

HTML Computercode

- HTML contains several elements for defining user input and computer code.

```
<code>  
x = 5;<br>  
y = 6;<br>  
z = x + y;  
</code>
```

Some programming code:

```
x = 5;  
y = 6;  
z = x + y;
```

- [Try it Yourself »](#)

HTML <kbd> For Keyboard Input

- The HTML <kbd> element is used to define keyboard input. The content inside is displayed in the browser's default monospace font.

Define some text as keyboard input in a document:

```
<p>Save the document by pressing <kbd>Ctrl + S</kbd></p>
```

Result:

Save the document by pressing `ctrl + s`

HTML <samp> For Program Output

- The HTML <samp> element is used to define **sample output** from a computer program. The content inside is displayed in the browser's default monospace font.

Example

Define some text as sample output from a computer program in a document:

```
<p>Message from my computer:</p>
<p><samp>File not found.<br>Press F1 to continue</samp></p>
```

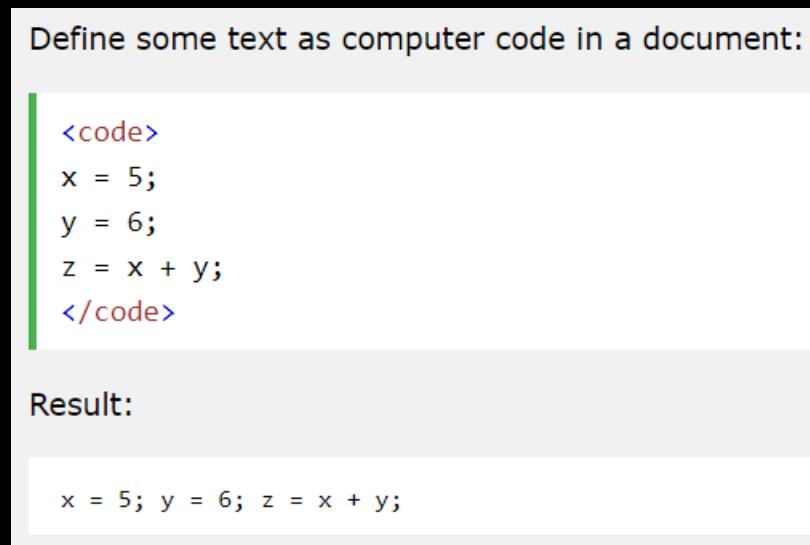
Result:

Message from my computer:

File not found.
Press F1 to continue

HTML <code> For Computer Code

- The HTML <code> element is used to define a piece of computer code. The content inside is displayed in the browser's default monospace font.



Define some text as computer code in a document:

```
<code>
x = 5;
y = 6;
z = x + y;
</code>
```

Result:

```
x = 5; y = 6; z = x + y;
```

- Notice that the `<code>` element does not preserve extra whitespace and line-breaks.
- To fix this, you can put the `<code>` element inside a `<pre>` element:

```
<pre>
<code>
x = 5;
y = 6;
z = x + y;
</code>
</pre>
```

Result:

```
x = 5;
y = 6;
z = x + y;
```

HTML <var> For Variables

- The HTML <var> element is used to defines a variable in programming or in a mathematical expression. The content inside is typically displayed in italic.

Define some text as variables in a document:

```
<p>The area of a triangle is: 1/2 x <var>b</var> x <var>h</var>, where <var>b</var> is the base, and  
<var>h</var> is the vertical height.</p>
```

Result:

The area of a triangle is: $1/2 \times b \times h$, where *b* is the base, and *h* is the vertical height.

HTML Entities

- Reserved characters in HTML must be replaced with character entities.

HTML Entities

- Some characters are reserved in HTML.
- If you use the less than (<) or greater than (>) signs in your text, the browser might mix them with tags.
- Character entities are used to display reserved characters in HTML.
- To display a less than sign (<) we must write: **<** or **<**

Non-breaking Space

- A commonly used entity in HTML is the non-breaking space:
- A non-breaking space is a space that will not break into a new line.
- Two words separated by a non-breaking space will stick together (not break into a new line). This is handy when breaking the words might be disruptive.
- If you write 10 spaces in your text, the browser will remove 9 of them. To add real spaces to your text, you can use the character entity.

