WEB PAGES DESIGN

Cascading Style Sheets (CSS) Introduction

Lecturer: M.Sc. Ahmed Sami
Lecture 6.
Class 2.
Department: Informatics Systems Management (ISM)

CSS overview

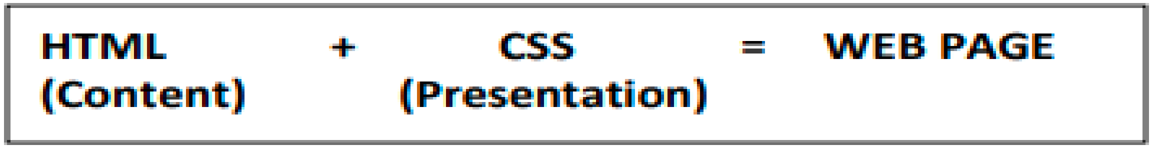
What is CSS?

CSS is a language that applies styles to a HTML document and its elements to change the look and feel and is usually stored in separate. CSS style which can be re-used for all the web pages. A website is made up of HTML for content plus CSS for appearance. It can control the layout of multiple web pages all at once. CSS can be added to HTML elements in 3 ways:

1- Inline - by using the style attribute in HTML elements

2- Internal - by using a <style> element in the <head>section

3- External - by using an external CSS file



HTML (Content)	+	CSS (Presentation)	=	WEB PAGE

advantage and disadvantage to CSS

❑ Advantages:

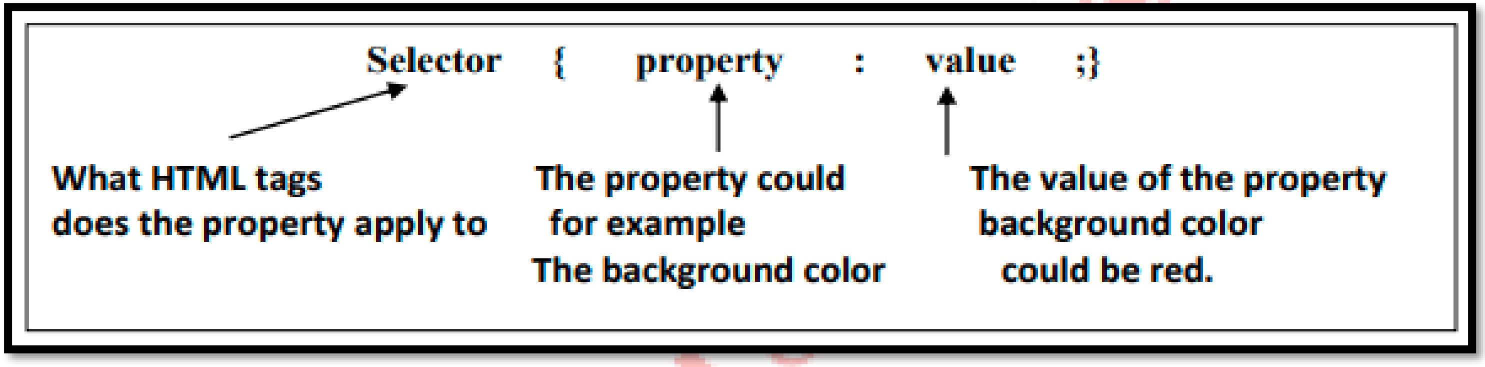
- CSS saves time - You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.
- Pages load faster - If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply to all the occurrences of that tag. So less code means faster download times.
- Easy maintenance - To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.

❑ Disadvantages:

- Browser Compatibility- Some style sheet features are supported and some are not by the browsers.

Basic CSS syntax

The CSS syntax consists of a set of rules. These rules have a 3 parts:



Selector { property : value ;}

What HTML tags does the property apply to

The property could for example The background color

The value of the property background color could be red.

1- Selector: A selector is an HTML tag at which style will be applied. This could be any tag like <h1> or <table> etc.

2- Property: A property is a type of attribute of HTML tag. Put simply, all the HTML attributes are converted into CSS properties. They could be color or border etc.

3- Value: Values are assigned to properties. For example color property can have value either red.

Basic CSS syntax

Example:

- You can define a table border as follows:

```
table{ border :1px; }
```

- Here table is a selector and border is a property and given value 1px is the value of that property.

Levels of style sheet

There are 3 levels of style sheet used associate CSS styles with your HTML document.

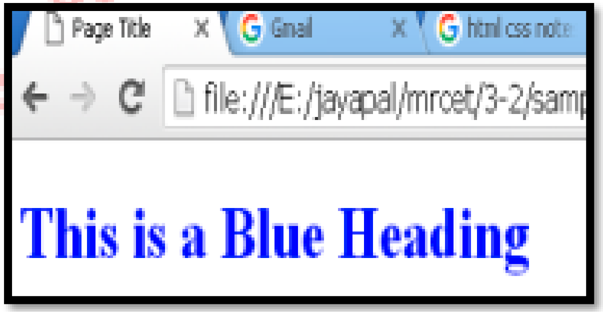
1- Inline 2- Internal 3- External

1- Inline CSS - The style Attribute:

- An inline CSS is used to apply a unique style to a single HTML element.
- An inline CSS uses the style attribute of an HTML element.

