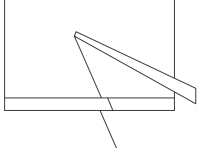


Bring ideas to life
VIA University College



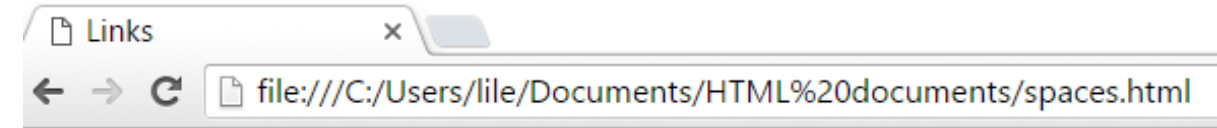
Images

RWD I1

Exercises from last time

Questions

Recap links



Link to [where Line buys stuff for her pets](#)

`<a>` This is a link tag

The page the link takes you to

`<p>Link to `
where Line buys stuff for her pets`</p>`

The text the user will see, and can click on

Recap bookmarks

- Easy to make 😊
 - Use the *id* attribute (id="value") to define bookmarks in a page
 - Use the *href* attribute (href="#value") to link to the bookmark

```
<a href="#Nemo">Nemo</a>
```

▪
▪
▪

```
<h2 id="Nemo">Nemo (current)</h2>
```

```
<p>Nemo is my dog. He is a Japanese spitz and looks like a polar fox (white and fluffy). He is 10 years old and loves the snow.</p>
```

Recap directory structure

`Contact`

`Collars`

`Home`

`Dog Bathing`



groomer
index.html
contact.html



images



products
collars.html
shampoo.html



services
bathing.html
daycare.html

A silhouette of a tree stands on a rocky shore, its branches reaching out against a vibrant sunset sky. The sun is low on the horizon, casting a warm glow over the ocean and the sky, which is filled with soft, colorful clouds. The text "A picture is worth a thousand words" is overlaid on the right side of the image in a bold, white font.

**A picture
is worth a
thousand
words**

...Or is it?

Image formats

- Most commonly used on web pages:
 - GIF (Graphic Interchange Format) – for charts, sketches, logos etc.
 - JPEG (Joint Photographic Experts Group) – for photos etc.
 - PNG (Progressive Network Graphics) – the best from GIF & JPEG

GIF

GIF saved with
Transparency

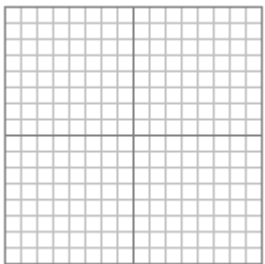
GIF saved without
Transparency

Background
color configured
to be
transparent

Background
color – no
transparency

- Graphics Interchange Format
- Best used for line art and logos
- Maximum of 256 colors (8-bit)
- One color can be configured as transparent
- Can be animated
- Uses lossless compression
- Can be interlaced

