

Web Engineering

Lect 6 (CSS)

Instructor: Faheem Shaukat

Meeting Hours

Wednesday and Thursday

12PM to 02PM

In this lecture, we will discuss...

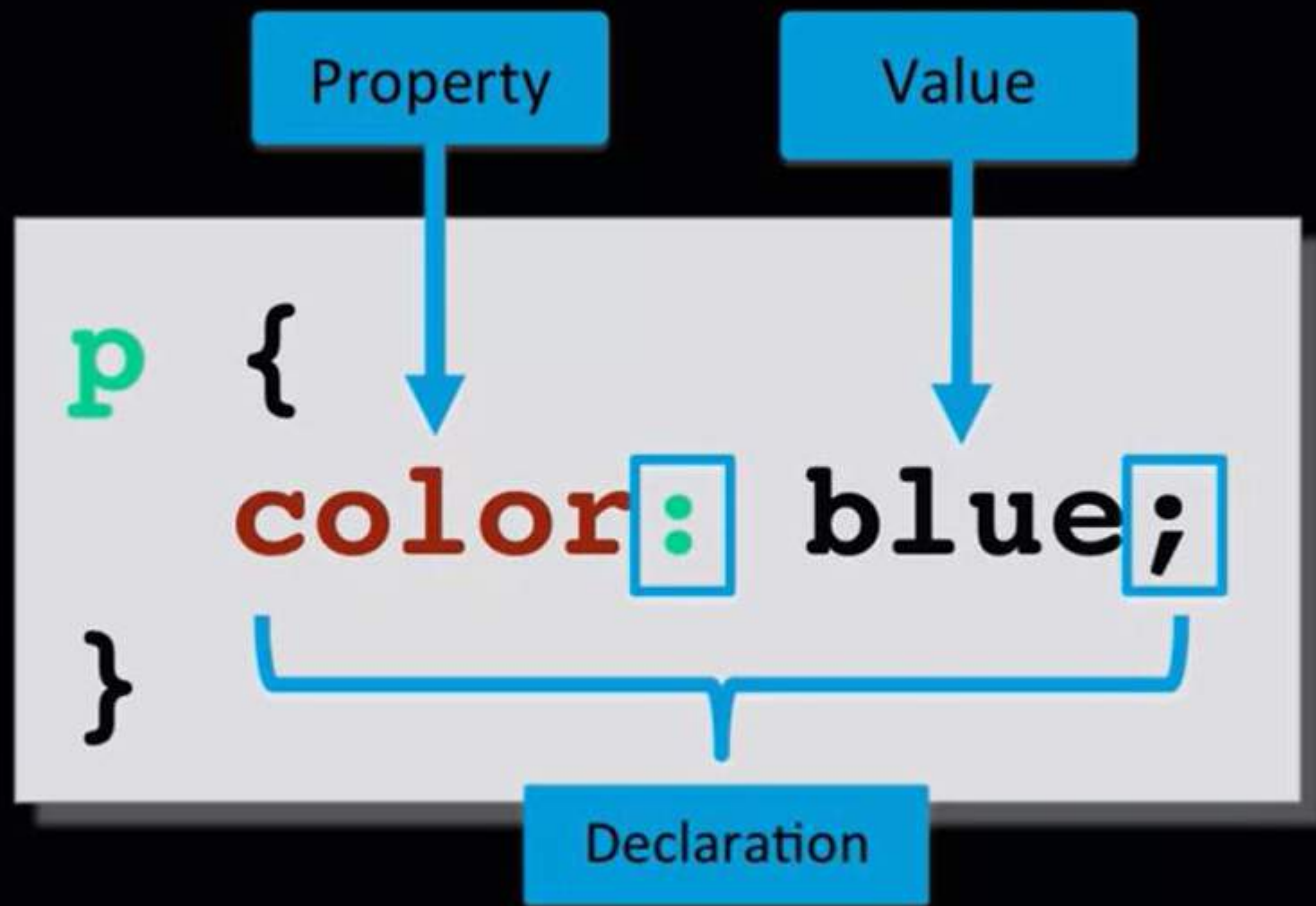
Anatomy of a CSS Rule

Anatomy of a CSS Rule

Selector

```
p {  
  color: blue;  
}
```


Anatomy of a CSS Rule



Anatomy of a CSS Rule

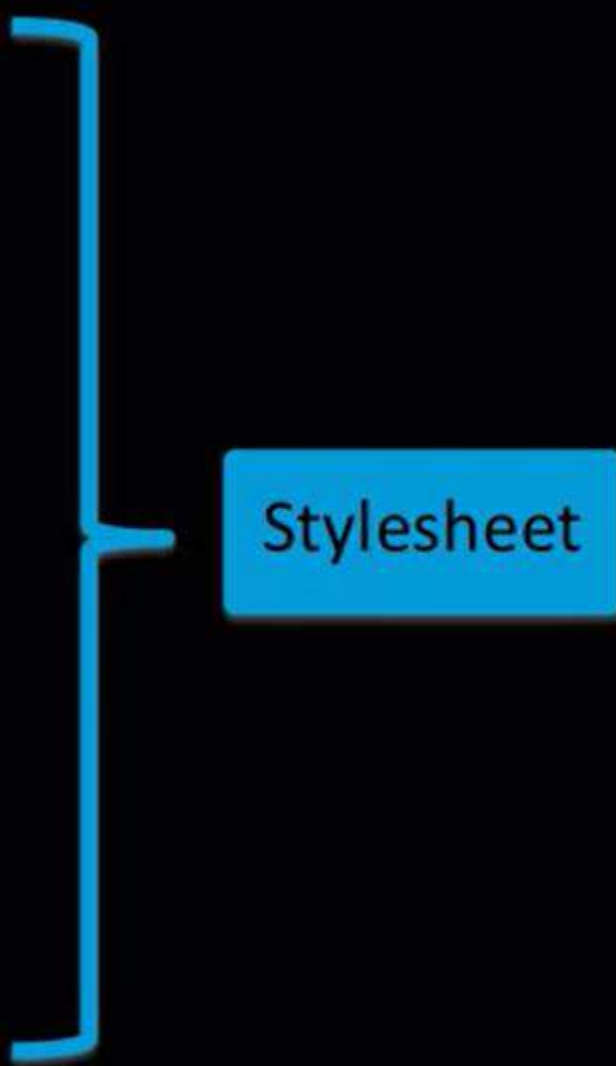
```
p {  
  color: blue;  
  font-size: 20px;  
  width: 200px;  
}
```

Zero or More
Declarations
are allowed



Anatomy of a CSS Rule

```
p {  
  color: blue;  
  font-size: 20px;  
  width: 200px;  
}  
  
h1 {  
  color: green;  
  font-size: 36px;  
  text-align: center;  
}  
...
```



A large blue bracket on the right side of the slide groups the CSS rules. A horizontal line extends from the middle of the bracket to a blue rectangular box containing the text "Stylesheet".

