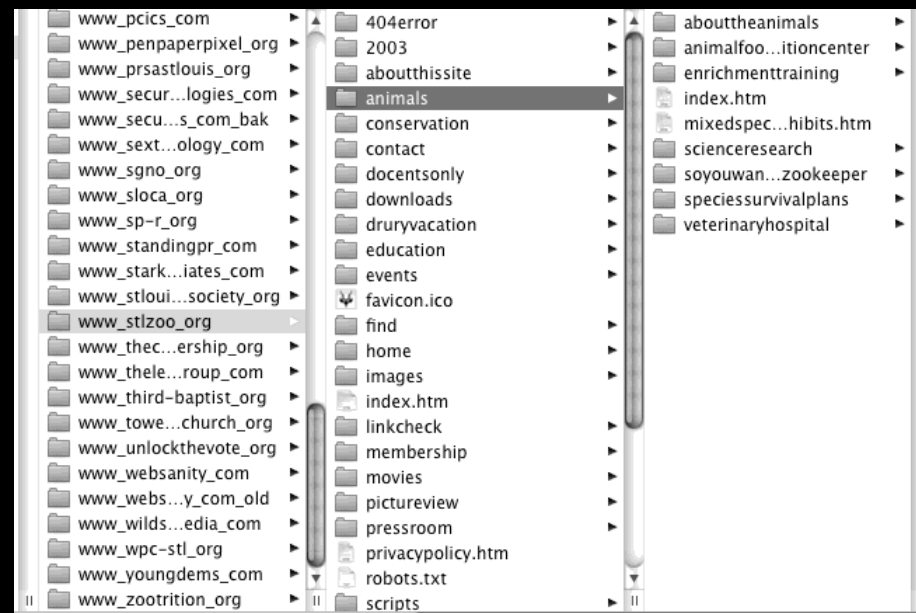


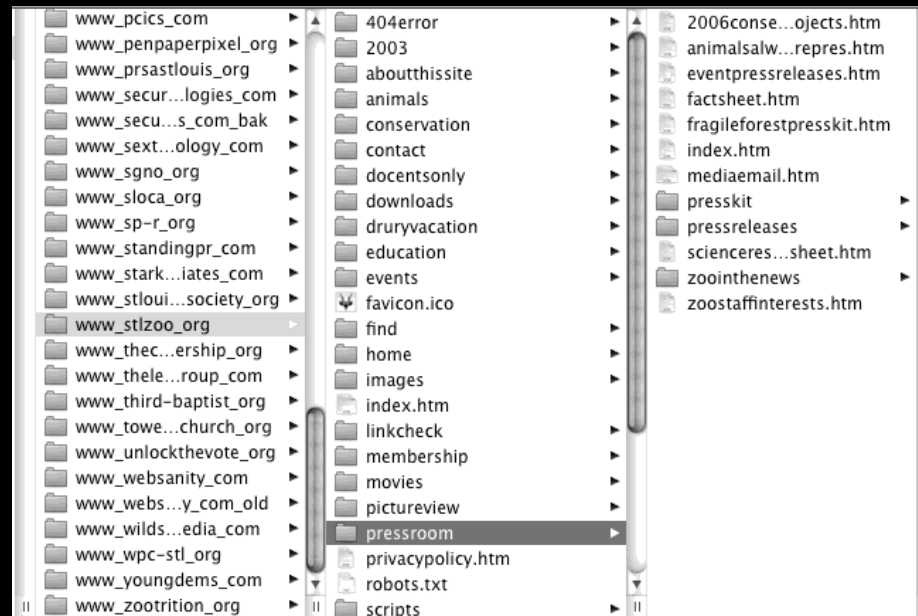












# Default Index Files

```
<a href="http://www.nytimes.com">  
  The New York Times</a>
```

```
<a href="http://www.google.com/">  
  Google</a>
```

```
<a href="http://www.granneman.com">  
  Scott Granneman</a>
```

Where do you end up  
when you go these URLs?

How does the web server  
know which page you're asking for?

```
<a href="http://www.nytimes.com/arts">
  The New York Times Arts</a>

<a href="http://www.google.com/a/">
  Google Apps</a>

<a href="http://www.granneman.com/
  webdev/">
Web Development :: Scott Granneman</a>
```

Where do you end up  
when you go these URLs?

