# Using Reserved Characters and Symbols in HTML

In this lesson, we will learn the usage of reserved characters and symbols in HTML.

WE'LL COVER THE FOLLOWING



In a few listings, you have already met a strange set of character literals, such as in this snippet:

```
<div>
  &lt;div&gt; always starts a new block,
  <span style="font-weight: bold">
    however &lt;span&gt; defines a
    logical container for inline text.
  </span>
</div>
```

In those listings I declined to explain what they are, but it is time to get acquainted with them.

There are characters that are reserved in HTML and XHTML. For example, the "<" and ">" signs are reserved, because they are used by the HTML (XHTML) scanner to recognize the beginning and end of tags. However, these are characters that also could be part of the page's content.

Also, there are non-printable characters, and ones that cannot easily be entered with the keyboard, but still should be rendered when displaying a page. HTML provides a simple way to display reserved characters and other special symbols (such as Greek letters) with entities. Entities have two formats; they can use codes or names. All entities start with an ampersand (`&`) character, and are closed with a semicolon (`;`), such as `&copy;` (the © symbol),

`&pound;` (the `£` symbol), or `&#09;` (the horizontal tab). Coded and named entities differ in the literals typed between the delimiting characters. Coded entities use a number sign (`#`) and a sequence of decimal digits to define the code of the entity. Named entities use a predefined name that is understood by the browser.

All characters can be described as coded entities, but only a few hundred have names. The first table below summarizes the reserved characters, while the second table lists several frequently used symbols.

## Reserved characters in HTML #

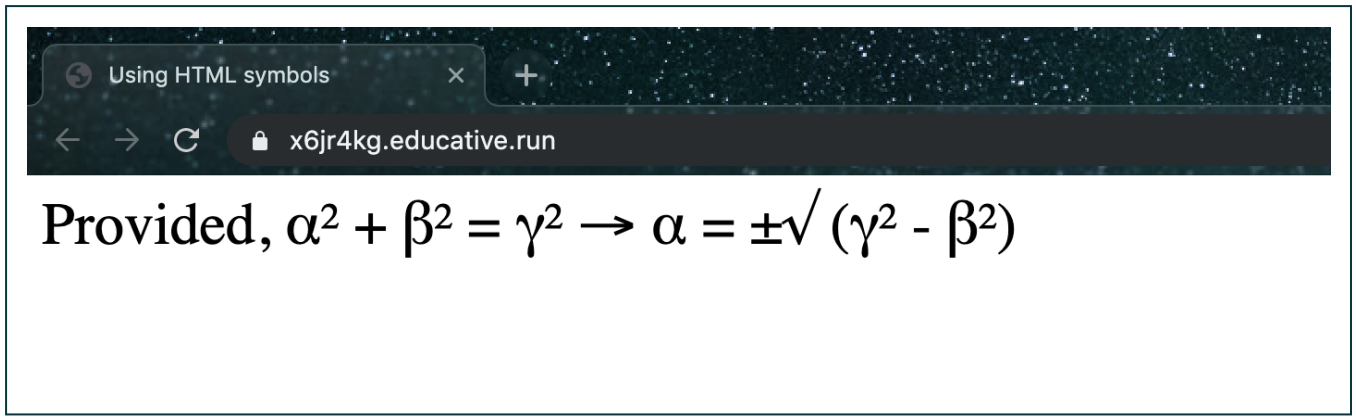
| Code | Name | Description |
|---|---|---|
| &#34; | &quot; | quotation mark (") |
| &#39; | &apos; | apostrophe (') |
| &#38; | &amp; | ampersand (&) |
| &#60; | &lt; | less-than (<) |
| &#62; | &gt; | greater-than (>) |

## Frequently used symbols in HTML #

| Code | Name | Symbol |
|---|---|---|
|   |   | non-breaking space |
| &#162; | &cent; | cent (¢) |
| &#163; | &pound; | pound (£) |
| &#165; | &yen; | yen (¥) |
| &#167; | &sect; | section (§) |
| &#169; | &copy; | copyright (©) |
| &#171; | &laquo; | angle quotation mark (left, «) |
| &#174; | &reg; | registered trademark (®) |
| &#176; | &deg; | degree (°) |
| &#182; | &para; | paragraph (¶) |
| &#182; | &middot; | middle dot (·) |
| &#187; | &raquo; | angle quotation mark (right, ») |
| &#192; | &Agrave; | capital a, grave accent (À) |
| &#193; | &Aacute; | capital a, acute accent (Á) |
| &#199; | &Ccedil; | capital c, cedilla |

| | | |
|---|---|---|
| &#8719; | &prod; | prod (∏) |
| &#8721; | &sum; | sum (∑) |
| &#8730; | &radic; | square root (√) |
| &#8734; | &infin; | infinity (∞) |
| &#8747; | &int; | integral (∫) |
| &#915; | &Gamma; | capital Greek letter gamma (Γ) |
| &#945; | &alpha; | Greek letter alpha (α) |
| &#946; | &beta; | Greek letter beta (β) |
| &#947; | &gamma; | Greek letter gamma (γ) |
| &#8592; | &larr; | left arrow (←) |
| &#8594; | &rarr; | right arrow (→) |

Using entities, you can easily provide the markup (see Listing 2-8) for the expression shown below:




A mathematical expression rendered in the browser

## Listing 2-8: Using HTML symbols #

```
<!DOCTYPE html>
<html>
<head>
  <title>Using HTML symbols</title>
</head>
<body style="font-size: 2em">
  Provided, &alpha;&sup2; + &beta;&sup2;
  = &gamma;&sup2;
  &rarr;
  &alpha; = &plusmn;&radic;
  (&gamma;&sup2; - &beta;&sup2;)
</body>
</html>
```

In the *next lesson*, we'll look at Paragraphs and Text Breaks in HTML.

See you there! :)