

- **radial-gradient()** = works from inside to outside element  
default direction ↕↔

- format: `background: radial-gradient(starting color, ending color);`

- use css gradient generator: <https://www.colorzilla.com/gradient-editor/>

- **gradient color stops** = to add multiple colors to a gradient  
separate colors w/ a comma  
by default colors are distanced equally → first @ 0% & last @ 100%.

→ (eg. `background: linear-gradient(to right, #fff, #3ac, #368);`)

- choose color's position: declare length value after color value

→ (eg. `background: linear-gradient(to right, #fff, #3ac 85%, #368);`)

### Using Multiple Background Images

- separate multiple background values w/ a comma
- layer order: first declared background image | top / foreground  
...  
last declared background image | bottom / background

→ (eg. `background: url("fore.png") 0 0 no-repeat,  
url("middle.png") 0 0 no-repeat,  
url("back.png") 0 0 no-repeat;`)

→ (eg. `background: url("bg.png") 20px 50% no-repeat, linear-gradient(#3ac, #368);`)

### Exploring New Background Properties

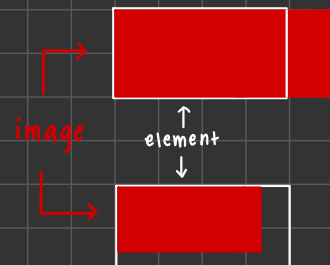
- new background properties: `background-size`  
`background-clip`  
`background-origin`
- **background-size property** = to change the size of a background image

- accepts: general length values  
keyword values

- keyword values: **auto** = preserves aspect ratio

**cover** = preserves aspect ratio  
shrinks/stretches image to cover entire element  
image is often cut off to occupy full space

**contain** = preserves aspect ratio  
shrinks/stretches image to remain/reside w/in element  
always shows the full image  
image often doesn't occupy full space of element



## Lesson 8: Creating Lists

- HTML lists: unordered
  - ordered
  - description
- **marker** = the bullet point preceding a list item
- marker styles: square
  - round
  - numeric
  - alphabetical
  - nonexistent

## Unordered Lists

- unordered list (<ul>)** = a list of related items whose order doesn't matter  
each item is individually marked w/in the <ul> via <li>
- browser defaults:
    - vertical margin
    - left padding <ul> element
    - Solid dot marker preceding each <li> element
- format:
- |   |   |   |   |                    |
|---|---|---|---|--------------------|
| <ul><br><li>...</li><br><li>...</li><br></ul> | → | <ul><br><li> Orange</li><br><li> Blue</li><br></ul> | → | . Orange<br>. Blue |
|---|---|---|---|--------------------|

## Ordered Lists

- **ordered list (<ol>)** = same as unordered list, but items' order does matter  
default item marker: numbers
  - unique attributes: start  
reversed
  - format: `<ol>` → `<ol>` →  
`<li>... </li>` `<li> mix ingredients </li>` 1. mix ingredients  
`<li>... </li>` `<li> bake </li>` 2. bake  
`</ol>` `</ol>`
- **start attribute** = defines the number from which an ordered list should start  
accepts integer value arguments
  - format: `<ol start="integer">` → `<ol start="30">` →  
30. mix ingredients  
31. bake
- **reversed attribute** = allows a list to appear in reverse order  
boolean attribute → doesn't accept any arguments

- format: `<ol reversed>`  $\rightarrow$  2. mix ingredients  
1. bake

**value attribute** = changes an individual's list item's value/marker #  
any list item below the value attributed list item has the subsequent #

- format: <code>&lt;ol&gt;</code>	$\rightarrow$	<code>&lt;ol&gt;</code>	$\rightarrow$	1. mix ingredients
<code>&lt;li&gt;...&lt;/li&gt;</code>		<code>&lt;li&gt; mix ingredients &lt;/li&gt;</code>		7. bake
<code>&lt;li value="#"&gt;...&lt;/li&gt;</code>		<code>&lt;li value="7"&gt;bake &lt;/li&gt;</code>		8. cool down
<code>&lt;li&gt;...&lt;/li&gt;</code>		<code>&lt;li&gt; cool down &lt;/li&gt;</code>		
<code>&lt;/ol&gt;</code>		<code>&lt;/ol&gt;</code>		

