

# CSS

# cascading style sheets

introduction

## **Learning Objectives**

- Understand how CSS is used and how to include it
- Write your first CSS declarations
- Have them reflected on the page

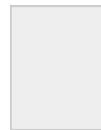
# the meaning of "cascade..."

## css -- cascading style sheets

- current standard is CSS3
- primary way of styling static HTML pages
- some browsers do not support some features
- browsers support features differently
- **cross-browser support** -- design that works on multiple browser types
- history lesson -- original web designed for research papers; styles an "after-thought"
- **cascade** -- properties are read top-to-bottom; bottom rules can override preceding rules



client/browser



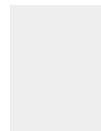
index.html

html  
structure



styles.css

css  
style



script.js

js  
behavior

the meaning of "cascade..."

## css -- cascading style sheets

- defines the styles on a web page

- styles

color

borders

font-style

size (width, height)

display

margins

padding

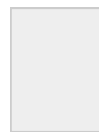
floats, clears, box-sizing, overflow, flexbox...

styling

structure



client/browser



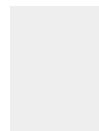
html  
structure

index.html



css  
style

styles.css



js  
behavior

script.js

the meaning of "cascade..."

## css -- cascading style sheets

- defines the styles on a web page
- styles
  - color
  - borders
  - font-style
  - size (width, height)
  - display
  - margins
  - padding
  - floats, clears, box-sizing, overflow, flexbox...



client/browser



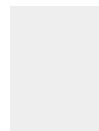
index.html

html  
structure



styles.css

css  
style & structure



script.js

js  
behavior

# linking css to html

## adding styles

- inline

```
<span style="color: red">Some text</span>
```

- html **<style>** tags

```
<style type="text/css">
  span {color: red;}
  #main-menu {width: 400px;}
  .menu-item {width: 40px;}
</style>
```

- stylesheet

```
<head>
  <link rel="stylesheet" type="text/css" href="style.css">
</head>
```



client/browser



index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

# linking css to html

## adding styles

- inline

```
<span style="color: red">Some text</span>
```

- html <style> tags

```
<style type="text/css">
  span {color: red;}
  #main-menu {width: 400px;}
  .menu-item {width: 40px;}
</style>
```

- stylesheet

```
<head>
  <link rel="stylesheet" type="text/css" href="style.css">
</head>
```



client/browser



index.html

html  
structure



styles.css

CSS  
style



script.js

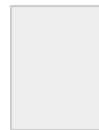
js  
behavior

# styles.css

```
/* ===== sections ===== */
body {
    font-family: "Ariel", sans-serif;
}
.section {
    margin: 20px;
    padding: 10px;
}
#header {
    margin: 20px 20px 0 20px;
    padding: 10px;
    background-color: #eee;
}
#footer {
    background-color: #ddd;
}
/* ===== menu ===== */
#menu {
    width: 400px;
    height: 80px;
}
#menu-item > a {
    width: 80px;
    height: 40px;
    color: purple;
}
```



client/browser



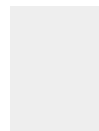
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

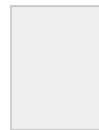
styles.css

## comments

```
/* ===== sections ===== */
body {
    font-family: "Ariel", sans-serif;
}
.section {
    margin: 20px;
    padding: 10px;
}
#header {
    margin: 20px 20px 0 20px;
    padding: 10px;
    background-color: #eee;
}
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#menu {
    width: 400px;
    height: 80px;
}
#menu-item > a {
    width: 80px;
    height: 40px;
    color: purple;
}
```



client/browser



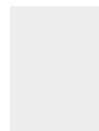
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior



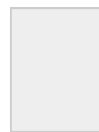
styles.css

## attributes

```
/* ===== sections ===== */
body {
  font-family: "Ariel", sans-serif;
}
.section {
  margin: 20px;
  padding: 10px;
}
#header {
  margin: 20px 20px 0 20px;
  padding: 10px;
  background-color: #eee;
}
#footer {
  background-color: #ddd;
}
/* ===== menu ===== */
#menu {
  width: 400px;
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#menu-item > a {
  width: 80px;
  height: 40px;
  color: purple;
}
```



client/browser



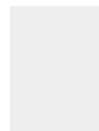
index.html

html  
structure



styles.css

CSS  
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script.js

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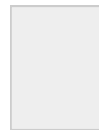
styles.css