How does the web server  
know which page you're asking for?

# Error 403

## Access forbidden!

You don't have permission to access the requested directory. There is either no index document or the directory is read-protected.

If you think this is a server error, please contact the [webmaster](#).

## Error 403

[www.diocesemo.org](http://www.diocesemo.org)

Mon Sep 29 14:14:43 2008

Apache/2.2.8 (Unix) mod\_ssl/2.2.8 OpenSSL/0.9.7l DAV/2 PHP/5.2.6

# Error 404

## Object not found!

The requested URL was not found on this server. If you entered the URL manually please check your spelling and try again.

If you think this is a server error, please contact the [webmaster](#).

## Error 404

[www.janscarton.com](http://www.janscarton.com)





















Mon Sep 29 14:16:21 2008

Apache/2.2.8 (Unix) mod\_ssl/2.2.8 OpenSSL/0.9.7i DAV/2 PHP/5.2.6



# Directory Listing

## Index of /downloads/apply/options

<u>Name</u>	<u>Last modified</u>	<u>Size</u>
 <a href="#">d6c7f99b8d7684e6ad064505daa424d5data.txt</a>	26-Sep-2008 16:23	3k
 <a href="#">61bb8384f9716726fffc16489ea87061data.txt</a>	25-Sep-2008 20:57	2k
 <a href="#">a873ae3c272180f64d042e34977b8071data.txt</a>	25-Sep-2008 20:40	3k
 <a href="#">3a71aa784db915c2adad643a74b3c751data.txt</a>	25-Sep-2008 15:32	3k
 <a href="#">4a663a89203bb0e311786cf238d907cadata.txt</a>	24-Sep-2008 23:53	3k
 <a href="#">e7c2d5481f212272c509c6cc2896d68ddata.txt</a>	24-Sep-2008 20:11	3k
 <a href="#">f1cfe80b146b954c68b0b16c2e27e547data.txt</a>	24-Sep-2008 19:50	3k
 <a href="#">a0925a393d5009ea3f0f27fbc772af42data.txt</a>	24-Sep-2008 17:53	3k
 <a href="#">d8861a00f88fdd1532e26cdb79b14356data.txt</a>	24-Sep-2008 08:14	2k
 <a href="#">eed2192c51d0b3ee42e203ed8d6c77aedata.txt</a>	23-Sep-2008 21:57	3k
 <a href="#">76044134547bfbec2bbcd61b42e8f920data.txt</a>	23-Sep-2008 16:41	2k
 <a href="#">26cf614ef74f716719e0606e900625edddata.txt</a>	23-Sep-2008 11:10	3k
 <a href="#">9c1a4d753c7c622a5ee1b314ff72371eddata.txt</a>	23-Sep-2008 09:59	3k
 <a href="#">a7f0d62433d975d095f30e7019c6d737data.txt</a>	22-Sep-2008 16:09	2k
 <a href="#">ae3392cbd785ab2edfef3bb6818d1b09data.txt</a>	22-Sep-2008 11:22	3k
 <a href="#">7c9ea0913bbb473250b8936d458b247fddata.txt</a>	19-Sep-2008 09:44	4k
 <a href="#">44fd7188a101d65d1c45fc5fa424e902data.txt</a>	16-Sep-2008 16:23	2k
 <a href="#">61d23a8d68952ff0b5d283fd8d095feadata.txt</a>	16-Sep-2008 01:13	3k
 <a href="#">1e26d948a753fcc339404af4234c3a8addata.txt</a>	14-Sep-2008 21:29	2k
 <a href="#">3bdf06e95b9a7f53c110a174fdf35e33data.txt</a>	14-Sep-2008 17:06	3k



## Typical Default Index Files

Apache	IIS
<code>index.html</code>	<code>default.htm</code>
<code>index.htm</code>	<code>default.asp</code>
<code>index.php</code>	
<code>index.shtml</code>	