Animated GIF Showing Interlaced



JPEG

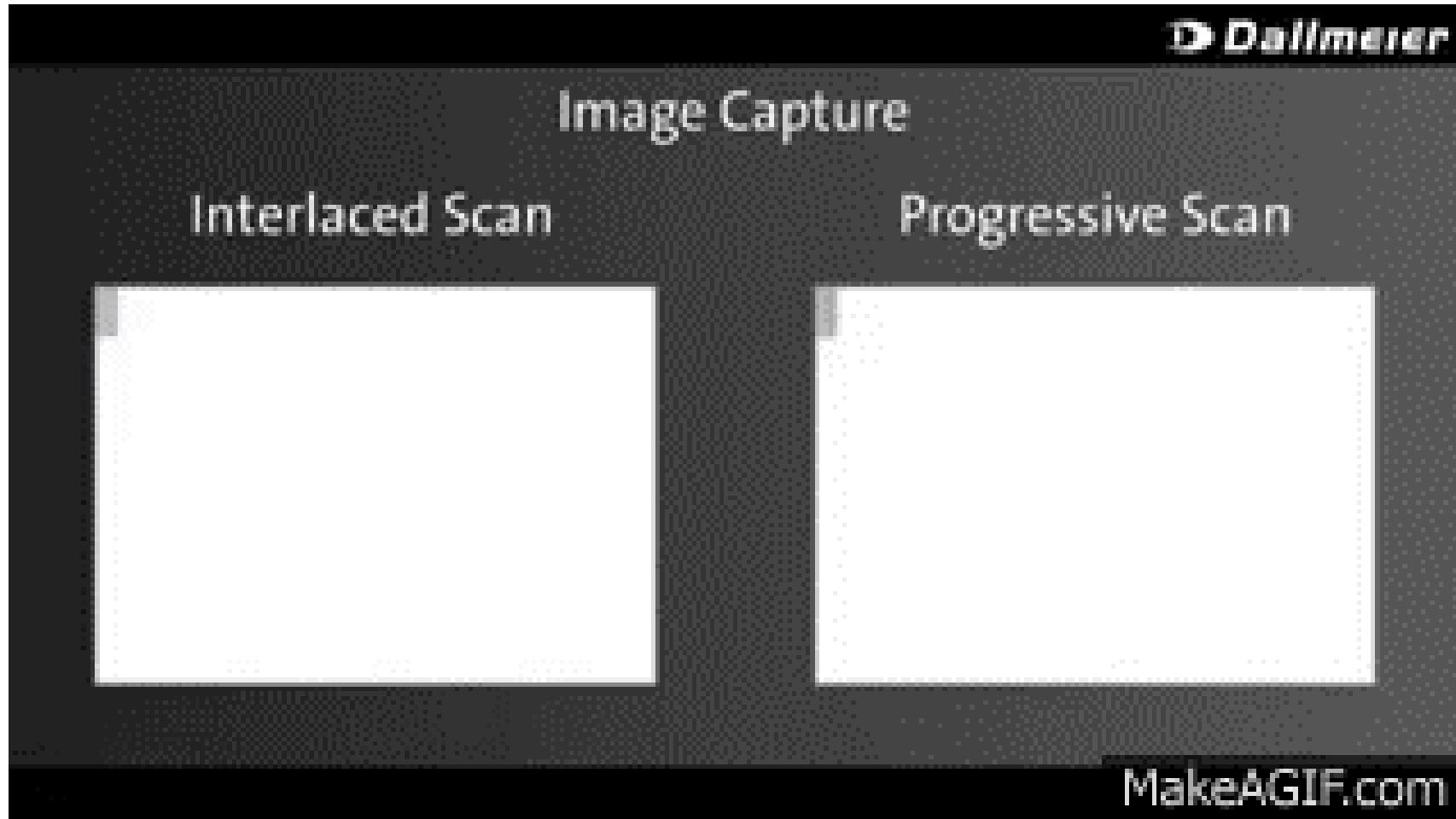
- Joint Photographic Experts Group
- Best used for photographs
- Up to 16.7 million colors (24-bit)
- Use lossy compression
- Cannot be animated
- Cannot be made transparent
- Progressive JPEG – similar to interlaced display



PNG

- Portable Network Graphic
- Support millions of colors (24-bit or 32-bit)
- Support multiple levels of transparency
(but browsers do not – so limit to one transparent color for Web display)
- Supports interlacing
- Use lossless compression
- Combines the best of GIF & JPEG
- Browser support is growing

Interlaced vs. progressive



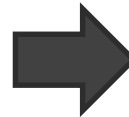
Web Graphics

Image Type	File Extension	Compression	Transparency	Animation	Colors	Progressive Display
Graphic Interchange Format (GIF)	.gif	Lossless	Yes	Yes	256	Inter-lacing
Joint Photographic Experts Group (JPEG)	.jpg or .jpeg	Lossy	No	No	Millions	Progressive
Portable Network Graphic (PNG)	.png	Lossless	Yes (multiple levels)	No	Millions	Inter-lacing