Stylesheet

Style sheet in <head>

- <style>
- p {
- color: blue;
- font-size: 20px;
- width: 200px;
- }
- h1 {
- color: green;
- font-size: 36px;
- text-align: center;
- }
- </style>

Code Where Style Sheet Effect <body>

- **<h1>Anatomy of a CSS Rule</h1>**
- **<h2>Subheading 1</h2>**
- **<p>**CSS works by associating rules with HTML elements. These rules govern how the content of specified elements should be displayed. A CSS rule contains two parts: a selector and a declaration.**</p>**
- **<h2>Subheading 2</h2>**
- **<p>**Lorem ipsum dolor sit amet, consectetur adipisicing elit. Est maxime aperiam blanditiis reprehenderit voluptatem quia quas nesciunt amet atque temporibus quod harum sequi voluptate consequatur tenetur perferendis, cum ad! Eos.**</p>**

Anatomy of a CSS Rule

Subheading 1

CSS works by associating rules with HTML elements. These rules govern how the content of specified elements should be displayed. A CSS rule contains two parts: a selector and a declaration.

Subheading 2

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Est maxime aperiam blanditiis reprehenderit voluptatem quia quas

Element Selector

Element name

```
p {  
  color: blue;  
}
```

Element Selector

```
p {  
  color: blue;  
}
```

```
...  
<p>...</p>  
...  
<p>...</p>
```



Blue text

Blue text

class Selector

Class name

```
.blue {  
    color: blue;  
}
```

class Selector

```
.blue {  
  color: blue;  
}
```

```
...  
<p class="blue">...</p>  
<p>...</p>  
<div class="blue">...</div>  
...
```

Blue text

Unaffected

Blue text

class Selector

Defined with .

```
.blue {  
    color: blue;  
}
```

Used without

```
...  
<p class="blue">...</p>  
<p>...</p>  
<div class="blue">...</div>  
...
```

id Selector

id Value

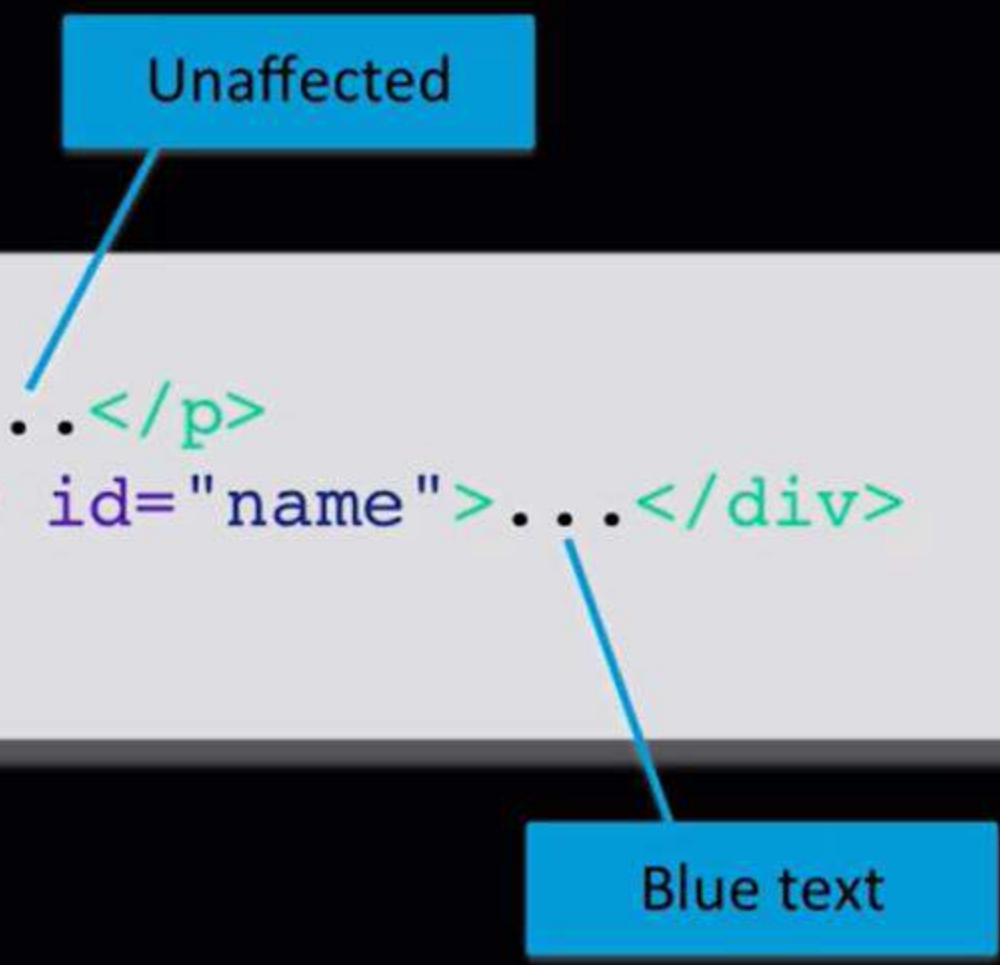


```
#name {  
    color: blue;  
}
```


id Selector

```
#name {  
  color: blue;  
}
```

```
...  
<p>...</p>  
<div id="name">...</div>  
...
```



Unaffected

Blue text

id Selector

Defined with #

```
#name {  
  color: blue;  
}
```

```
...  
<p>...</p>  
<div id="name">...</div>  
...
```

Used without

Grouping Selectors

Separate selectors
with commas

```
div, .blue {  
  color: blue;  
}
```

Blue text

```
...  
<p class="blue">...</p>  
<p>...</p>  
<div>...</div>  
...
```

Blue text

/* all h2 elements */

- **xxx {**
- **color: red;**
- **text-align: center;**
- **}**

/* all with class="highlight" */

- **xxx {**
- **font-size: 20px;**
- **font-weight: bold;**
- **font-style: italic;**
- **background-color: green;**
- **opacity: .6;**
- **}**

/* element with id="mainPoint" */

- **xxx {**
- **font-size: 24px;**
- **font-weight: bold;**
- **background-color: red;**
- **opacity: .7;**
- **}**