Example:

```
<h1 style="color: blue;">This is a Blue Heading</h1>
```



This is a Blue Heading

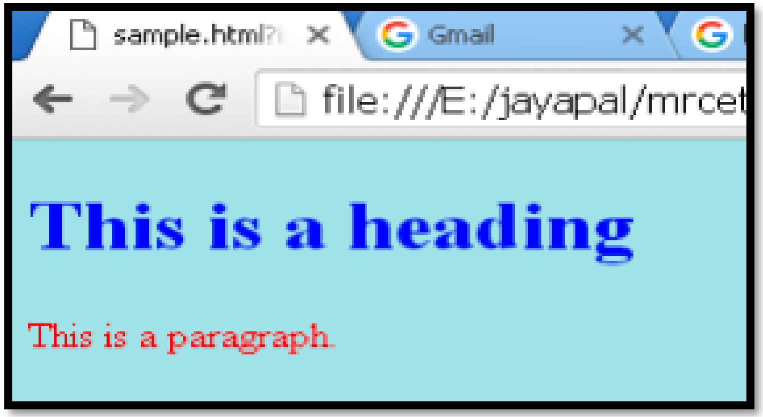
Levels of style sheet

2- Internal Level CSS - The <style> Element:

- An internal CSS is used to define a style for a single HTML page.
- An internal CSS is defined in the <head> section of an HTML page, within a <style> element:

Example:

```
<head>
<style>
body {background-color: powder blue;}
h1 {color: blue;}
p {color: red;}
</style>
</head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph</p>
</body>
```



file:///E:/jayapal/mrcet

This is a heading

This is a paragraph.

Levels of style sheet

3- External CSS - The <link> Element:

- An external style sheet is a separate text file with .CSS extension.
- You define all the Style rules within this text file and then you can include this file in any HTML document using <link> element.
- External style sheets can apply to the bodies of multiple html documents

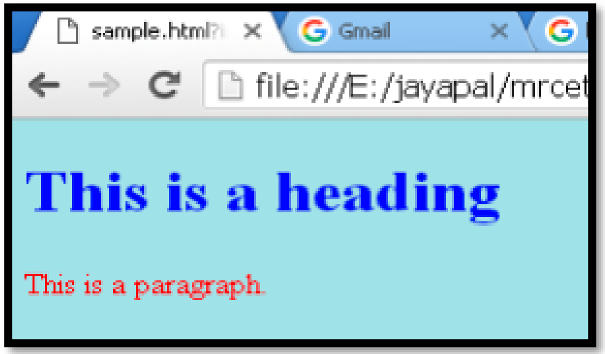
Example:

```
<head> <link rel="stylesheet" href="styles.css"> </head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
```

An external style sheet can be written in any text editor.

must be saved with a .CSS extension.

```
body { background-color: powder blue; }
h1 { color: blue; }
p { color: red; }
```



This is a heading

This is a paragraph.

Type of selectors

In CSS, a selector is the target element to which each CSS rule is applied. The different types of selectors are:

- element Selector
- id Selector
- Class Selector
- Universal Selector
- Grouping Selector

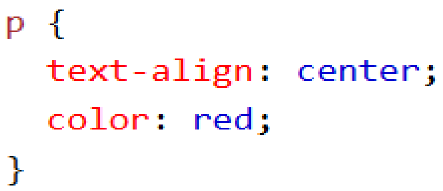
CSS element Selector

The CSS element Selector:

The element selector selects HTML elements based on the element name.

Example:

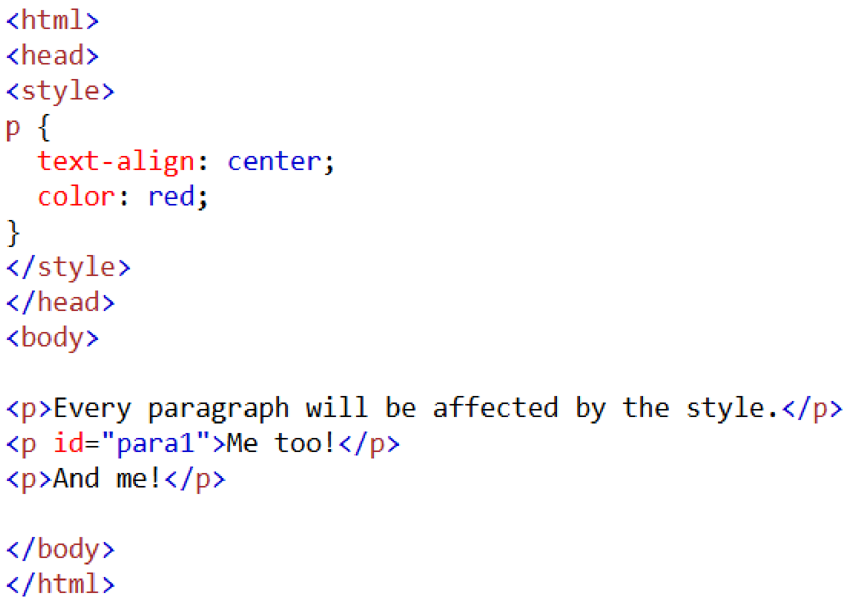
Here, all <p> elements on the page will be center-aligned, with a red text color:



