What is HTML?

HTML is the standard markup language for creating Web pages.

- HTML stands for Hyper Text Markup Language
- HTML describes the structure of Web pages using markup
- HTML elements are the building blocks of HTML pages
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page

A Simple HTML Document

```
<!DOCTYPE html>
<html>
<head>
<title>PageTitle</title>
</head>
<body>
<h1>MyFirstHeading</h1>
Myfirstparagraph.
</body>
</html>
```

- The <!DOCTYPE html> declaration defines this document to be HTML5
- The <html> element is the root element of an HTML page
- The <head> element contains meta information about the document
- The <title> element specifies a title for the document
- The <body> element contains the visible page content
- The <h1> element defines a large heading
- The element defines a paragraph

HTML Versions

Version	Year
HTML	1991
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
XHTML	2000
HTML5	2014

HTML Headings

HTML headings are defined with the **<h1>** to **<h6>** tags.

<h1> defines the most important heading. <h6> defines the least important heading:

HTML Paragraphs

HTML paragraphs are defined with the tag:

HTML Links

HTML links are defined with the $\langle a \rangle$ tag:

```
eg:<a href="home.html">This is a link</a>
```

The link's destination is specified in the **href attribute**.

HTML Images

HTML images are defined with the **** tag.

The source file (src), alternative text (alt), width, and height are provided as attributes:

eg:

HTML Elements

An HTML element usually consists of a **start** tag and **end** tag, with the content inserted in between:

<tagname>Content goes here...</tagname>

The HTML **element** is everything from the start tag to the end tag:

My first paragraph

Nested HTML Elements

HTML elements can be nested (elements can contain elements).

All HTML documents consist of nested HTML elements.

HTML Attributes

• All HTML elements can have attributes

- Attributes provide **additional information** about an element
- Attributes are always specified in the start tag
- Attributes usually come in name/value pairs like: name="value"

eg:

The title hiiiiAttribute

Here, a **title** attribute is added to the element. The value of the title attribute will be displayed as a tooltip when you mouse over the paragraph:

```
Thisisaparagraph.
```

The HTML Style Attribute

Setting the style of an HTML element, can be done with the **style attribute**.

The HTML style attribute has the following **syntax**:

```
<tagname style="property:value;">
```

Size Attributes

HTML images are defined with the **** tag.

The filename of the source (**src**), and the size of the image (**width** and **height**) are all provided as **attributes**:

```
<img src="w3schools.jpg" width="104" height="142">
```

The alt Attribute

The **alt** attribute specifies an alternative text to be used, when an image cannot be displayed.

The value of the attribute can be read by screen readers. This way, someone "listening" to the webpage, e.g. a blind person, can "hear" the element.

```
<img src="w3schools.jpg" alt="W3Schools.com" width="104" height="142">
```

HTML Horizontal Rules

The <hr> tag defines a thematic break in an HTML page, and is most often displayed as a horizontal rule.

HTML Line Breaks

The HTML **<br**> element defines a **line break**.

The HTML Element

The HTML element defines preformatted text.

The text inside a element is displayed in a fixed-width font (usually Courier), and it preserves both spaces and line breaks:

HTML Background Color

The **background-color** property defines the background color for an HTML element.

```
<body style="background-color:powderblue;">
<h1>Thisisaheading</h1>
Thisisaparagraph.
</body>

or

<body>
```

HTML Text Color

The **color** property defines the text color for an HTML element:

<h1 style="color:blue;">This is a heading</h1>

HTML Fonts

The **font-family** property defines the font to be used for an HTML element:

<h1 style="font-family:verdana;">This is a heading</h1>

HTML Text Size

The **font-size** property defines the text size for an HTML element:

<h1 style="font-size:300%;">This is a heading</h1>

HTML Text Alignment

The **text-align** property defines the horizontal text alignment for an HTML element:

<h1 style="text-align:center;">Centered Heading</h1>

Text Formatting

Formatting elements were designed to display special types of text:

- Bold text
- Important text
- <i> Italic text
- Emphasized text
- <mark> Marked text
- <small> Small text
- Deleted text
- <ins> Inserted text

- <sub> Subscript text
- <sup> Superscript text

HTML <q> for Short Quotations

The HTML $\langle \mathbf{q} \rangle$ element defines a short quotation.

Browsers usually insert quotation marks around the <q> element.

WWF's goal is to: <q>Build a future where people live in harmony with nature.

HTML <blockquote> for Quotations

The HTML **<blockquote>** element defines a section that is quoted from another source.

Browsers usually indent <blockquote> elements.

Showsers usually indent blockquote elements.

The world's leading conservation organization,

WWF works in 100 countries and is supported by

1.2 million members in the United States and

close to 5 million globally.

</blockquote>

HTML Comment Tags

You can add comments to your HTML source by using the following syntax:

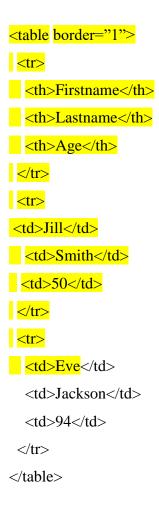
<!-- Write your comments here -->

HTML Tables

Defining an HTML Table

An HTML table is defined with the tag.