/* all p AND h1 elements */

- **xxx {**
- **color: blue;**
- **text-align: center;**
- **}**

- **<h1>Simple Selectors (h1)</h1>**
- **<h2>Subheading 1 (h2)</h2>**
- **<p class="highlight">**Lorem ipsum dolor sit amet, consectetur adipisicing elit. Possimus amet alias est? Nobis cum quasi at soluta odit, maiores quaerat dolores expedita ex nemo ea repellendus dolorem sed maxime quos?**</p>**
- **<p class="highlight">**Paragraph with attribute class="highlight". Lorem ipsum dolor sit amet, consectetur adipisicing elit.**</p>**
- **<h2>Subheading 2 (h2)</h2>**
- **<p>**Lorem ipsum dolor sit amet, consectetur adipisicing elit. Eligendi nemo ipsum dolores vel modi magnam veniam alias at nam. Voluptatem officiis dolor dolorem aspernatur dolorum modi ipsa, nobis animi aut!**</p>**
- **<div>**This is the main point of the entire article. So, attribute
- ****id="mainPoint".** </div>**

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Simple Selectors</title>
6 <style>
7
8 /* all h2 elements */
9 xxx {
10     color: red;
11     text-align: center;
12 }
13
14
15 /* all with class="highlight" */
16 xxx {
17     font-size: 20px;
18     font-weight: bold;
19     font-style: italic;
20     background-color: green;
21     opacity: .6;
22 }
23
24 /* element with id="mainPoint" */
```

Simple Selectors (h1)

Subheading 1 (h2)

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Possimus amet alias e cum quasi at soluta odit, maiores quaerat dolores expedita ex nemo ea repellend dolorem sed maxime quos?

Paragraph with attribute class="highlight". Lorem ipsum dolor sit amet, consec adipisicing elit.

Subheading 2 (h2)

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Eligendi nemo ipsum modi magnam veniam alias at nam. Voluptatem officiis dolor dolorem aspernat dorum modi ipsa, nobis animi aut!

This is the main point of the entire article. So, attribute id="mainPoint".


```
simple-selectors-before.html x
8  /* all h2 elements */
9  h2 {
10     color: red;
11     text-align: center;
12 }
13
14
15 /* all with class="highlight" */
16 xxx {
17     font-size: 20px;
18     font-weight: bold;
19     font-style: italic;
20     background-color: green;
21     opacity: .6;
22 }
23
24 /* element with id="mainPoint" */
25 xxx {
26     font-size: 24px;
27     font-weight: bold;
28     background-color: red;
29     opacity: .7;
30 }
31
```

Simple Selectors (h1)

Subheading 1 (h2)

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Possimus amet alias e cum quasi at soluta odit, maiores quaerat dolores expedita ex nemo ea repellend dolorem sed maxime quos?

Paragraph with attribute class="highlight". Lorem ipsum dolor sit amet, consec adipisicing elit.

Subheading 2 (h2)

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Eligendi nemo ipsum modi magnam veniam alias at nam. Voluptatem officiis dolor dolorem aspernat dorum modi ipsa, nobis animi aut!

This is the main point of the entire article. So, attribute id="mainPoint".

```

1  /* all h2 elements */
2  h2 {
3
4      color: red;
5      text-align: center;
6  }
7
8  /* all with class="highlight" */
9  .highlight {
10     font-size: 20px;
11     font-weight: bold;
12     font-style: italic;
13     background-color: green;
14     opacity: .6;
15 }
16
17 /* element with id="mainPoint" */
18 xxx {
19     font-size: 24px;
20     font-weight: bold;
21     background-color: red;
22     opacity: .7;
23 }
24
25
26
27
28
29
30
31

```

Simple Selectors (h1)

Subheading 1 (h2)

*Lorem ipsum dolor sit amet, consectetur adipisicing elit. Poss
amet alias est? Nobis cum quasi at soluta odit, maiores quaer
dolores expedita ex nemo ea repellendus dolorem sed maxime*

*Paragraph with attribute class="highlight". Lorem ipsum do
amet, consectetur adipisicing elit.*

Subheading 2 (h2)

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Eligendi nemo ipsum
modi magnam veniam alias at nam. Voluptatem officiis dolor dolorem asperna
dolorum modi ipsa, nobis animi aut!

This is the main point of the entire article. So, attribute id="mainPoint".


```
17 font-size: 20px;
18 font-weight: bold;
19 font-style: italic;
20 background-color: green;
21 opacity: .6;
22 }
23
24 /* element with id="mainPoint" */
25 #mainPoint {
26 font-size: 24px;
27 font-weight: bold;
28 background-color: red;
29 opacity: .7;
30 }
31
32 /* all p AND h1 elements */
33 xxx {
34 color: blue;
35 text-align: center;
36 }
```

Simple Selectors (h1)

Subheading 1 (h2)

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Possimus amet alias est? Nobis cum quasi at soluta odit, maiores quaerat dolores expedita ex nemo ea repellendus dolorem sed maxime quos?

Paragraph with attribute class="highlight". Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Subheading 2 (h2)

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Eligendi nemo ipsum dolores vel modi magnam veniam alias at nam. Voluptatem officiis dolor dolorem aspernatur dolorum modi ipsa, nobis animi aut!

This is the main point of the entire article. So, attribute **id="mainPoint"**.


```

22 }
23
24 /* element with id="mainPoint" */
25 #mainPoint {
26     font-size: 24px;
27     font-weight: bold;
28     background-color: red;
29     opacity: .7;
30 }
31
32 /* all p AND h1 elements */
33 p, h1 {
34     color: blue;
35     text-align: center;
36 }
37
38 </style>
39 </head>
40 <body>
41
42 <h1>Simple Selectors (h1)</h1>
43 <h2>Subheading 1 (h2)</h2>
44 <p class="highlight">Lorem ipsum dolor sit
    amet, consectetur adipiscing elit

```

Simple Selectors (h1)

Subheading 1 (h2)

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Po
amet alias est? Nobis cum quasi at soluta odit, maiores qu
dolores expedita ex nemo ea repellendus dolorem sed maxim

Paragraph with attribute class="highlight". Lorem ipsum d
amet, consectetur adipiscing elit.

Subheading 2 (h2)

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Eligendi nemo ipsum
modi magnam veniam alias at nam. Voluptatem officiis dolor dolorem asp
dolorum modi ipsa, nobis animi aut!

This is the main point of the entire article. So, attribute **id="mainPoint"**

In this lecture, we will discuss...

Combining Selectors

Element With Class Selector

Every **p** that has **class="big"**