## values

```
/* ===== sections ===== */
body {
  font-family: "Ariel", sans-serif;
}
.section {
  margin: 20px;
  padding: 10px;
}
#header {
  margin: 20px 20px 0 20px;
  padding: 10px;
  background-color: #eee;
}
#footer {
  background-color: #ddd;
}
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  width: 400px;
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  width: 80px;
  height: 40px;
  color: purple;
}
```



client/browser



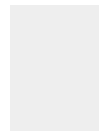
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

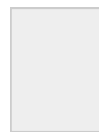
styles.css

## selectors

```
/* ===== sections ===== */
body {
    font-family: "Ariel", sans-serif;
}
.section {
    margin: 20px;
    padding: 10px;
}
#header {
    margin: 20px 20px 0 20px;
    padding: 10px;
    background-color: #eee;
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#footer {
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#menu {
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    width: 80px;
    height: 40px;
    color: purple;
}
```



client/browser



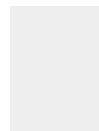
html  
structure

index.html



CSS  
style

styles.css



js  
behavior

script.js

# styles.css

## selectors

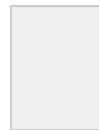
id

# (hash tag)

```
/* ===== sections ===== */
body {
    font-family: "Ariel", sans-serif;
}
.section {
    margin: 20px;
    padding: 10px;
}
#header {
    margin: 20px 20px 0 20px;
    padding: 10px;
    background-color: #eee;
}
#footer {
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/* ===== menu ===== */
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    width: 400px;
    height: 80px;
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.menu-item > a {
    width: 80px;
    height: 40px;
    color: purple;
}
```



client/browser



index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

styles.css

## selectors

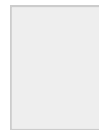
class

.(period)

```
/* ===== sections ===== */
body {
    font-family: "Ariel", sans-serif;
}
.section {
    margin: 20px;
    padding: 10px;
}
#header {
    margin: 20px 20px 0 20px;
    padding: 10px;
    background-color: #eee;
}
#footer {
    background-color: #ddd;
}
/* ===== menu ===== */
#menu {
    width: 400px;
    height: 80px;
}
.menu-item > a {
    width: 80px;
    height: 40px;
    color: purple;
}
```



client/browser



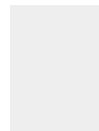
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

styles.css

## selectors

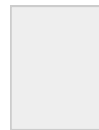
tag

(no prefix)

```
/* ===== sections ===== */
body {
    font-family: "Ariel", sans-serif;
}
.section {
    margin: 20px;
    padding: 10px;
}
#header {
    margin: 20px 20px 0 20px;
    padding: 10px;
    background-color: #eee;
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}
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    width: 80px;
    height: 40px;
    color: purple;
}
```



client/browser



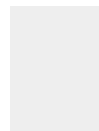
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

## Your turn!!



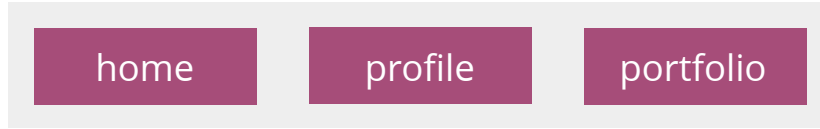
client/browser

- Create an `index.html` file with required head and body elements
- create a `styles.css` file and link the file to your `index.html` file
- Add `<h1>` and `<p>` elements (with text) to your html file
- Define background-color and text color for each element