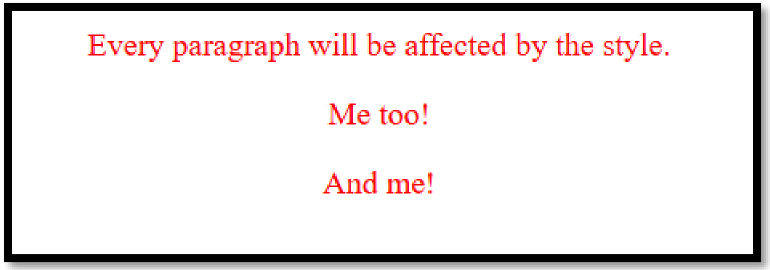
```
p {
  text-align: center;
  color: red;
}
```

CSS element Selector

Example:



```
<html>
<head>
<style>
p {
  text-align: center;
  color: red;
}
</style>
</head>
<body>

<p>Every paragraph will be affected by the style.</p>
<p id="para1">Me too!</p>
<p>And me!</p>

</body>
</html>
```



Every paragraph will be affected by the style.

Me too!

And me!

CSS id Selector

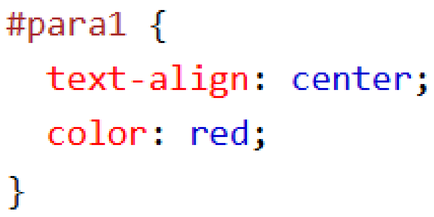
The CSS id Selector:

- The id selector uses the id attribute of an HTML element to select a specific element.
- The id of an element is unique within a page, so the id selector is used to select one unique element!
- To select an element with a specific id, write a **hash (#)** character, followed by the id of the element.

Note: An id name cannot start with a number!

Example:

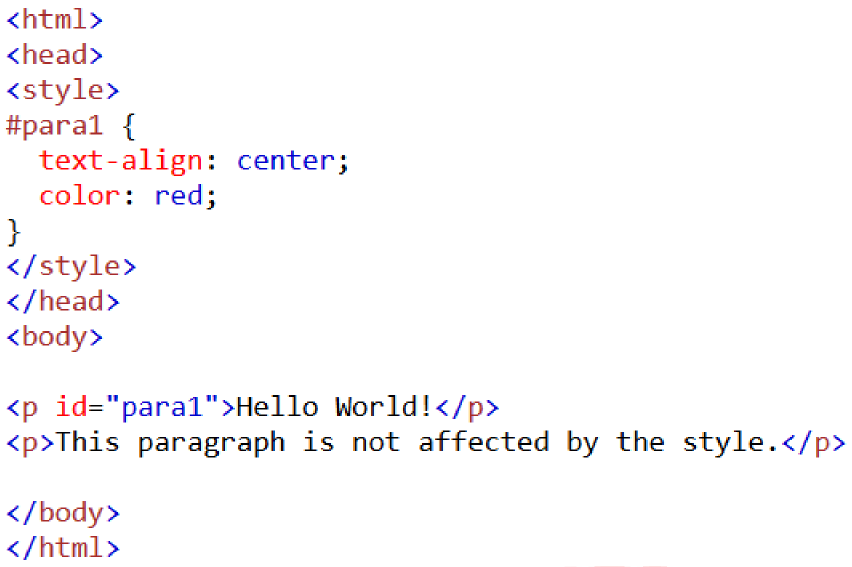
The CSS rule below will be applied to the HTML element with id="para1":



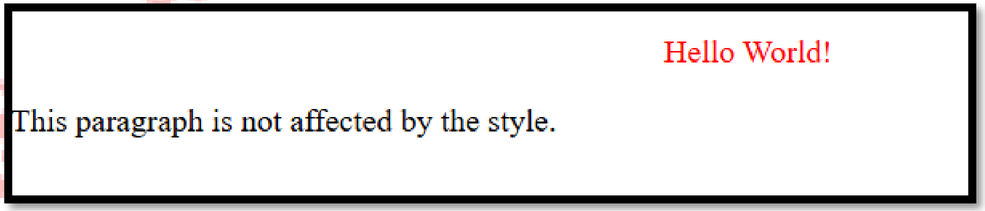
```
#para1 {
  text-align: center;
  color: red;
}
```

CSS id Selector

Example:



```
<html>
<head>
<style>
#para1 {
  text-align: center;
  color: red;
}
</style>
</head>
<body>

<p id="para1">Hello World!</p>
<p>This paragraph is not affected by the style.</p>

</body>
</html>
```



Hello World!

This paragraph is not affected by the style.

CSS class Selector

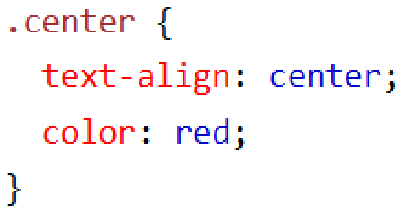
The CSS class Selector:

- The class selector selects HTML elements with a specific class attribute.
- To select elements with a specific class, write a **period (.)** character, followed by the class name.

Note: A class name cannot start with a number!