```
p.big {  
    font-size: 20px;  
}
```

NOTE lack of space between element and class definition

Element With Class Selector

```
p.big {  
  font-size: 20px;  
}
```


```
...  
<p class="big">...</p>  
<div class="big">...</div>  
...
```

Text size 20px

Unaffected text

Child Selector

Every **p** that is a direct child of **article**



```
article > p {  
  color: blue;  
}
```

Child Selector

```
article > p {  
  color: blue;  
}
```

```
<article>...  
  <p>...</p>  
</article>  
...  
<p>...</p>  
<article>...  
  <div><p>...</p></div>  
</article>
```

Blue text

Unaffected text

Unaffected text

Descendant Selector

Every **p** that is inside (at any level) of **article**



```
article p {  
  color: blue;  
}
```

Descendant Selector

```
article p {  
  color: blue;  
}
```


```
<article>...  
  <p>...</p>  
</article>  
...  
<p>...</p>  
<article>...  
  <div><p>...</p></div>  
</article>
```

Blue text

Unaffected text

Blue text

Not Limited To Element Selectors



```
.colored p {  
  color: blue;  
}
```

Every **p** that is inside (at any level) an element with `class="colored"`



```
article > .colored {  
  color: blue;  
}
```

Every element with `class="colored"` that is a direct child of **article** element

Sample Code

- `<h1 class="highlight">Element with Class Selector</h1>`
- `<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Possimus amet alias est? Nobis cum quasi at soluta odit, maiores quaerat dolores expedita ex nemo ea repellendus dolorem sed maxime quos?</p>`
- `<p class="highlight">This is P with CLASS="highlight"</p>`
- `<div class="mainpoint highlight">This is the main point of the entire article.`
- `</div>`

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Element with Class Selector
6 </title>
7 <style>
8
9 /* all with class="highlight" */
10 .highlight {
11     background-color: green;
12 }
13
14 /* all p elements with class="highlight" */
15 xxx {
16     font-style: italic;
17 }
18
19 /* all elements with class 'highlight' as
20 well as with class 'mainpoint'. */
21 xxx {
22     color: red;
23     background-color: black;
24 }

```

Element with Class Selector

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Possimus amet alias e cum quasi at soluta odit, maiores quaerat dolores expedita ex nemo ea repellend dolorem sed maxime quos?

This is P with CLASS="highlight"

This is the main point of the entire article.

```

5 <title>Element with Class Selector
6 </title>
7 <style>
8
9 /* all with class="highlight" */
10 .highlight {
11     background-color: green;
12 }
13
14 /* all p elements with class="highlight" */
15 p.highlight {
16     font-style: italic;
17 }
18
19 /* all elements with class 'highlight' as
    well as with class 'mainpoint'. */
20 xxx {
21     color: red;
22     background-color: black;
23 }
24
25 </style>
26 </head>
27 <body>

```

Element with Class Selector

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Possimus amet alias e cum quasi at soluta odit, maiores quaerat dolores expedita ex nemo ea repellend dolorem sed maxime quos?

This is P with CLASS="highlight"

This is the main point of the entire article.


```

12 }
13
14 /* all p elements with class="highlight" */
15 p.highlight {
16     font-style: italic;
17 }
18
19 /* all elements with class 'highlight' as
20 well as with class 'mainpoint'. */
21 .highlight.mainpoint {
22     color: red;
23     background-color: black;
24 }
25 </style>
26 </head>
27 <body>
28
29 <h1 class="highlight">Element with Class
30 Selector</h1>
31
32 <p>Lorem ipsum dolor sit amet, consectetur
33 adipiscing elit. Possimus amet alias est?
34 Nobis cum quasi at soluta odit, maiores
35 consequat dolores expedita ex nemo ea repellend

```

Element with Class Selector

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Possimus amet alias est? cum quasi at soluta odit, maiores quaerat dolores expedita ex nemo ea repellend dolorem sed maxime quos?

This is P with CLASS="highlight"

This is the main point of the entire article.

Sample Code

- `<h1>Child Selector</h1>`
- `<section>`
- `<h2>Subheading 1</h2>`
- `<div>`
- `<article>ARTICLE which inside DIV, which is inside SECTION</article>`
- `</div>`
- `</section>`
- `<section>`
- `<article>ARTICLE as a direct child of the SECTION element.</article>`
- `</section>`
- `<h2>Subheading 2</h2>`

```

child-selector-before.html x
/* any h2 element whose immediate parent is a
section element. */
9 section > article {
10   color: green;
11   font-size: 24px;
12 }
13
14 /* any h2 element which is a direct child
of a section element, i.e., any h2 element
whose immediate parent is a section
element. */
15 xxx {
16   color: green;
17 }
18
19
20 </style>
21 </head>
22 <body>
23 <h1>Child Selector</h1>
24 <section>
25   <h2>Subheading 1</h2>
26   <div>
27     <article> ARTICLE which inside DIV

```

Child Selector

Subheading 1

ARTICLE which inside DIV, which is inside SECTION

ARTICLE as a direct child of the SECTION element

Subheading 2


```

child-selector-before.html x
/* any h2 element which is a direct child
of a section element, i.e., any h2 element
whose immediate parent is a section
element. */
9 section > article {
10     color: green;
11     font-size: 24px;
12 }
13
14 /* any h2 element which is a direct child
of a section element, i.e., any h2 element
whose immediate parent is a section
element. */
15 section > h2 {
16     color: green;
17 }
18
19
20 </style>
21 </head>
22 <body>
23 <h1>Child Selector</h1>
24 <section>
25     <h2>Subheading 1</h2>
26     <div>
27         <article> ARTICLE which inside DIV

```

Child Selector

Subheading 1

ARTICLE which inside DIV, which is inside SECTION

ARTICLE as a direct child of the SECTION element

Subheading 2

Sample Code

- `<h1>Descendant Selector</h1>`
- `<section>`
- Table of contents:
- ``
- `Article 1`
- `Article 2`
- `Article 3`
- ``
- `</section>`
- `<article>`
- Shopping List:
- ``
- `Cookies`
- `Cake`
- `Pie`
- ``
- `</article>`

```

5 <title>Descendant Selector</title>
6 <style>
7
8 /* all li elements that are inside a
   section element. */
9 section li {
10     color: green;
11 }
12
13 </style>
14 </head>
15 <body>
16 <h1>Descendant Selector</h1>
17 <section>
18     Table of contents:
19     <ul>
20         <li>Article 1</li>
21         <li>Article 2</li>
22         <li>Article 3</li>
23     </ul>
24 </section>
25 <article>
26     Shopping List:
27     <ul>