styles.css

## selectors in use

main menu



client/browser



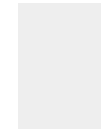
html  
structure

index.html



styles.css

CSS  
style



script.js

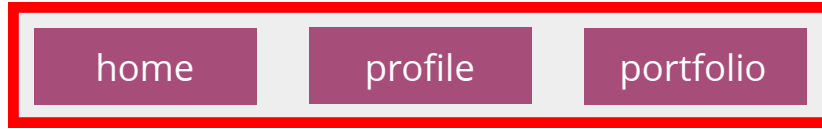
js  
behavior



selectors in use

## structural

main menu



structural components

- container



client/browser



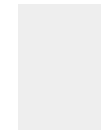
index.html

html  
structure



styles.css

css  
style



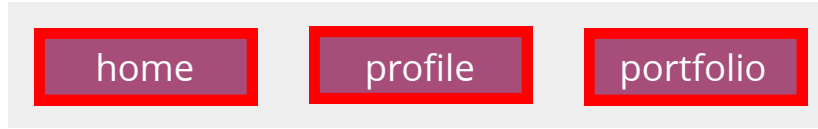
script.js

js  
behavior

## selectors in use

### structural

main menu



structural components

- container
- **buttons**



client/browser



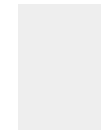
index.html

html  
structure



styles.css

CSS  
style



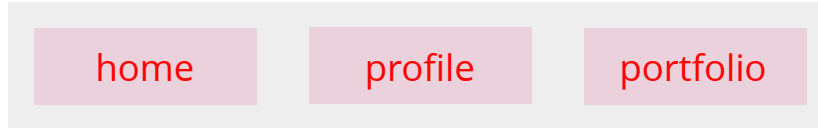
script.js

js  
behavior

## selectors in use

### structural

main menu



structural components

- container
- buttons
- **links**



client/browser



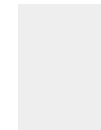
index.html

html  
structure



styles.css

CSS  
style



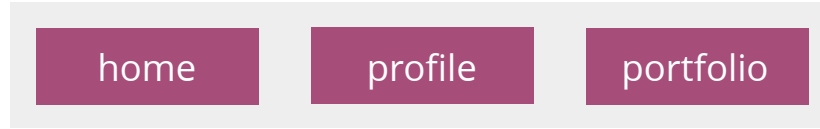
script.js

js  
behavior

# selectors in use

## names

main menu



client/browser



index.html

html  
structure

structural components

- container
- buttons
- links

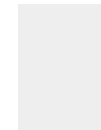


styles.css

CSS  
style

naming

- container -- **main-menu**
- buttons -- **menu-item**
- links -- **home, profile, portfolio**



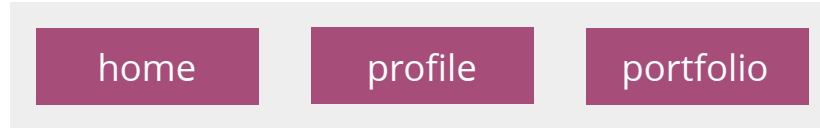
script.js

js  
behavior

# selectors in use

## names

main menu



client/browser



html  
structure

index.html

structural components

- container
- buttons
- links

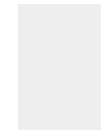


styles.css

CSS  
style

naming

- container -- main-menu [id]
- buttons -- menu-item [class]
- links -- home, profile, portfolio [id]



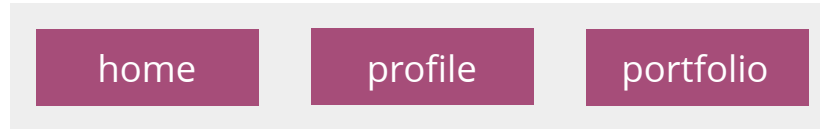
script.js

js  
behavior

# selectors in use

## names

main menu



client/browser



index.html

html  
structure

structural components

- container
- buttons
- links

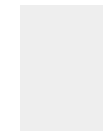


styles.css

CSS  
style

naming

- container -- **main-menu** [id]
- buttons -- **menu-item** [class]
- links -- **home, profile, portfolio** [direct descendants]