RGB colors

- Colors are combined using their **red**, **green**, and **blue** values
- This is called RGB
- The values range from 0 to 255
- The values/intensity of **red**, **green**, and **blue**
 - `rgb(0, 0, 0)` is black
 - `rgb(255, 255, 255)` is white

RGB images



										62	63	63	65	66	63	61	63	63	64		
										29	31	34	30	27	31	31	30	30	31	64	63
64	64	64	60	59	62	62	61	59	58	31	31	64	64							64	64
62	64	64	60	59	61	62	62	63	60	32	32	67	67							67	67
60	62	63	61	61	64	63	63	61	64	32	33	67	66							67	66
62	63	63	60	62	62	62	62	64	65	31	31	62	65							62	65
62	63	62	61	61	60	60	61	65	64	32	32	66	66							66	66
61	61	62	59	59	61	65	62	62	65	33	32	62	62							62	62
63	61	60	59	61	63	66	62	63	67	32	30	62	60							62	60
65	60	59	60	62	64	63	61	63	64	32	31	61	63							61	63
66	63	61	61	63	64	64	61	63	60	31	32										
61	63	63	66	67	63	63	64	61	64												

Hexadecimal Color Values

- # is used to indicate a hexadecimal value
 - What is that?
- Hexadecimal numbers (base 16)
- Hex value pairs range from 00 to FF
- Three hex value pairs describe an RGB color

#FFFFFF	#FFFFCC	#FFF999	#FFF666	#FFF333	#FFF000
#FFCCFF	#FFCCCC	#FFCC99	#FFCC66	#FFCC33	#FFCC00
#FF99FF	#FF99CC	#FF9999	#FF9966	#FF9933	#FF9900

#000000 black

#FF0000 red

#00FF00 green

#0000FF blue

#CCCCCC grey

Alternative color names can be used

Take a look here:

http://www.w3schools.com/html/html_colornames.asp

Web Safe Colors

- A collection of 216 colors
- Display the most similar on the Mac, PC and Linux platforms
- Hex values: 00, 33, 66, 99, CC, FF
- Color Chart

<http://webdevfoundations.net/color>

Web Safe Color Chart

#FFFFFF	#FFFFCC	#FFF999	#FFF666	#FFF333	#FFF000
#FFCCFF	#FFCCCC	#FFCC99	#FFCC66	#FFCC33	#FFCC00
#FF99FF	#FF99CC	#FF9999	#FF9966	#FF9933	#FF9900
#FF66FF	#FF66CC	#FF6699	#FF6666	#FF6633	#FF6600
#FF33FF	#FF33CC	#FF3399	#FF3366	#FF3333	#FF3300
#FF00FF	#FF00CC	#FF0099	#FF0066	#FF0033	#FF0000
#CCFFFF	#CCFFCC	#CCFF99	#CCFF66	#CCFF33	#CCFF00
#CCCCFF	#CCCCCC	#CCCC99	#CCCC66	#CCCC33	#CCCC00
#CC99FF	#CC99CC	#CC9999	#CC9966	#CC9933	#CC9900
#CC66FF	#CC66CC	#CC6699	#CC6666	#CC6633	#CC6600
#CC33FF	#CC33CC	#CC3399	#CC3366	#CC3333	#CC3300
#CC00FF	#CC00CC	#CC0099	#CC0066	#CC0033	#CC0000
#99FFFF	#99FFCC	#99FF99	#99FF66	#99FF33	#99FF00
#99CCFF	#99CCCC	#99CC99	#99CC66	#99CC33	#99CC00
#9999FF	#9999CC	#999999	#999966	#999933	#999900
#9966FF	#9966CC	#996699	#996666	#996633	#996600
#9933FF	#9933CC	#993399	#993366	#993333	#993300
#9900FF	#9900CC	#990099	#990066	#990033	#990000