```

Decendant Selector

Table of contents:

- Article 1
- Article 2
- Article 3

Shopping List:

- Cookies
- Cake
- Pie

Summary

✧ Combining selectors

- Element with class selector (`selector.class`)
- Child (direct) selector (`selector > selector`)
- Descendent selector (`selector selector`)

✧ Didn't cover

- Adjacent sibling selector (`selector + selector`)
- General sibling selector (`selector ~ selector`)

Pseudo-Class Selector

```
selector:pseudo-class {  
    ...  
}
```

Pseudo-Class Selector

- ✧ Many pseudo-class selectors exist
- ✧ We cover:
 - **`:link`**
 - **`:visited`**
 - **`:hover`**
 - **`:active`**
 - **`:nth-child(...)`**



pseudo-selectors-before.html x

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Pseudo Class Selectors</title>
6 <style>
7 /* Styles go here. */
8 header li {
9     list-style: none;
10 }
11
12 </style>
13 </head>
14 <body>
15 <h1>Pseudo Class Selectors</h1>
16
17 <header>
18     <ul>
19         <li><a href="/">Home</a></li>
20         <li><a href="http://goo.gl/V0Wl6s"
21             target="_blank">AngularJS Course</a></li>
22         <li><a href="http://www.facebook.com/
23             CourseraWebDev" target="_blank">
```

Pseudo Class Selectors x

file:///Users/yaakov/workspace/coursera/fullstack-c...

Pseudo Class Selectors

[Home](#)[AngularJS Course](#)[Facebook Fan Page](#)

DIV 1

DIV 2

DIV 3

DIV 4

DIV 5

DIV 6

DIV 7

DIV 8

DIV 9

DIV 10

DIV 11

DIV 12

DIV 13

DIV 14

DIV 15

DIV 16

DIV 17

DIV 18

DIV 19

DIV 20

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<meta charset="utf-8">
```

```
<title>Pseudo Class Selectors</title>
```

```
<style>
```

```
/* Styles go here. */
```

```
header li {  
  list-style: none;
```

```
}  
  
a:link, a:visited {  
  text-decoration: none;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h1>Pseudo Class Selectors</h1>
```

```
<header>
```

```
<ul>
```

```
<li><a href="/">Home</a></li>
```

Pseudo Class Selectors

[Home](#)

[AngularJS Course](#)

[Facebook Fan Page](#)

DIV 1

DIV 2

DIV 3

DIV 4

DIV 5

DIV 6

DIV 7

DIV 8

DIV 9

DIV 10

DIV 11

DIV 12

DIV 13

DIV 14

DIV 15

DIV 16

DIV 17

DIV 18

DIV 19

DIV 20

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Pseudo Class Selectors</title>
6 <style>
7 /* Styles go here. */
8 header li {
9     list-style: none;
10 }
11 a:link, a:visited {
12     text-decoration: none;
13     background-color: green;
14     border: 1px solid blue;
15     color: black;
16 }
17
18 }
19
20 </style>
21 </head>
22 <body>
23 <h1>Pseudo Class Selectors</h1>
24

```

Pseudo Class Selectors

Home
AngularJS Course
Facebook Fan Page

DIV 1
DIV 2
DIV 3
DIV 4
DIV 5
DIV 6
DIV 7
DIV 8
DIV 9
DIV 10
DIV 11
DIV 12
DIV 13
DIV 14
DIV 15
DIV 16
DIV 17
DIV 18
DIV 19
DIV 20


```

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Pseudo Class Selectors</title>
6 <style>
7 /* Styles go here. */
8 header li {
9     list-style: none;
10 }
11 a:link, a:visited {
12     text-decoration: none;
13     background-color: green;
14     border: 1px solid blue;
15     color: black;
16     display: block;
17 }
18 }
19
20 </style>
21 </head>
22 <body>
23 <h1>Pseudo Class Selectors</h1>
24

```

Pseudo Class Selectors

Home

AngularJS Course

Facebook Fan Page

DIV 1

DIV 2

DIV 3

DIV 4

DIV 5

DIV 6

DIV 7

DIV 8

DIV 9

DIV 10

DIV 11

DIV 12

DIV 13

DIV 14

DIV 15

DIV 16

DIV 17

DIV 18

DIV 19

DIV 20

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Pseudo Class Selectors</title>
6 <style>
7 /* Styles go here. */
8 header li {
9     list-style: none;
10 }
11 a:link, a:visited {
12     text-decoration: none;
13     background-color: green;
14     border: 1px solid blue;
15     color: black;
16     display: block;
17     width: 200px;
18     text-align: center;
19     margin-bottom: 1px;
20 }
21 }
22
23 </style>
24 </head>

```

Pseudo Class Selectors

Home

AngularJS Course

Facebook Fan Page

DIV 1

DIV 2

DIV 3

DIV 4

DIV 5

DIV 6

DIV 7

DIV 8

DIV 9

DIV 10

DIV 11

DIV 12

DIV 13

DIV 14

DIV 15

DIV 16

DIV 17

DIV 18

DIV 19

DIV 20


```

1 <!-- meta charset -->
2
3
4
5 <title>Pseudo Class Selectors</title>
6 <style>
7 /* Styles go here. */
8 header li {
9     list-style: none;
10 }
11 a:link, a:visited {
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14     border: 1px solid blue;
15     color: black;
16     display: block;
17     width: 200px;
18     text-align: center;
19     margin-bottom: 1px;
20 }
21
22 a:hover, a:active {
23     background-color: red;
24     color: purple;
25 }
26
27 </style>

```

Pseudo Class Selectors



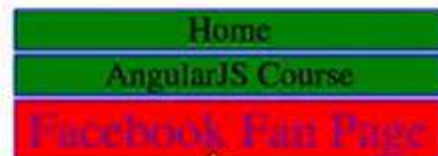
DIV 1
DIV 2
DIV 3
DIV 4
DIV 5
DIV 6
DIV 7
DIV 8
DIV 9
DIV 10
DIV 11
DIV 12
DIV 13
DIV 14
DIV 15
DIV 16
DIV 17
DIV 18
DIV 19
DIV 20

```

12 text-decoration: none;
13 background-color: green;
14 border: 1px solid blue;
15 color: black;
16 display: block;
17 width: 200px;
18 text-align: center;
19 margin-bottom: 1px;
20 }
21
22 a:hover, a:active {
23     background-color: red;
24     color: purple;
25 }
26
27 header li:nth-child(3) {
28     font-size: 24px;
29 }
30
31 </style>
32 </head>
33 <body>
34 <h1>Pseudo Class Selectors</h1>
35