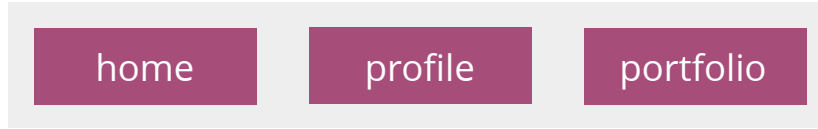
script.js

js  
behavior

selectors in use

## selector techniques

main menu



selection

- by id
- by class
- by parent > child



client/browser



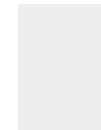
index.html

html  
structure



styles.css

CSS  
style



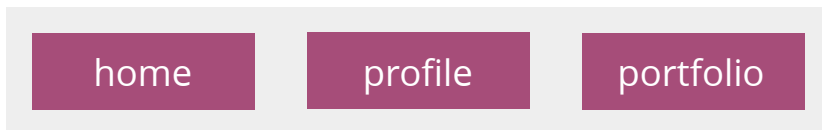
script.js

js  
behavior

selectors in use

## selector techniques

main menu



client/browser



html  
structure

index.html

html

```
<div id="main-menu" class="section">
  <div id="home" class="menu-item">
    <a href="home.html" class="menu-link">home</a>
  </div>
  <div id="profile" class="menu-item">
    <a href="profile.html" class="menu-link">profile</a>
  </div>
  <div id="portfolio" class="menu-item">
    <a href="portfolio.html" class="menu-link">portfolio</a>
  </div>
</div>
```

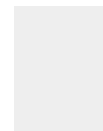


css  
style

styles.css

css

```
#main-menu {
  width: 400px;
}
```



js  
behavior

script.js

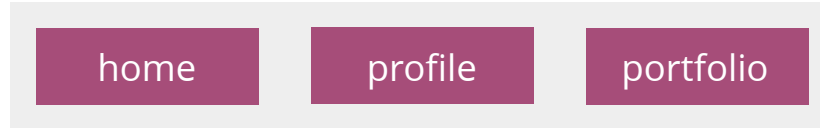
selecting by id



# selectors in use

## selector techniques

menu items



```
<div id="main-menu" class="section">
  <div id="home" class="menu-item">
    <a href="home.html" class="menu-link">home</a>
  </div>
  <div id="profile" class="menu-item">
    <a href="profile.html" class="menu-link">profile</a>
  </div>
  <div id="portfolio" class="menu-item">
    <a href="portfolio.html" class="menu-link">portfolio</a>
  </div>
</div>
```

js

```
$('#home').on('click', openHomePage)
$('#profile').on('click', getProfile)
$('#portfolio').on('click', showProject)
```

selecting by id (useful for assigning javascript behaviors...)



client/browser



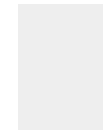
index.html

html  
structure



styles.css

css  
style



script.js

js  
behavior

selectors in use

## selector techniques

menu items

home

profile

portfolio



client/browser



index.html

html  
structure

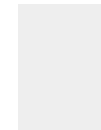
html

```
<div id="main-menu" class="section">
  <div id="home" class="menu-item">
    <a href="home.html" class="menu-link">home</a>
  </div>
  <div id="profile" class="menu-item">
    <a href="profile.html" class="menu-link">profile</a>
  </div>
  <div id="portfolio" class="menu-item">
    <a href="portfolio.html" class="menu-link">portfolio</a>
  </div>
</div>
```



styles.css

CSS  
style



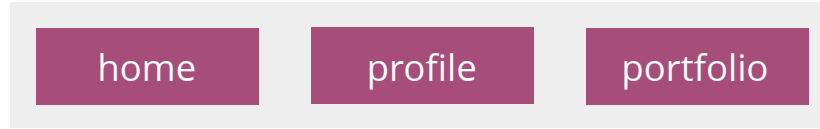
script.js

js  
behavior

# selectors in use

## selector techniques

menu items



client/browser



html  
structure

index.html

html

```
<div id="main-menu" class="section">
  <div id="home" class="menu-item">
    <a href="home.html" class="menu-link">home</a>
  </div>
  <div id="profile" class="menu-item">
    <a href="profile.html" class="menu-link">profile</a>
  </div>
  <div id="portfolio" class="menu-item">
    <a href="portfolio.html" class="menu-link">portfolio</a>
  </div>
</div>
```