Example:

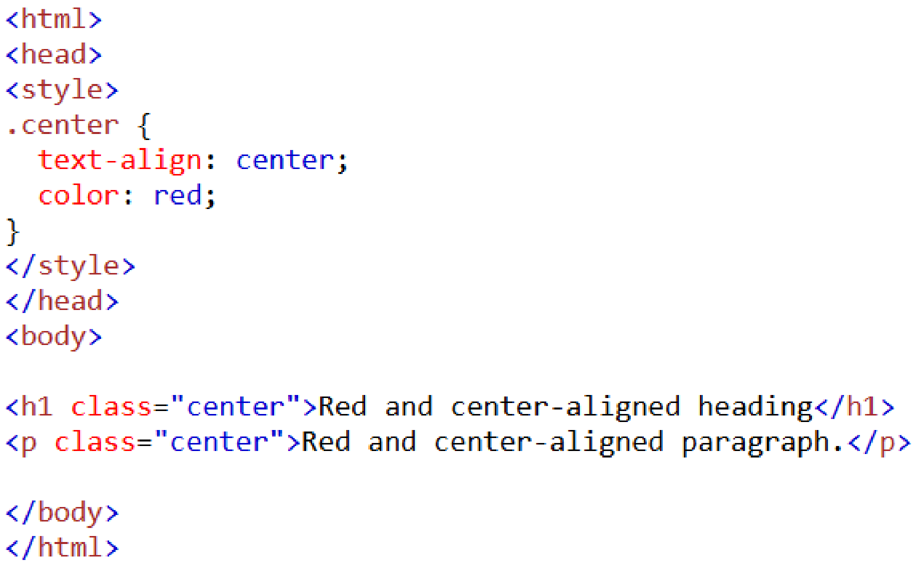
In this example all HTML elements with class="center" will be red and center-aligned:



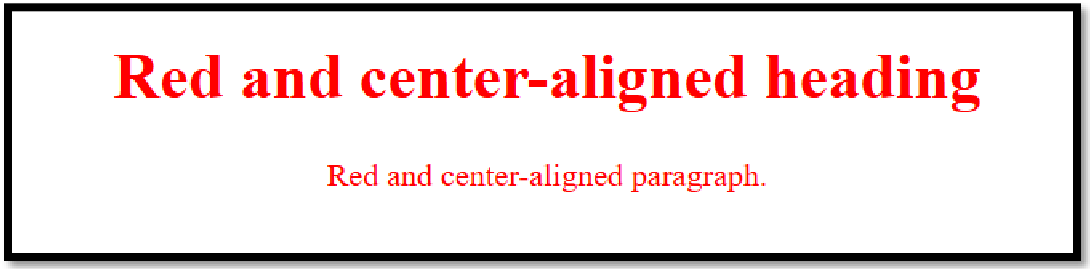
```
.center {
  text-align: center;
  color: red;
}
```

CSS class Selector

Example:



```
<html>
<head>
<style>
.center {
  text-align: center;
  color: red;
}
</style>
</head>
<body>

<h1 class="center">Red and center-aligned heading</h1>
<p class="center">Red and center-aligned paragraph.</p>

</body>
</html>
```



Red and center-aligned heading

Red and center-aligned paragraph.

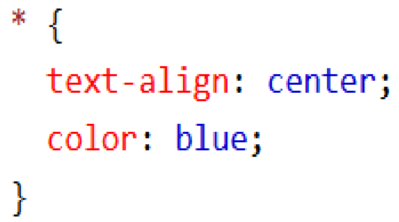
CSS Universal Selector

The CSS Universal Selector:

- The universal selector (*) selects all HTML elements on the page.

Example:

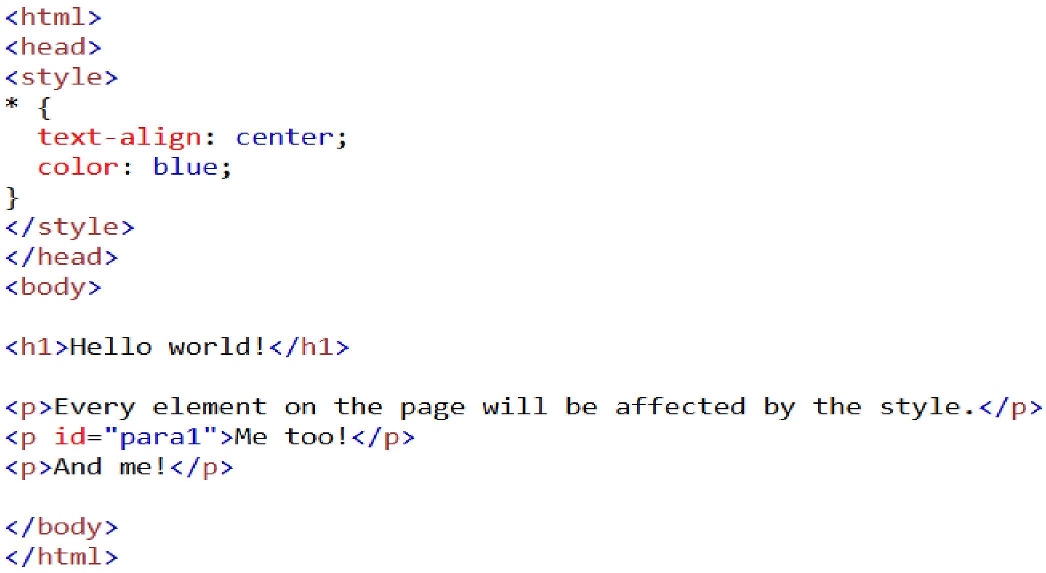
The CSS rule below will affect every HTML element on the page:



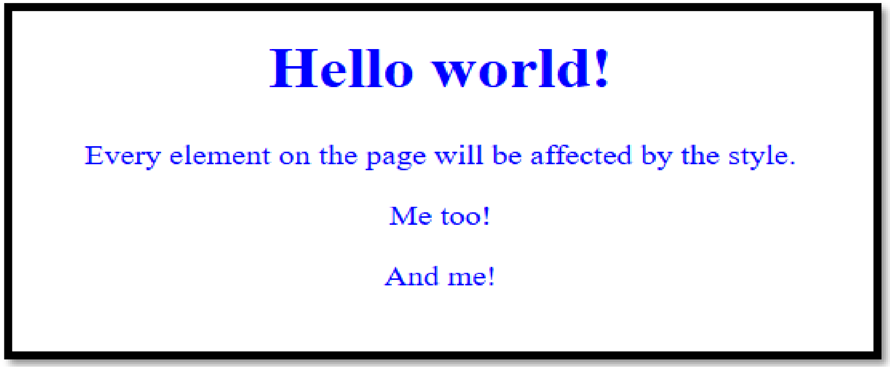
```
* {
  text-align: center;
  color: blue;
}
```

CSS Universal Selector

Example:



```
<html>
<head>
<style>
* {
  text-align: center;
  color: blue;
}
</style>
</head>
<body>

<h1>Hello world!</h1>

<p>Every element on the page will be affected by the style.</p>
<p id="para1">Me too!</p>
<p>And me!</p>

</body>
</html>
```



Hello world!

Every element on the page will be affected by the style.

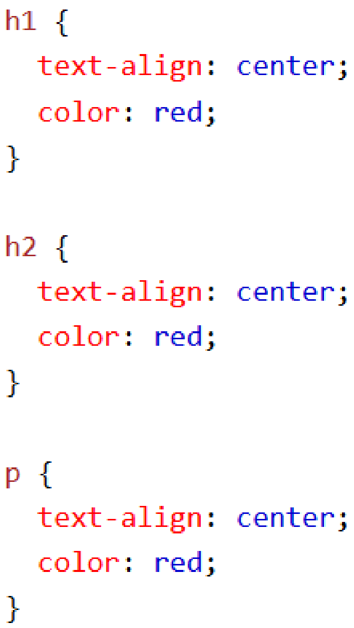
Me too!

And me!

CSS Grouping Selector

The CSS Grouping Selector:

- The grouping selector selects all the HTML elements with the same style definitions.
- Look at the following CSS code (the h1, h2, and p elements have the same style definitions).



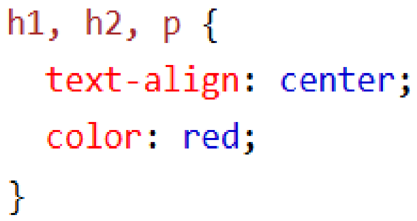
```
h1 {
  text-align: center;
  color: red;
}

h2 {
  text-align: center;
  color: red;
}

p {
  text-align: center;
  color: red;
}
```

CSS Grouping Selector

- It will be better to group the selectors, to minimize the code.
- To group selectors, separate each selector with a comma.

Example:

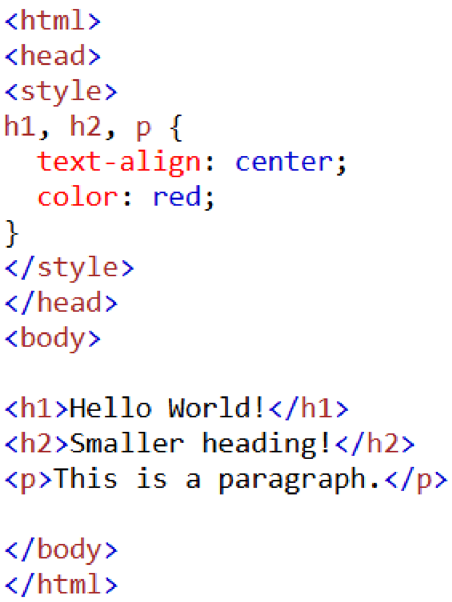
In this example we have grouped the selectors from the code above:



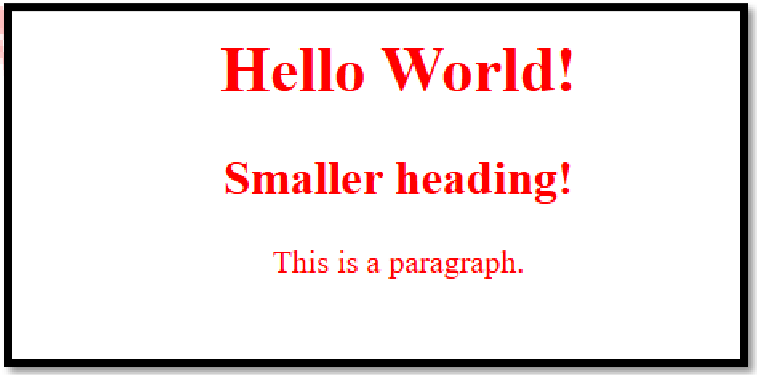
```
h1, h2, p {
  text-align: center;
  color: red;
}
```