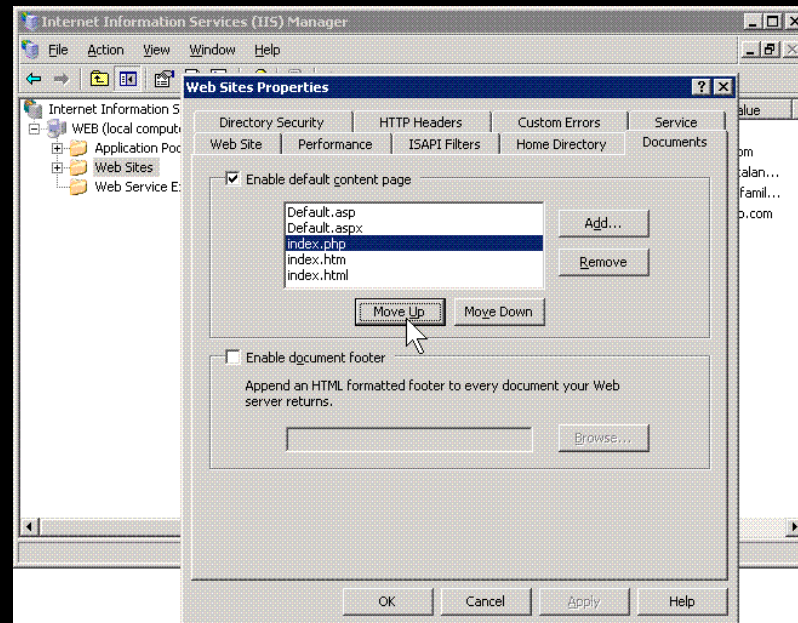
You can use any of these  
on any web server,  
depending upon how it's configured

## Apache

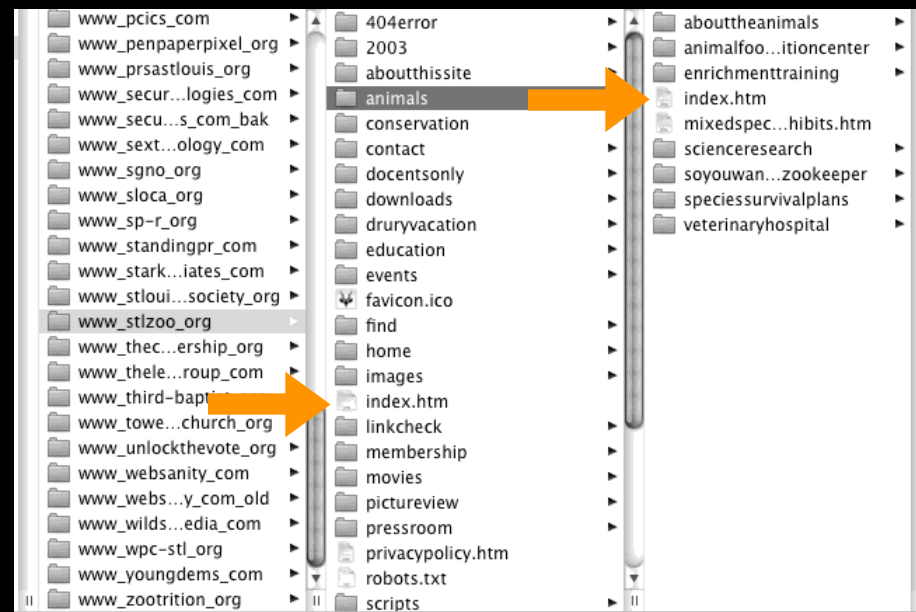
```
DirectoryIndex "index.php" "index.html"  
               "index.htm"
```

OR

```
DirectoryIndex "index.htm" "index.php"  
               "index.shtml"
```



index.htm  
index.html  
index.shtml  
default.html  
default.shtml  
default.asp  
index.php  
index.asp  
index.jsp







# Absolute & Relative

## Absolute

The full, complete address  
to somewhere,  
from start to finish

## Relative

The address  
to somewhere,  
in relation to where you are now

Absolute Directions  
Party at my (old) house!  
40 to Skinker  
N on Skinker  
Pass Forest Park Parkway  
R/E on Waterman  
1 and 1/2 blocks on Waterman  
6047 Waterman

Relative Directions  
Party at my (old) house!  
From Wash U,  
walk down Skinker to Waterman  
Right on Waterman  
1 and 1/2 blocks on Waterman  
6047 Waterman