```

Pseudo Class Selectors



DIV 1
 DIV 2
 DIV 3
 DIV 4
 DIV 5
 DIV 6
 DIV 7
 DIV 8
 DIV 9
 DIV 10
 DIV 11
 DIV 12
 DIV 13
 DIV 14
 DIV 15
 DIV 16
 DIV 17
 DIV 18
 DIV 19
 DIV 20


```

12 text-decoration: none;
13 background-color: green;
14 border: 1px solid blue;
15 color: black;
16 display: block;
17 width: 200px;
18 text-align: center;
19 margin-bottom: 1px;
20 }
21
22 a:hover, a:active {
23     background-color: red;
24     color: purple;
25 }
26
27 header li:nth-child(3) {
28     font-size: 24px;
29 }
30
31 section div:nth-child(odd) {
32     background-color: gray;
33 }
34
35 </style>

```

Pseudo Class Selectors

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DIV 1

DIV 2

DIV 3

DIV 4

DIV 5

DIV 6

DIV 7

DIV 8

DIV 9

DIV 10

DIV 11

DIV 12

DIV 13

DIV 14

DIV 15

DIV 16

DIV 17

DIV 18

DIV 19

DIV 20

```

13 background-color: green;
14 border: 1px solid blue;
15 color: black;
16 display: block;
17 width: 200px;
18 text-align: center;
19 margin-bottom: 1px;
20 }
21
22 a:hover, a:active {
23     background-color: red;
24     color: purple;
25 }
26
27 header li:nth-child(3) {
28     font-size: 24px;
29 }
30
31 section div:nth-child(odd) {
32     background-color: gray;
33 }
34
35 section div:nth-child(4):hover {
36     background-color: green;

```

Pseudo Class Selectors

Home
AngularJS Course
Facebook Fan Page

DIV 1

DIV 2

DIV 3

DIV 4

DIV 5

DIV 6

DIV 7

DIV 8

DIV 9

DIV 10

DIV 11

DIV 12

DIV 13

DIV 14

DIV 15

DIV 16

DIV 17

DIV 18

DIV 19

DIV 20

Summary

- ✧ Pseudo-class selectors are very powerful
- ✧ Make sure your selector is still readable
 - Simple/Readable > Complicated/Tricky



```
5 <!-- style placement -->
6 <link rel="stylesheet" href="style.css">
7 <style>
8
9 h2 {
10   color: maroon;
11 }
12
13 </style>
14 </head>
15 <body>
16 <h1>Style Placement</h1>
17 <h2>Subheading 1</h2>
18 <p>Lorem ipsum dolor sit amet, consectetur
   adipiscing elit. Ex et similique
   cupiditate dignissimos delectus nulla
   dolore, eos dolorum quidem excepturi,
   facere non repellat accusamus, atque? Id
   voluptate eos et accusantium.</p>
19 <h2>Subheading 2</h2>
20 <p style="text-align: center;">I am
   centered!</p>
21
22 </body>
```

Style Placement

Subheading 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ex et similique cupiditate dignissimos delectus nulla dolore, eos dolorum quidem excepturi, facere non repellat accusamus, atque? Id voluptate eos et accusantium.

Subheading 2

I am centered!



```
1 body {
2   background-color: gray;
3   font-size: 130%;
4 }
```



Style Placement

Subheading 1

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Ex c
similique cupiditate dignissimos delectus nulla dolore, eos de
quidem excepturi, facere non repellat accusamus, atque? Id v
eos et accusantium.

Subheading 2

I am centered!

Summary

- ✧ Placing styles inline is great for quick testing
- ✧ Real sites almost always use external styles
- ✧ Head styles are usually there to override external ones

Some Concepts

origin

merge

inheritance

specificity

Origin Precedence (when in conflict)

simple rule

Last Declaration Wins

- ✧ Remember, HTML is processed sequentially, top to bottom.
- ✧ For precedence, think of external CSS as declared at the spot where it's linked to.

Origin Precedence (when no conflict)

even simpler rule

Declarations Merge



```

1  {
2    font-size: 130%;
3    background-color: gray;
4    color: white;
5  }
6

```

Origin Example

The rule is simple: last declaration wins.

If there is no conflict, declarations merge into one rule.

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Cascade of CSS</title>
6 <link rel="stylesheet" href="external.
  css">
7 <style>
8
9 p {
10   color: maroon;
11 }
12
13 </style>
14 </head>
15 <body>
16 <h1>Origin Example</h1>
17 <p>The rule is simple: last declaration
  wins.</p>
18 <p style="color: black;">If there is no
  conflict, declarations merge into one
  rule.</p>
19 </body>
20 </html>
```

Origin Example

The rule is simple: last declaration wins.

If there is no conflict, declarations merge into one rule.

external.css — course4-examples

origin.html external.css

