

# Anatomy of a Cascading Style Sheet

A CSS file contains a set of rulesets. Rulesets define a particular style and can be applied to elements via the selector. Let's break this down a little. Here is a simple example ruleset that changes all <h1> tags to be red:

```
h1 {  
  color: red;  
}
```

In the above example, the h1 is the selector and color: red is a rule. All of it together is a ruleset.

```
selector {  
  property: value;  
}
```

## Rules

Rules contain a property and a value:

```
property: value
```

A CSS property is what you are trying to affect with your rule. For instance, you may want to change the background to red. So, your property may be background-color and your value could be red.

```
background-color: red;
```

Rules alone are not valid CSS, they need to exist in a ruleset, and a ruleset starts with a selector.

## Selectors

A selector defines what elements a CSS ruleset should be applied to. Essentially, it tell the CSS which elements to "select" and apply the rules to. Imagine you're in a document and you want to bold something. You would "select" the text you want to bold then click the bold button.

Rulesets can be applied to element types, elements with a class attribute, elements with an id set, and more.

## Element Selectors

When using an element selector, you're "selecting" all of the elements of a certain type. The selector is simply the name of the element. If you want to change all of the paragraphs to be a certain font size, you would select all p elements.

```
p {  
  font-size: 1.5em;  
}
```

## Class Selectors

The most common way that CSS is used is via classes. All HTML elements have an attribute on them called class, and you can put whatever you want as the value in the attribute. Let's say that I have some HTML like:

```
<h1 class="red-text">Hello World!</h1>  
<h1>Bye Bye!</h1>
```

Notice that the first h1 has a class attribute with a value of red-text. Now, we can "select" only elements with that class and apply a ruleset:

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

The difference that you need to notice is the period (.) that comes before the selector. The period (.) tells CSS that you are referencing a class and that class is named red-text.

The really powerful thing here is that now we can use this on whatever elements we want. For example:

```
<h1 class="red-text">Hello!</h1>
<p class="red-text">Bye!</p>
```

## ID Selectors

The id attribute on your elements are completely unique, and you can select them directly using # and the name like #myelement null. Here is an example of some HTML and CSS using an id selector.

```
#btnLogin {
  background: blue;
}
```

```
<button id="btnLogin">Submit</button>
```