Google Maps

6047 waterman 63112

Find businesses, addresses and places of interest. [Learn more.](#)

Get Directions [My Maps](#)

Print Send Link

Map Satellite Terrain

1610 S Big Bend Blvd, St Louis, MO 63117

6047 Waterman Blvd, St Louis, MO 63112

[Add Destination](#) [Show options](#)

By car

Get Directions

Also available: [Walking](#)

**Driving directions to 6047 Waterman Blvd, St Louis, MO 63112**

3.0 mi – about 9 mins

1610 S Big Bend Blvd  
St Louis, MO 63117

1. Head north on S Big Bend Blvd toward Arlington Dr 1.9 mi
2. Turn right at Forest Park Pkwy/Millbrook Blvd 0.8 mi
3. Turn left at N Skinker Blvd 0.1 mi
4. Turn right at Waterman Blvd 0.2 mi

6047 Waterman Blvd  
St Louis, MO 63112

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly.

©2008 Google. Map data ©2008 Tele Atlas. [Terms of Use](#)

# URLs

<b>Absolute</b>		Complete URL
<b>Site root-relative</b>		Web server fills in protocol & domain
<b>Document-relative</b>		Same directory
		Down into sub-directory
		Up into parent directory

OK	Never OK
foo.htm	C:\Windows\foo.htm
bar/foo.htm	\Windows\foo.htm
http://www.foo.com	\foo.htm
../foo.htm	file:///
/bar/foo.htm	

No OS-specific paths!



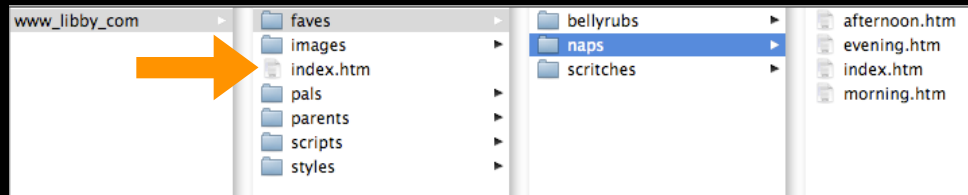
# Absolute URLs

## Absolute URL

<http://www.libby.com/>

<http://www.libby.com/parents/>

[http://www.libby.com/parents/  
scott.htm](http://www.libby.com/parents/scott.htm)



On `index.htm`:

```
<a href="http://www.libby.com/faves/naps/afternoon.htm">After lunch</a>
```

```
<a href="http://www.dogster.com">Chat with pals</a>
```

# Site-Root Relative URLs

/foo/bar.htm

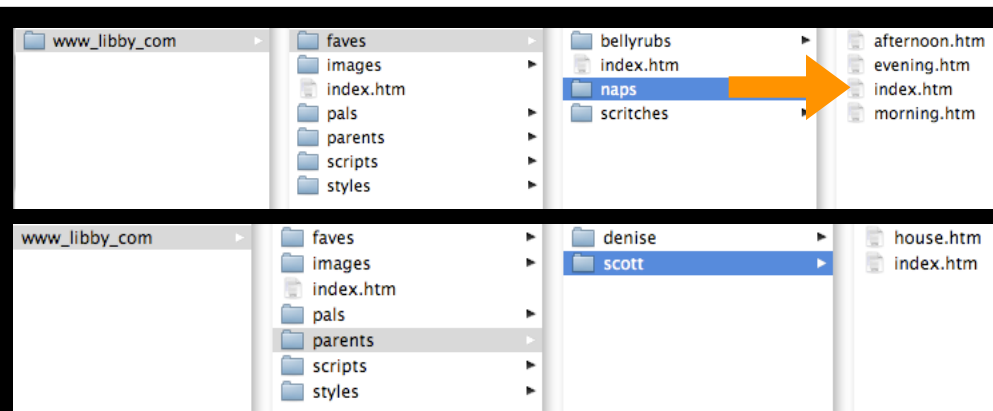
The web server fills in the rest:

http://

&

www.libby.com

The 1<sup>st</sup> / in  
/foo/bar.htm  
is always short for  
http://www.libby.com



On index.htm:

/parents/scott/house.htm

/parents/scott/

/styles/main.css

# Document- Relative URLs



Document-relative URLs  
tell the browser  
how to get  
from the page it is currently on  
to another on the same site

Grandparent	File in grandparent folder	<code>../../baba.htm</code>
Parent	File in parent folder	<code>../ali.htm</code>
Sibling	File in same folder	<code>foo.htm</code>
Child	File in child folder	<code>bar/foo.htm</code>
Grandchild	File in grandchild folder	<code>foobar/bar/foo.htm</code>

Same Directory

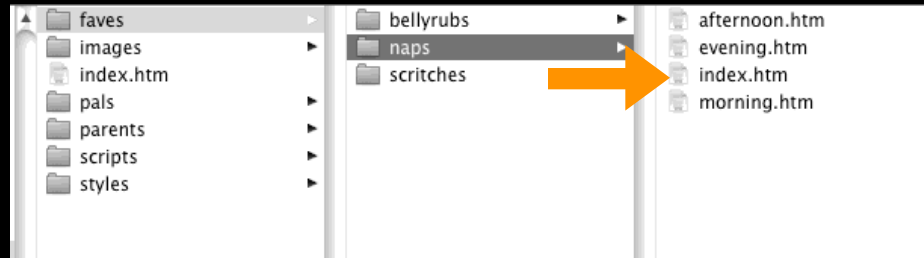
foo.htm

The server fills in the rest:

http://

www.libby.com/

path/to/URL/



On `index.htm`:

```
<a href="morning.htm">After breakfast</a>
```

```
<a href="afternoon.htm">After lunch</a>
```

```
<a href="evening.htm">After dinner</a>
```

Down

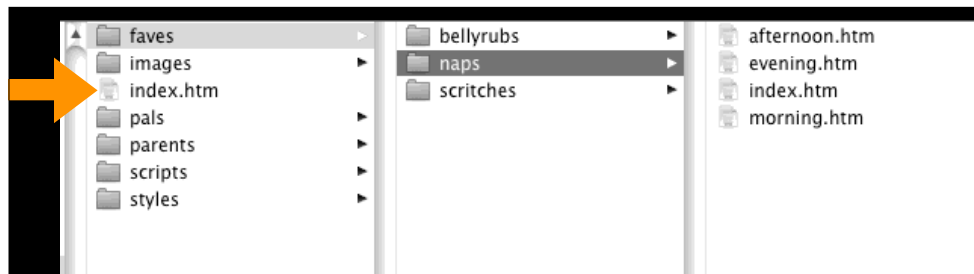
bar/foo.htm

The server fills in the rest:

http://

www.libby.com/

path/to/URL/



On `index.htm`:

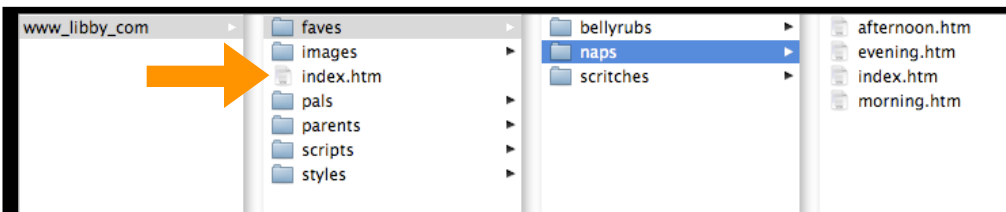
```
<a href="faves/naps/morning.htm">After  
breakfast</a>
```

```
<a href="faves/naps/afternoon.htm">After  
lunch</a>
```

```
<a href="faves/naps/evening.htm">After  
dinner</a>
```



Up



As we just learned,  
going *down* with a Relative URL is easy:

~~naps/evening.htm~~

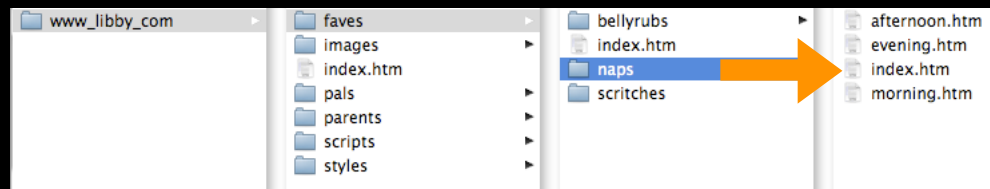
~~naps/~~

~~faves/naps/~~

~~faves/naps/morning.htm~~

How do you go *up*?