Image Optimization

- The process of creating an image with the lowest file size that still renders a good quality image—**balancing image quality and file size**
- Photographs taken with digital cameras are not usually optimized for the Web
- Use a graphics application to:
 - Reduce image dimensions
 - Reduce size of the image file
- This is very important when working with Mobile devices with limited bandwidth



Optimize An Image for the Web

- Image Optimization

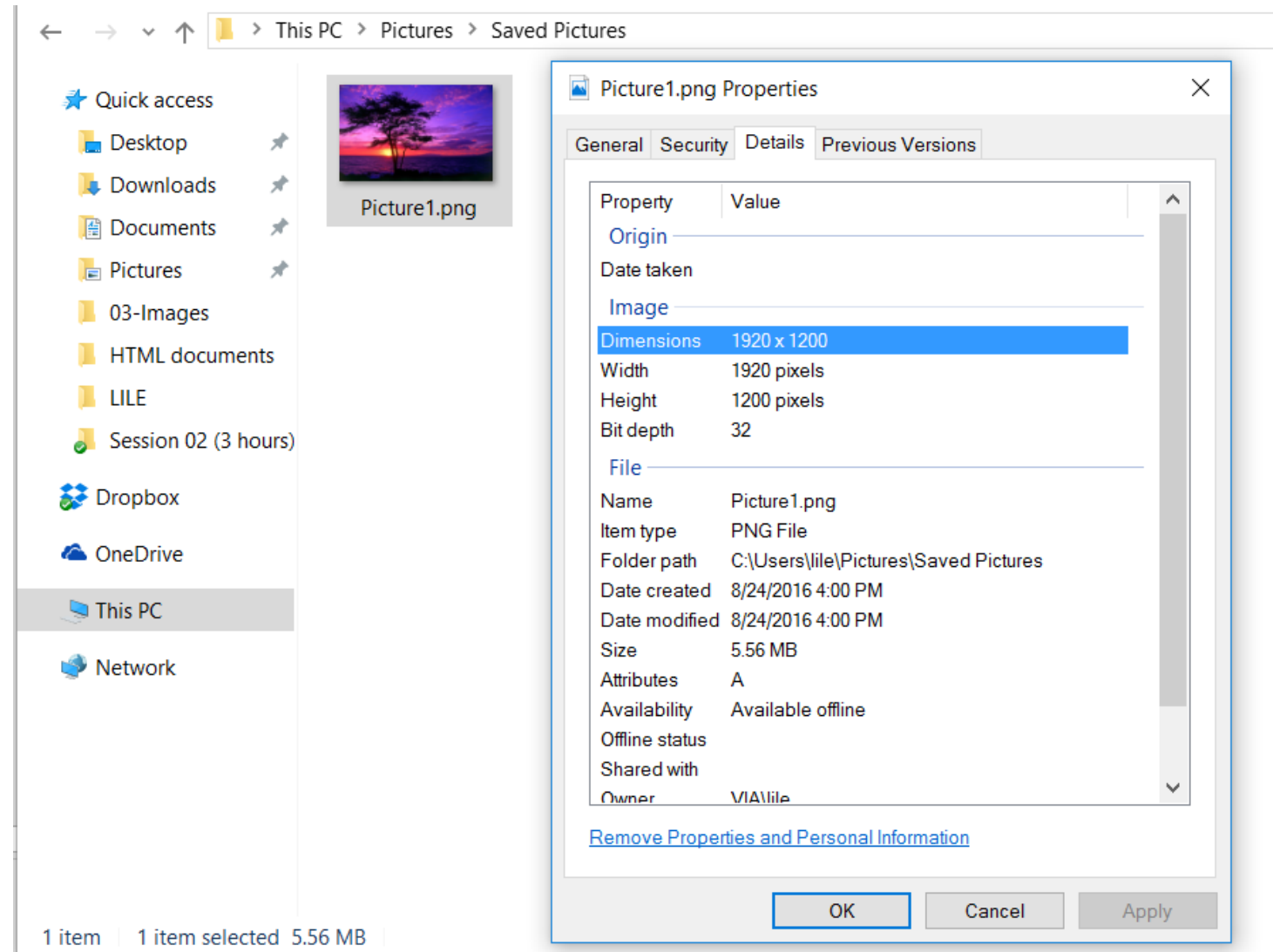
- Reduce the file size of the image
- Reduce the dimensions of the image to the actual width and height of the image on the web page
- Reduce the quality – easy to do with JPEG

- Image Editing Tools:

- GIMP (free!)
- Adobe Fireworks
- Adobe Photoshop
- <http://pixlr.com/editor> (free!)