```

1 p {
2   font-size: 130%;
3   background-color: gray;
4   color: white;
5 }
6

```

Cascade of CSS

file:///Users/yaakov/workspace/coursera/fullstack-course4/...

Origin Example

The rule is simple: last declaration wins.

If there is no conflict, declarations merge into one rule.

Elements Network Sources Timeline Profiles Resources Audits »

<body>
 <h1>Origin Example</h1>
 <p>The rule is simple: last declaration wins.</p>
 <p style="color: black;">If there is no conflict, declarations merge into one rule.</p>
 </body>

html body p

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {
 }
 p {
 color: maroon;
 }
 p {
 font-size: 130%;
 background-color: gray;
 color: white;
 }
 p {
 display: block;
 -webkit-margin-before: 1em;
 -webkit-margin-after: 1em;
 -webkit-margin-start: 0px;
 }

origin.html:9
 external.css:1
 user agent stylesheet

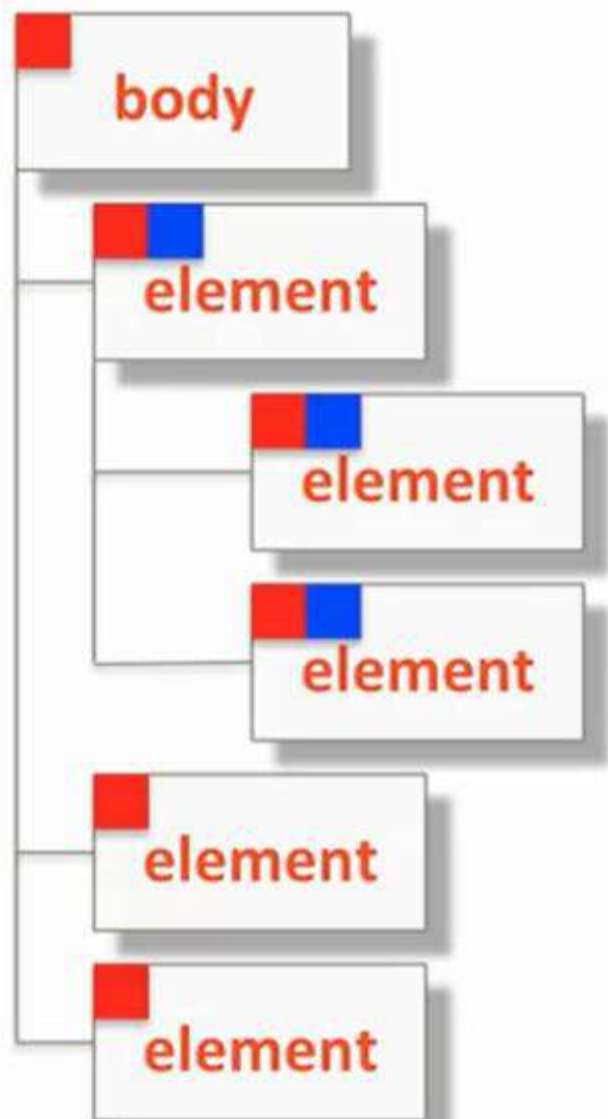
margin 20.800
 border -
 padding -
 632 x 24
 20.800

Filter Show

-webkit-app-region
 drag;
 -webkit-appearance

Inheritance

DOM
Tree





```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Inheritance in CSS</title>
6 <style>
7 body {
8   color: red;
9   text-align: center;
10  font-family: Helvetica;
11 }
12 p {
13   color: blue;
14 }
15 </style>
16 </head>
17 <body>
18 <h1>Cascade of CSS Example</h1>
19 <h2>Subheading 1</h2>
20 <p>Inheritance allows us to write more
    global styles on parent elements and
    then "fine-tune" the styles for some of
    the child elements as needed. Such
    approach makes writing CSS very
```

Cascade of CSS Example

Subheading 1

Inheritance allows us to write more global styles on parent elements and then "fine-tune" the styles for some of the child elements as needed. Such approach makes writing CSS very efficient.

Subheading 2

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Architecto ad excepturi, odio, fuga nam quidem reprehenderit placeat commodi? In laudantium cum neque vitae at eligendi consequatur sequi cumque.

```
inheritance.html x
13 color: blue;
14 }
15 </style>
16 </head>
17 <body>
18 <h1>Cascade of CSS Example</h1>
19 <h2>Subheading 1</h2>
20 <p>Inheritance allows us to write more
    global styles on parent elements and
    then "fine-tune" the styles for some of
    the child elements as needed. Such
    approach makes writing CSS very
    efficient.</p>
21 <h2 style="color: green;">Subheading 2</
    h2>
22 <p>Lorem ipsum dolor sit amet,
    consectetur adipisicing elit.
    Architecto ad excepturi eveniet odio,
    fuga nam quidem reprehenderit placeat
    commodi? In laudantium cum nam quod
    vitae at eligendi consequatur sequi
    cumque.</p>
23 </body>
```

Cascade of CSS Example

Subheading 1

Inheritance allows us to write more global styles on parent elements and then the styles for some of the child elements as needed. Such approach makes writing CSS very efficient.

Subheading 2





Lorem ipsum dolor sit amet, consectetur adipisicing elit. Architecto ad excepturi odio, fuga nam quidem reprehenderit placeat commodi? In laudantium cum nam quod vitae at eligendi consequatur sequi cumque.

Specificity

simple rule

**Most Specific
Selector Combination Wins**

Specificity (score)

style="..."	ID	Class, pseudo-class, attribute	# of Elements
			

```
<h2 style="color: green;">
```

visualization
borrowed
css-tricks

Specificity (score)

style="..."	ID	Class, pseudo-class, attribute	# of Elements
1	0	0	0

```
<h2 style="color: green;">
```

Specificity (score)

style="..."	ID	Class, pseudo-class, attribute	# of Elements
0	0	0	2

```
div p { color: green; }
```

Specificity (score)

```
div #myParag {  
  color: blue;  
}
```

?

```
div.big p {  
  color: green;  
}
```

0 1 0 1



0 0 1 2



```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Inheritance in CSS</title>
6 <style>
7 header.navigation p {
8   color: blue;
9 }
10 p.blurb {
11   color: red;
12 }
13 /*p {
14   color: green !important;
15 }*/
16 </style>
17 </head>
18 <body>
19 <header class="navigation">
20   <p class="blurb">Lorem ipsum dolor
    sit amet, consectetur adipisicing
    elit. Vero soluta enim aut! Nihil nam
    obcaecati, fugiat sint sit libero
    voluptate eos incidunt odio neque
```

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Vero soluta enim aut! Nihil nam obcaecati, fugiat sint sit libero voluptate eos incidunt odio neque cum, dignissimos aperiam magnam nisi debitis.


```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Inheritance in CSS</title>
6 <style>
7 header.navigation p {
8   color: blue;
9 }
10 p.blurb {
11   color: red;
12 }
13 p {
14   color: green !important;
15 }
16 </style>
17 </head>
18 <body>
19 <header class="navigation">
20   <p class="blurb">Lorem ipsum dolor
    sit amet, consectetur adipisicing
    elit. Vero soluta enim aut! Nihil nam
    obcaecati, fugiat sint sit libero
    voluptate eos incidunt odio neque
```

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Vero soluta enim aut! Nihil nam obcaecati, fugiat sint sit libero voluptate eos incidunt odio neque cum, dignissimos aperiam magnam nisi debitis.

Summary

- ✧ Cascade: origin, merge; Inheritance, & Specificity
- ✧ Provide precise control over targeting content while allowing maximum re-use of styles across your website

```
1 <!-- head -->
2
3
4 <meta charset="utf-8">
5 <title>Styling Text</title>
6 <style>
7 .style {
8   font-family: Arial, Helvetica, sans-
     serif;
9
10 }
11 </style>
12 </head>
13 <body>
14 <p>You can get commonly used font
    combinations from <a href="http://www.
    w3schools.com/cssref/css_websafe_fonts.
    asp">http://www.w3schools.com/cssref/
    css_websafe_fonts.asp</a>. Lorem ipsum
    dolor sit amet, consectetur adipisicing
    elit. Quisquam quod necessitatibus a
    ullam dolorum amet reprehenderit sit
    laudantium reiciendis aperiam. </p>
15 <p class="style">Lorem ipsum dolor sit
    amet, consectetur adipisicing elit.
    Laboriosam fugiat repudiandae fugit
```

You can get commonly used font combinations from

http://www.w3schools.com/cssref/css_websafe_fonts.asp. Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quisquam quod necessitatibus a ullam dolorum amet reprehenderit sit laudantium reiciendis aperiam.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Laboriosam fugiat repudiandae fugit porro commodi.