Some Useful HTML Character Entities

Result	Description	Entity Name	Entity Number
	non-breaking space	 	
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	double quotation mark	"	"
'	single quotation mark (apostrophe)	'	'
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
©	copyright	©	©
®	registered trademark	®	®

Combining Diacritical Marks

Mark	Character	Construct	Result
`	a	à	à
'	a	á	á
^	a	â	â
~	a	ã	ã
`	o	Ò	ò
'	o	Ó	ó
^	o	Ô	ô
~	o	Õ	õ

HTML Symbols

- Symbols that are not present on your keyboard can also be added by using entities.

HTML Symbol Entities

- HTML entities were described in the previous chapter.
- Many mathematical, technical, and currency symbols, are not present on a normal keyboard.
- To add such symbols to an HTML page, you can use the entity name or the entity number (a decimal or a hexadecimal reference) for the symbol.

Display the euro sign, €, with an entity name, a decimal, and a hexadecimal value:

```
<p>I will display &euro;</p>
<p>I will display &#8364;</p>
<p>I will display &#x20AC;</p>
```

Will display as:

```
I will display €
I will display €
I will display €
```

Some Mathematical Symbols Supported by HTML

Char	Number	Entity	Description
\forall	∀	∀	FOR ALL
∂	∂	∂	PARTIAL DIFFERENTIAL
\exists	∃	∃	THERE EXISTS
\emptyset	∅	∅	EMPTY SETS
∇	∇	∇	NABLA
\in	∈	∈	ELEMENT OF
\notin	∉	∉	NOT AN ELEMENT OF
\ni	∋	∋	CONTAINS AS MEMBER
\prod	∏	∏	N-ARY PRODUCT
\sum	∑	∑	N-ARY SUMMATION

Some Greek Letters Supported by HTML

Char	Number	Entity	Description
A	Α	Α	GREEK CAPITAL LETTER ALPHA
B	Β	Β	GREEK CAPITAL LETTER BETA
Γ	Γ	Γ	GREEK CAPITAL LETTER GAMMA
Δ	Δ	Δ	GREEK CAPITAL LETTER DELTA
Ε	Ε	Ε	GREEK CAPITAL LETTER EPSILON
Ζ	Ζ	Ζ	GREEK CAPITAL LETTER ZETA

Some Other Entities Supported by HTML

Char	Number	Entity	Description
©	©	©	COPYRIGHT SIGN
®	®	®	REGISTERED SIGN
€	€	€	EURO SIGN
™	™	™	TRADEMARK
←	←	←	LEFTWARDS ARROW
↑	↑	↑	UPWARDS ARROW
→	→	→	RIGHTWARDS ARROW
↓	↓	↓	DOWNWARDS ARROW
♠	♠	♠	BLACK SPADE SUIT
♣	♣	♣	BLACK CLUB SUIT
♥	♥	♥	BLACK HEART SUIT
♦	♦	♦	BLACK DIAMOND SUIT

HTML Emojis

- Emojis are characters from the UTF-8 character set:



What are Emojis?

- Emojis look like images, or icons, but they are not.
- They are letters (characters) from the UTF-8 (Unicode) character set.
- UTF-8 covers almost all of the characters and symbols in the world.

The HTML charset Attribute

- To display an HTML page correctly, a web browser must know the character set used in the page.

```
| <meta charset="UTF-8">
```

- If not specified, UTF-8 is the default character set in HTML.

UTF-8 Characters

- Many UTF-8 characters cannot be typed on a keyboard, but they can always be displayed using numbers (called entity numbers):
 - A is 65
 - B is 66
 - C is 67

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
</head>
<body>

<p>I will display A B C</p>
<p>I will display &#65; &#66; &#67;</p>

</body>
</html>
```

I will display A B C

I will display A B C

Emoji Characters

- Emojis are also characters from the UTF-8 alphabet:
- 😊 is 128516
- 😌 is 128525
- ❤️ is 128151

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
</head>
<body>

<h1>My First Emoji</h1>

<p>😊</p>

</body>
</html>
```

My First Emoji



```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
</head>
<body>

<h1>Sized Emojis</h1>

<p style="font-size:48px">
&#128512; &#128516; &#128525; &#128151;
</p>

</body>
</html>
```

Sized Emojis



Some Emoji Symbols in UTF-8

Emoji	Value
⚠	#128507;
🌋	#128508;
👉	#128509;
🤳	#128510;
👤	#128511;
😊	#128512;
😂	#128513;
🤣	#128514;
😃	#128515;
😄	#128516;
😅	#128517;