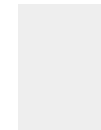
CSS  
style

styles.css

CSS

```
.menu-item {
  width: 80px;
  height: 40px;
  background-color: purple;
}
```

selecting by class



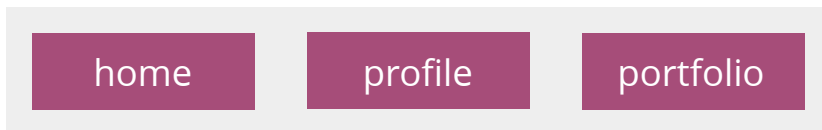
js  
behavior

script.js

selectors in use

## selector techniques

menu links



```
<div id="main-menu" class="section">
  <div id="home" class="menu-item">
    <a href="home.html" class="menu-link">home</a>
  </div>
  <div id="profile" class="menu-item">
    <a href="profile.html" class="menu-link">profile</a>
  </div>
  <div id="portfolio" class="menu-item">
    <a href="portfolio.html" class="menu-link">portfolio</a>
  </div>
</div>
```

selecting by class



client/browser



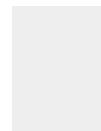
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

selectors in use

## selector techniques

menu links

home

profile

portfolio

```
<div id="main-menu" class="section">
  <div id="home" class="menu-item">
    <a href="home.html" class="menu-link">home</a>
  </div>
  <div id="profile" class="menu-item">
    <a href="profile.html" class="menu-link">profile</a>
  </div>
  <div id="portfolio" class="menu-item">
    <a href="portfolio.html" class="menu-link">portfolio</a>
  </div>
</div>
```

CSS

```
.menu-link {
  color: white;
}
```

selecting by class



client/browser



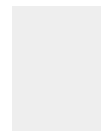
index.html

html  
structure



styles.css

CSS  
style



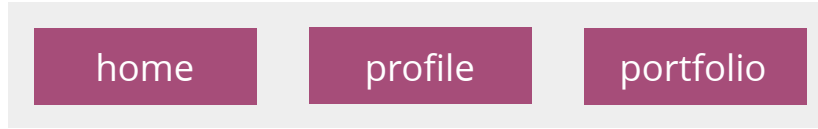
script.js

js  
behavior

# selectors in use

## selector techniques

menu links



```
<div id="main-menu" class="section">
  <div id="home" class="menu-item">
    <a href="home.html">home</a>
  </div>
  <div id="profile" class="menu-item">
    <a href="profile.html">profile</a>
  </div>
  <div id="portfolio" class="menu-item">
    <a href="portfolio.html">portfolio</a>
  </div>
</div>
```

css

```
.menu-item > a {
  color: white;
}
```

descendent operator

selecting by child of parent class



client/browser



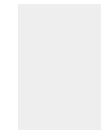
index.html

html  
structure



styles.css

css  
style



script.js

js  
behavior

# attributes

## attribute sequence

structure  
↓  
style

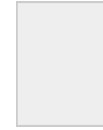
position  
dimensions  
spacing  
fonts  
colors  
decoration

```
#msg-box {  
  width: 180px;  
  height: 30px;  
  margin: 10px 0;  
  padding: 5px;  
  background-color: #eee;  
  border: 1px solid black;  
  border-radius: 5px;  
}
```

msg-box



client/browser



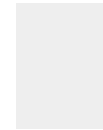
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

# attributes

## attribute sequence

position

dimensions

spacing

fonts

colors

decoration

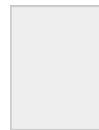
```
#msg-box {  
  width: 180px;  
  height: 30px;  
  margin: 10px 0;  
  padding: 5px;  
  background-color: #eee;  
  border: 1px solid black;  
  border-radius: 5px;  
}
```

msg-box

message



client/browser



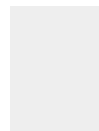
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior



# attributes

## attribute sequence

position

dimensions

spacing

fonts

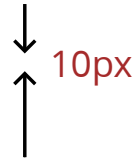
colors

decoration

```
#msg-box {  
  width: 180px;  
  height: 30px;  
  margin: 10px 0;  
  padding: 5px;  
  background-color: #eee;  
  border: 1px solid black;  
  border-radius: 5px;  
}
```

msg-box

message



client/browser



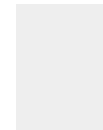
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

# attributes

## attribute sequence

position

dimensions

spacing

fonts

colors

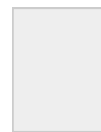
decoration

```
#msg-box {  
  width: 180px;  
  height: 30px;  
  margin: 10px 0;  
  padding: 5px;  
  background-color: #eee;  
  border: 1px solid black;  
  border-radius: 5px;  
}
```

msg-box



client/browser



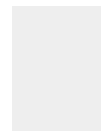
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