Optimize An Image for the Web

- How do you find/know the dimensions of an image?
- Right click and select properties



Choosing Names for Image Files

- Use all lowercase letters
- Do not use punctuation symbols and spaces
 - Use dash (-) or underscore (_) instead of space
- Do not change the file extensions
(should be .gif, .jpg, .jpeg, or .png)
- Keep your file names short but descriptive
 - i1.gif is probably too short
 - myimagewithmydogonmybirthday.gif is too long
 - dog-b-day.gif may be just about right

Adding images

```

```

- **src:** URL to the picture/image to show
- **alt:** Description of the picture – shown if the picture can't be seen
Can be read by screen readers
- **title:** Description of the picture
Often shown as tool tip when hovering
over the picture



Images (continued)

```

```

- **width**: Specify the width of picture in pixels
- **height**: Specify the height of the picture in pixels
- **style**="width:120px;height:100px;"
- There are different ways to align images on a page – later we will discuss them in CSS lessons

NOTE: width and height of images will normally be set in CSS

Images (continued)

Add caption to picture (HTML 5 only)

- Will be ignored of old browsers

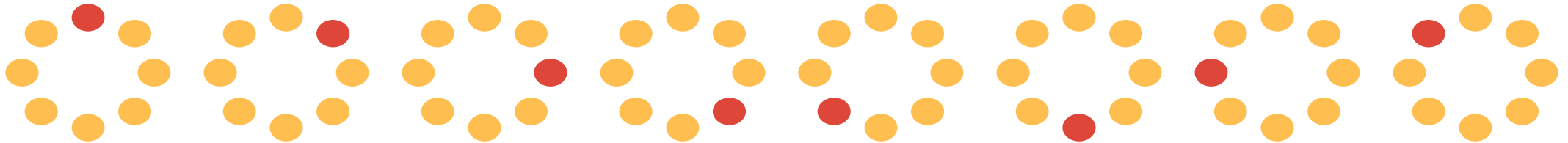
```
<figure>
  
  <figcaption>This is the figure caption</figcaption>
</figure>
```



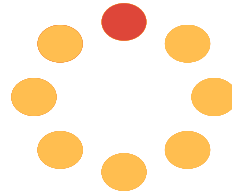
This is the figure caption

NOTE: HTML5 only!!

Animated GIF



Animated GIF



Can be created with <http://gifmaker.me/> etc

Accessibility & Images

- Required:
 - Configure the alt attribute
 - Alternate text content to convey the meaning/intent of the image
 - If the image contains a text message, then the text should typically be the value of the alt attribute
 - NOT the file name of the image
 - Use alt="" for purely decorative images

Image Links

- To create an image link use a link element to contain an image element (instead of the link text)

```
<a href="index.html"> </a>
```



- Many browsers automatically add a border to image links.
- Later we will handle this with CSS

Thumbnail Image

A small image configured to link to a larger version of that image



```
<a href="big.jpg" ></a>
```

Exercises

- Improve your Star Pizza page using images
 1. Use the pizza images found in the images-subfolder to create an appetizing menu for Star Pizza.
 2. Use Paint or another picture editing tool to resize (make a small version) the images of pasta dishes and beverages and add these to this menu page. Organize menu items into groups with headlines (Pizzas, Pasta and Beverages).
 3. Make image links for all images. Clicking on one should open a new window with a large version of the item clicked.
 4. Find on the Internet or make yourself an animated logo for the Star Pizza homepage.
- Continue with your personal web site using images