## Description Lists

**description lists (`<dl>`)** = used to outline multiple terms & their descriptions (eg. glossary)  
may contain multiple terms/description & multiple descriptions/term

- list items: description term element `<dt>`  
description element `<dd>`

- defaults: `<dl>` vertical margins  
`<dd>` left margin

- format: <code>&lt;dl&gt;</code>	$\rightarrow$	word
<code>&lt;dt&gt; word &lt;/dt&gt;</code>		definition
<code>&lt;dd&gt; definition &lt;/dd&gt;</code>		word
<code>&lt;dt&gt; word &lt;/dt&gt;</code>		definition 1
<code>&lt;dd&gt; definition 1 &lt;/dd&gt;</code>		definition 2
<code>&lt;dd&gt; definition 2 &lt;/dd&gt;</code>		word 1
<code>&lt;dt&gt; word 1 &lt;/dt&gt;</code>		word 2
<code>&lt;dt&gt; word 2 &lt;/dt&gt;</code>		definition
<code>&lt;dd&gt; definition &lt;/dd&gt;</code>		
<code>&lt;/dl&gt;</code>		

**nesting lists**: every list may be placed w/in another list, can be nested continually  
the only element that can reside directly in `<ul>` & `<ol>` elements is `<li>` elements  
begin new, nested list w/in `<li>` element before closing  
item markers will change according to how deeply nested the list is

$\rightarrow$ (eg. <code>&lt;ol&gt;</code> )	$\rightarrow$	
<code>&lt;li&gt; walk cola &lt;/li&gt;</code>		1. walk cola
<code>&lt;li&gt; clean:</code>		2. clean:
<code>&lt;ul&gt;</code>		o dishes
<code>&lt;li&gt; dishes &lt;/li&gt;</code>		o floor
<code>&lt;li&gt; floor &lt;/li&gt;</code>		o clothes
<code>&lt;li&gt; clothes &lt;/li&gt;</code>		3. make dinner
<code>&lt;/ul&gt;</code>		
<code>&lt;/li&gt;</code>		

```
<li>make dinner </li>
</ol>)
```

### List Item Styling

- **list-style-type property** = to set content of a list item marker
  - works on unordered & ordered lists
  - values:
    - none
    - disc
    - circle
    - square
    - decimal
    - decimal-leading-zero
    - lower-roman
    - upper-roman
    - lower-greek
    - lower-alpha
    - upper-alpha
    - armenian
    - georgian
- using an image as a marker:
  - remove default list marker
  - add background image & padding to <li> element
  - format: 

```
li {
    background: url("name.png") x offset y offset repeat value;
    list-style-type: none;
    padding: #;
}
```
- **list-style-position property** = change list marker placement
  - values:
    - outside** = default
      - content can't wrap below marker
    - inside** = places marker in line
      - allows content to wrap below
      - rarely used
    - inherit
- **list-style property** = shorthand list-style property
  - format: 

```
list-style: list-style-type, list-style-position
```

  
required

### Horizontally Displaying List

- display lists horizontally/as a straight line via: 

```
display property
```

 - quickest
  - ```
float property
```

- displaying list: display <li> items as inline/inline-block  
removes list item marker

→ ( eg. li {  
display: inline-block;  
margin: 0 10px;  
}

- floating list: float <li> items to the left  
list marker still displayed → sits on <li> neighbor → add margin/padding  
clear floats w/ clearfix method to return page back to normal flow

→ ( eg. li {  
float: left;  
margin: 0 20px;  
}

- useful for navigation menus