# attributes

## attribute sequence

position

dimensions

spacing

fonts

colors

decoration

```
#msg-box {  
  width: 180px;  
  height: 30px;  
  margin: 10px 0;  
  padding: 5px;  
  background-color: #eee;  
  border: 1px solid black;  
  border-radius: 5px;  
}
```

msg-box

message



client/browser



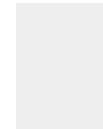
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

# attributes

## attribute sequence

position

dimensions

spacing

fonts

colors

decoration

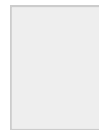
```
#msg-box {  
  width: 180px;  
  height: 30px;  
  margin: 10px 0;  
  padding: 5px;  
  background-color: #eee;  
  border: 1px solid black;  
  border-radius: 5px;  
}
```

msg-box

message



client/browser



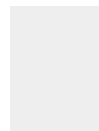
index.html

html  
structure



styles.css

CSS  
style



script.js

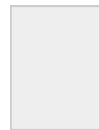
js  
behavior

## Your turn!!!

- open atom text editor
- navigate to WDI/exercises folder
- use existing **index.html** page
- create a css stylesheet (**styles.css**)
- add styles in sequence:  
position, dimensions, spacing, fonts, colors, decoration



client/browser



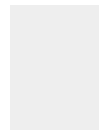
html  
structure

index.html



CSS  
style

styles.css



js  
behavior

script.js

## basic attributes

### combined element/class selectors

```
<ul class="presidents">
  <li>
    George Washington
    <ul>
      <li>Brave</li>
      <li>Tall</li>
    </ul>
  </li>
</ul>
```

```
ul.presidents {
  list-style-type: square;
}
```



client/browser



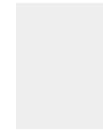
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

## basic attributes

### selecting multiple element groups

```
<ul class="presidents">
  <li>
    George Washington
  </li>
</ul>
<span>Cut down the cherry tree</span>

ul.presidents, span {
  font-family: "Arial", sans-serif;
}
```



client/browser



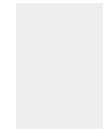
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior

## basic attributes

### selecting direct descendants

```
<ul class="presidents">
  <li>
    George Washington
    <ul>
      <li>Brave</li>
      <li>Tall</li>
    </ul>
  </li>
</ul>

ul.presidents > li {
  list-style-type: square;
}
```



client/browser



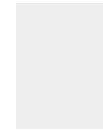
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior



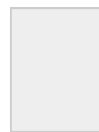
# attributes

## basic attributes to know



client/browser

element width (pixels, percent, ems)	<code>width: 100%;</code>
element height (pixels, percent, ems)	<code>height: 20px;</code>
selected element's font size	<code>font-size: 20px;</code>
element's display font	<code>font-family: "Times New Roman", serif;</code>
text alignment within element	<code>text-align: center;</code>
all text uppercase	<code>text-transform: uppercase;</code>
separation between lines	<code>line-height: 20px</code>
bullet point style	<code>list-style-type: square;</code>
custom image for bullet point	<code>list-style-image: url('my-bullet.png');</code>
removes bullet points	<code>list-style: none;</code>
dictates color of text in element	<code>color: red;</code>
background color of the element	<code>background-color: #fff;</code>
background image for the element	<code>background-image: url('tiger.png');</code>
no repeat of background image	<code>background-repeat: no-repeat;</code>



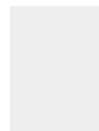
index.html

html  
structure



styles.css

CSS  
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script.js

js  
behavior

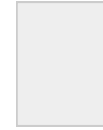
styles.css

## online resources

- W3schools  
[https://www.w3schools.com/cssref/css\\_selectors.asp](https://www.w3schools.com/cssref/css_selectors.asp)
- Tutorials Point  
<https://www.tutorialspoint.com/css/>
- CodeAcademy  
<https://www.codecademy.com/en/tracks/htmlcss>



client/browser



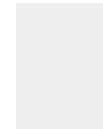
index.html

html  
structure



styles.css

CSS  
style



script.js

js  
behavior