```
3 <!-- head -->
4 <meta charset="utf-8">
5 <title>Styling Text</title>
6 <style>
7 .style {
8   font-family: Arial, Helvetica, sans-
     serif;
9   color: #0000ff;
10
11 }
12 </style>
13 </head>
14 <body>
15 <p>You can get commonly used font
    combinations from <a href="http://www.
    w3schools.com/cssref/css_websafe_fonts.
    asp">http://www.w3schools.com/cssref/
    css_websafe_fonts.asp</a>. Lorem ipsum
    dolor sit amet, consectetur adipisicing
    elit. Quisquam quod necessitatibus a
    ullam dolorum amet reprehenderit sit
    laudantium reiciendis aperiam. </p>
16 <p class="style">Lorem ipsum dolor sit
    amet, consectetur adipisicing elit.
```

You can get commonly used font combinations from

http://www.w3schools.com/cssref/css_websafe_fonts.asp. Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quisquam quod necessitatibus a ullam dolorum amet reprehenderit sit laudantium reiciendis aperiam.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Laboriosam fugiat reprehenderit sit laudantium reiciendis aperiam. fugit porro commodi.


```

1  <!--
2  <meta charset="utf-8">
3  <title>Styling Text</title>
4  <style>
5  .style {
6  font-family: Arial, Helvetica, sans-
7  serif;
8  color: #0000ff;
9  font-style: italic;
10 font-weight: 900;
11 }
12 </style>
13 </head>
14 <body>
15 <p>You can get commonly used font
16 combinations from <a href="http://www.
17 w3schools.com/cssref/css_websafe_fonts.
18 asp">http://www.w3schools.com/cssref/
19 css_websafe_fonts.asp</a>. Lorem ipsum
20 dolor sit amet, consectetur adipisicing
21 elit. Quisquam quod necessitatibus a
22 ullam dolorum amet reprehenderit sit
23 laudantium reiciendis aperiam. </p>

```

You can get commonly used font combinations from

http://www.w3schools.com/cssref/css_websafe_fonts.asp. Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quisquam quod necessitatibus a ullam dolorum amet reprehenderit sit laudantium reiciendis aperiam.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Laboriosam fugit repudiandae fugit porro commodi.

```
3 <!-- meta -->
4 <meta charset="utf-8">
5 <title>Styling Text</title>
6 <style>
7 .style {
8   font-family: Arial, Helvetica, sans-
     serif;
9   color: #0000ff;
10  font-style: italic;
11  font-weight: bold;
12  font-size: 24px;
13
14 }
15 </style>
16 </head>
17 <body>
18 <p>You can get commonly used font
    combinations from <a href="http://www.
    w3schools.com/cssref/css_websafe_fonts.
    asp">http://www.w3schools.com/cssref/
    css_websafe_fonts.asp</a>. Lorem ipsum
    dolor sit amet, consectetur adipisicing
    elit. Quisquam quod necessitatibus a
    ullam dolorum amet reprehenderit sit
```

You can get commonly used font combinations from

http://www.w3schools.com/cssref/css_websafe_fonts.asp. Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quisquam quod necessitatibus a ullam dolorum amet reprehenderit sit

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Laboriosam fugiat repudiandae fugit porro commodi.


```

1 <!-- head -->
2
3
4 <meta charset="utf-8">
5 <title>Styling Text</title>
6 <style>
7 .style {
8   font-family: Arial, Helvetica, sans-
9     serif;
10  color: #0000ff;
11  font-style: italic;
12  font-weight: bold;
13  font-size: 24px;
14  text-transform: uppercase;
15 }
16 </style>
17 </head>
18 <body>
19 <p>You can get commonly used font
    combinations from <a href="http://www.
    w3schools.com/cssref/css_websafe_fonts.
    asp">http://www.w3schools.com/cssref/
    css_websafe_fonts.asp</a>. Lorem ipsum
    dolor sit amet, consectetur adipiscing
    elit. Quisquam quod necessitatibus a
  
```

You can get commonly used font combinations from http://www.w3schools.com/cssref/css_websafe_fonts.asp. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Quisquam quod necessitatibus a ullam dolorum amet reprehenderit laudantium reiciendis aperiam.

**LOREM IPSUM DOLOR SIT AMET, CONSECTETUR
ADIPISICING ELIT. LABORIOSAM FUGIAT
REPUDIANDAE FUGIT PORRO COMMODI.**

```

1 <!--
2
3
4 <meta charset="utf-8">
5 <title>Styling Text</title>
6 <style>
7 .style {
8   font-family: Arial, Helvetica, sans-
9     serif;
10  color: #0000ff;
11  font-style: italic;
12  font-weight: bold;
13  font-size: 24px;
14  text-transform: uppercase;
15  text-align: right;
16 }
17 </style>
18 </head>
19 <body>
20 <p>You can get commonly used font
    combinations from <a href="http://www.
    w3schools.com/cssref/css_websafe_fonts.
    asp">http://www.w3schools.com/cssref/
    css_websafe_fonts.asp</a>. Lorem ipsum
    dolor sit amet, consectetur adipisicing
  
```

You can get commonly used font combinations from http://www.w3schools.com/cssref/css_websafe_fonts.asp. Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quisquam quod necessitatibus a ullam dolorum amet reprehenderit laudantium reiciendis aperiam.

**LOREM IPSUM DOLOR SIT AMET, CONSECT
ADIPISICING ELIT. LABORIOSAM F
REPUDIANDAE FUGIT PORRO COM**


```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Setting Font Size</title>
6 <style>
7 body {
8   font-size: 120%;
9 }
10 </style>
11 </head>
12 <body>
13 <div>Regular text</div>
14 <div style="font-size: 2em;">2em text
15   <div style="font-size: 2em;">4em text
16     <div style="font-size: .5em;">2em
17       again!</div>
18   </div>
19 </div>
20 </body>
</html>
```

Regular text

2em text

4em text

2em again!