CSS Grouping Selector

Example:



```
<html>
<head>
<style>
h1, h2, p {
  text-align: center;
  color: red;
}
</style>
</head>
<body>

<h1>Hello World!</h1>
<h2>Smaller heading!</h2>
<p>This is a paragraph.</p>

</body>
</html>
```

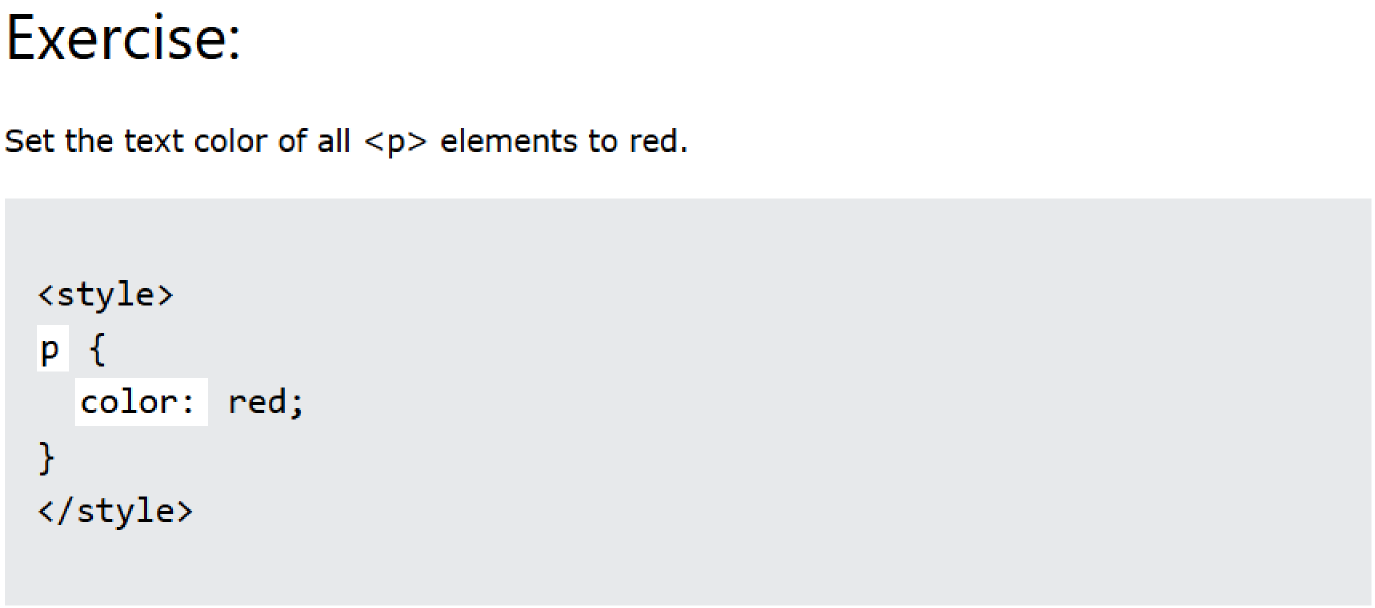


Hello World!

Smaller heading!

This is a paragraph.