../ = up



On index.htm:

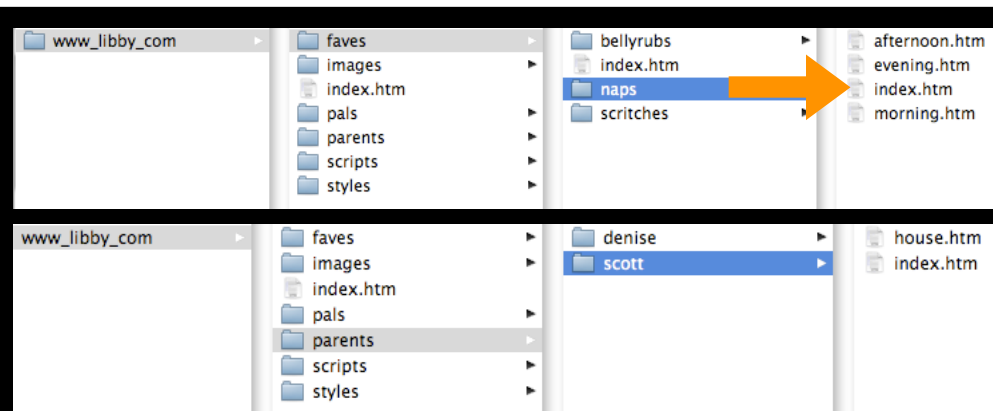
../index.htm

../

../../

What about this?

`../../bar/foo.htm`



On index.htm:

../../parents/scott/index.htm

../../parents/scott/

../../parents/scott/house.htm

../../styles/main.css

Which  
One?

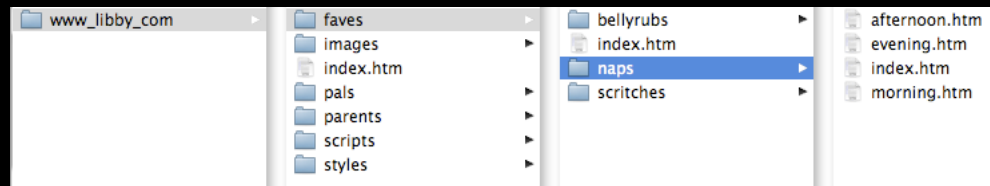
## Advantages of Relative URLs

Quick & easy on small sites

Can test site on your local computer  
without a web server

Can change domain name easily

Can move directories up or down  
& links are preserved



## Advantages of Absolute URLs

Doesn't matter where  
the page with link on it  
is in the file structure

Quick & easy

Required for external links



# Extras

Want to create a “fake” link?

One that looks like a link,  
but doesn't actually go anywhere?

```
<a href="#">Fake link</a>
```

(Actually, it reloads the same page)

You can also use the  
`id` attribute  
to position anchors in elements

Every `id` on a page  
must be unique

Create an anchor

```
<h3 id="foo">Lorem ipsum</h3>
```

Link to the anchor

```
<a href="#foo">dolor sit amet</a>
```

You can use this technique  
to create a table of contents

```
<h2>Table of Contents</h2>
<ul>
  <li><a href="#part-one">Part One</a></li>
  <li><a href="#part-two">Part Two</a></li>
</ul>
...
<h2 id="part-one">Part One</h2>
...
<h2 id="part-two">Part Two</h2>
```

You can also use this technique  
to make it easy for visitors  
to jump back to the TOC

```
<h2 id="toc">
  Table of Contents
</h2>
<ul>
  <li><a href="#part-one">Part One</a></li>
  <li><a href="#part-two">Part Two</a></li>
</ul>
...
<h2 id="part-one">
  Part One <a href="#toc">↩</a>
</h2>
...
<h2 id="part-two">
  Part Two <a href="#toc">↩</a>
</h2>
```

Thank you!

scott@granneman.com  
www.granneman.com  
ChainsawOnATireSwing.com  
@scottgranneman

info@jordanlev.com  
webconcentrate.com



<a>

# Understanding URLs & Addressing

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