Test Yourself With Exercises

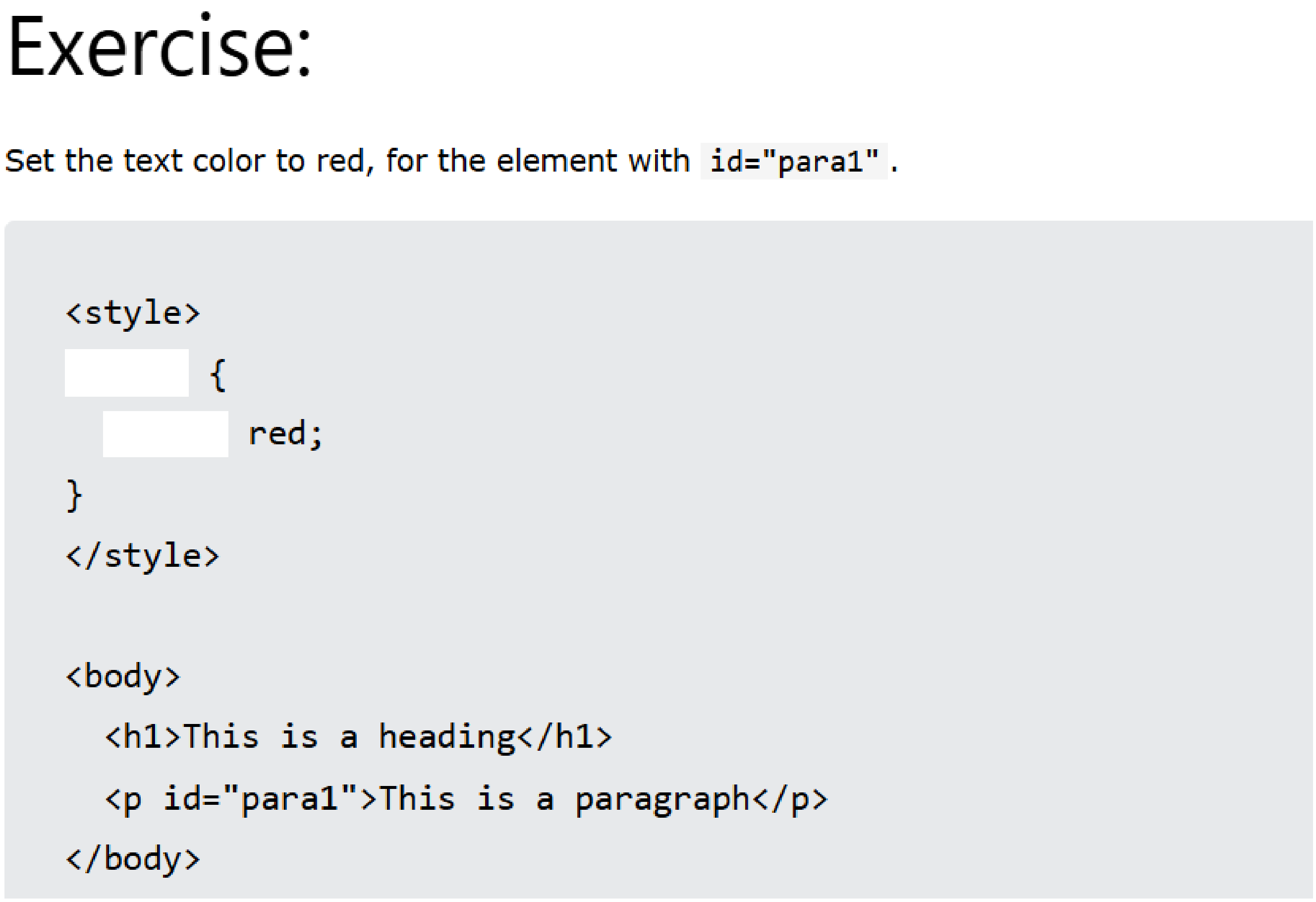


Exercise:

Set the text color of all <p> elements to red.

```
<style>
p {
  color: red;
}
</style>
```

Test Yourself With Exercises

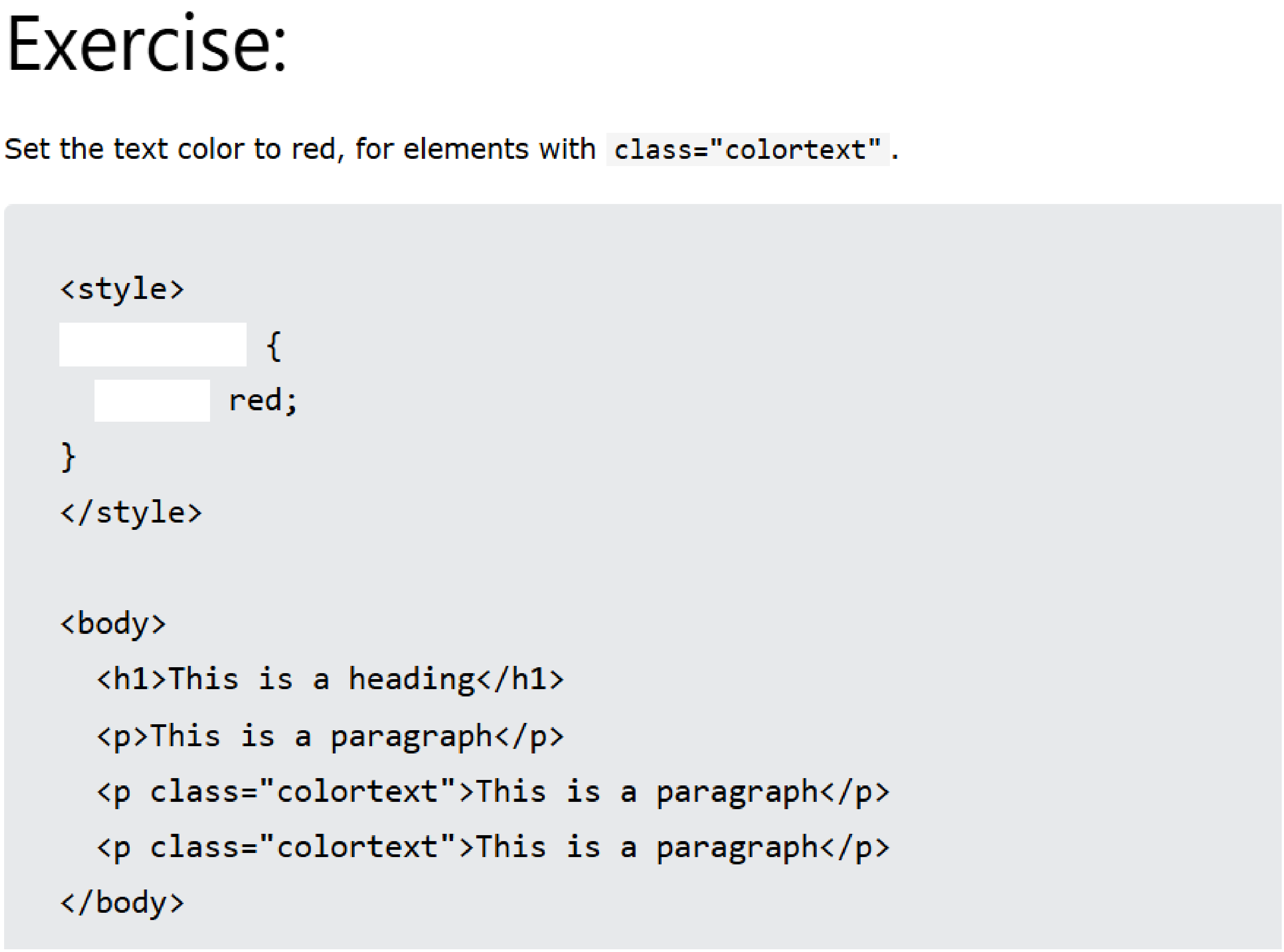


Exercise:

Set the text color to red, for the element with `id="para1"`.

```
<style>
         {
           red;
}
</style>

<body>
  <h1>This is a heading</h1>
  <p id="para1">This is a paragraph</p>
</body>
```

Test Yourself With Exercises

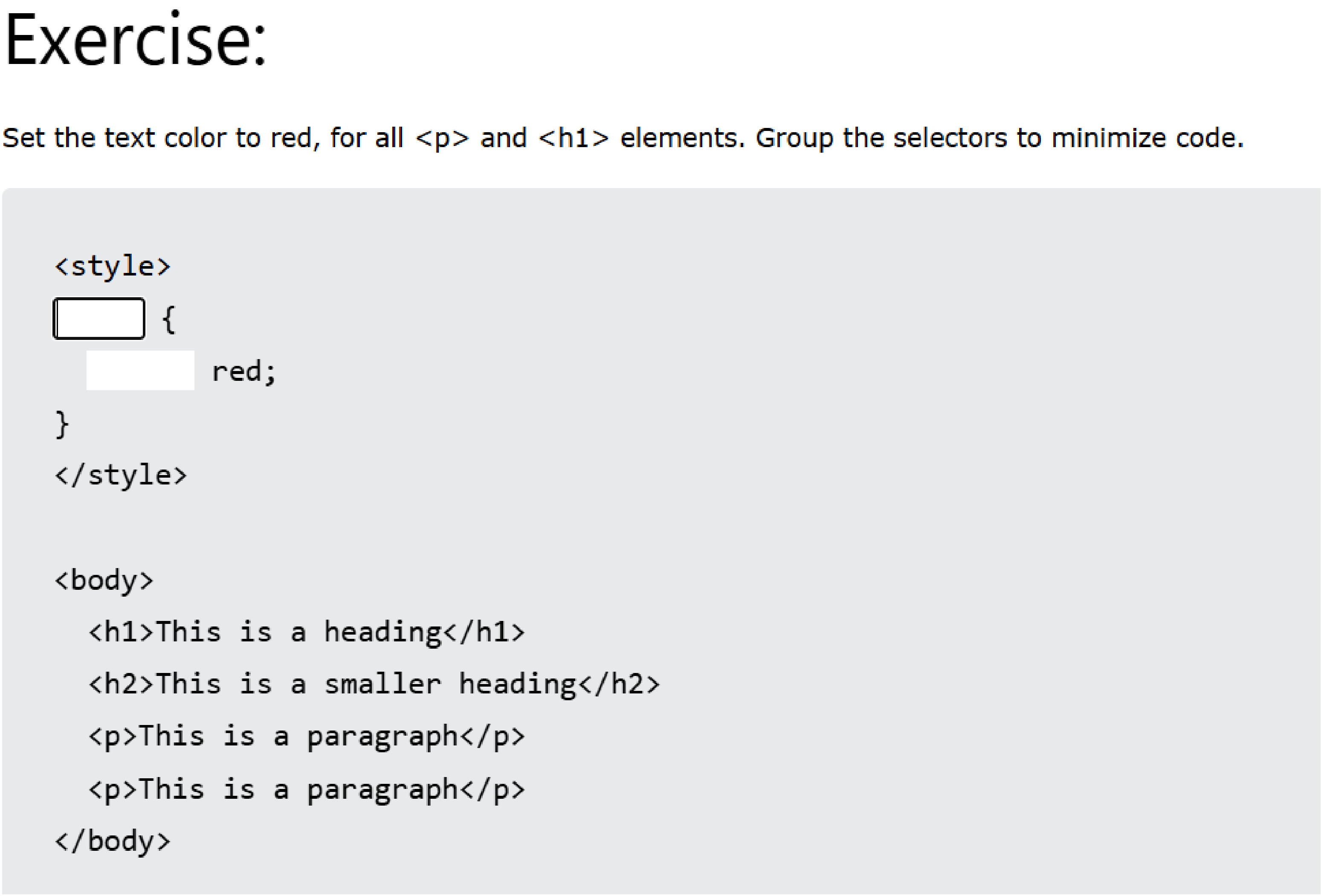


Exercise:

Set the text color to red, for elements with `class="colortext"`.

```
<style>
           {
         red;
}
</style>

<body>
  <h1>This is a heading</h1>
  <p>This is a paragraph</p>
  <p class="colortext">This is a paragraph</p>
  <p class="colortext">This is a paragraph</p>
</body>
```

Test Yourself With Exercises



Exercise:

Set the text color to red, for all <p> and <h1> elements. Group the selectors to minimize code.

```
<style>
□ {
  □ red;
}
</style>

<body>
  <h1>This is a heading</h1>
  <h2>This is a smaller heading</h2>
  <p>This is a paragraph</p>
  <p>This is a paragraph</p>
</body>
```

The end