Each table row is defined with the **>** tag. A table header is defined with the **>** tag. By default, table headings are bold and centered. A table data/cell is defined with the tag.



Cell Padding & cell Spacing

Cell padding specifies the space between the cell content and its borders.

cell spacing specifies the width of the border.

Colspan

To make a cell span more than one column, use the **colspan** attribute:

```
<tableborder="1">
Name
Name

cth colspan="2">Telephone

tr>
Bill Gates

55577854

7

7
7
```

Rowspan

To make a cell span more than one row, use the **rowspan** attribute:

```
Name:
Hand the state of the state
```

```
55577855
```

HTML Table - Adding a Caption

To add a caption to a table, use the **<caption>** tag:

title or explanation for the table and it show the top of the table

<caption>welcome</caption>

HTML Lists

Unordered HTML List

An unordered list starts with the **tag**. Each list item starts with the **tag**.

The list items will be marked with bullets (small black circles) by default:

```
    Coffee
    Tea
    Milk
```

Type

- disc
- square
- circle

```
CoffeeTeaMilk
```

Ordered HTML List

An ordered list starts with the **tag.** Each list item starts with the **tag.**

The list items will be marked with numbers by default:

```
    Coffee
    Tea
    Milk

    Ol>
```

Ordered HTML List - The Type Attribute

The **type** attribute of the tag, defines the type of the list item marker:

Туре	Description
type="1"	The list items will be numbered with numbers (default)
type="A"	The list items will be numbered with uppercase letters

type="a"	The list items will be numbered with lowercase letters
type="I"	The list items will be numbered with uppercase roman numbers
type="i"	The list items will be numbered with lowercase roman numbers

HTML Description Lists

HTML also supports description lists.

A description list is a list of terms, with a description of each term.

The <dl> tag defines the description list, the <dt> tag defines the term (name), and the <dd> tag describes each term:

```
<dl>
<dt>HTML</dt>
<dd>Hypertext markup language</dd>
</dl>
```

Nested HTML Lists

List can be nested (lists inside lists):

```
    Coffee
    Tea
    Blacktea
    Greentea
```

```
Milk
```

HTML Block and Inline Elements

Block-level Elements

A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).

The <div> element is a block-level element.

- div>
- <h1> <h6>
- •
- <form>

Inline Elements

An inline element does not start on a new line and only takes up as much width as necessary.

This is an inline element inside a paragraph.

Examples of inline elements:

-
- <a>
-

The < div> Element

The <div> element is often used as a container for other HTML elements.

The <div> element has no required attributes, but both **style** and **class** are common.

When used together with CSS, the <div> element can be used to style blocks of content:

```
eg:

<div style="background-color:black;color:white;padding:20px;">

<h2>London</h2>
London is the capital city of England. It is the most populous city in the United Kingdom, with a metropolitan area of over 13 millioninhabitants.
</div>
```

The Element

The element is often used as a container for some text.

The element has no required attributes, but both **style** and **class** are common.

When used together with CSS, the element can be used to style parts of the text:

```
<h1>my <span style="color:red">Important</span> Heading</h1>
```

The <form> Element

<form> tag is used to create an html form

<form action="1.php" method="get/post" enctype="multipart/form-data"></form>

Form Attributes

action: backend script ready to process your passed data

method: method to be used to upload the most frequently used are get and post method

enctype: enctype attribute to specify how the browser encodes the data before it sends it to the server

multipart/form-data: this is used when you want to upload binary data in the form of files like image, word file.

Html Form Control

- text input control
- checkbox controls
- radio box controls
- select box
- file
- hidden control
- button, submit, reset

Text input control

Single line input control: control is used for items that require only one line of user input they are created using html <input> tag.

```
eg: <input type="text" name="a" value=""/>
```

attributes

type = indicates the type of input control and for text input control it will be set to text.

name = used to give a name to the control which is sent to the server to be recognized and get the value

value = this can be used to provide an initial value inside the control

maxlength = allow to specify the maximum no f character a user can enter the text box

size = allows to specify the width of text-input control in terms of character

required: field is required

placeholder

Password input control: single line text input but masks the character as soon as a user enters it they are also created using html

eg: <input type="password" name="b" value="" maxlength="8"/>

Multiline input control

when a user is required to give details that may be longer than a single sentence. multi line input are created using <textarea>

eg: <textarea rows="5" cols="6" name="h"></textarea>

Checkbox control

checkboxes are used when more than one options is required to be selected

<input type="checkbox" name="btech" value="">Btech

checked = set to checked f you want to select it by default

Radio button control

radio button are used when out of many options just one option is required to be selected

<input type="radio" name="a" value="male">Male

<input type="radio" name="a" value="female">Female

Select box control

select box are called dropdown box which provides to list down various option in the form of dropdown list

```
<select name="f">
```

<option value="kottayam">Kottayam

<option value="pathanamthitta">Pathanamthitta</re></re>

selected – specifies that this option should be initially selected value when the page loads.

File upload box

```
<input type="file" name="pic"/>
```

Button Control

Submit: this creates a button that automatically submit a form

Reset: create a button that automatically reset from controls to their initi`al values

button: creates a button that is used to trigger a client side script when the user clicks that button

```
<iput type="button" name="a" value="ok"/>
```

image: this create a clickable button when we can use an image as background of the button

HTML Marquee

Html marquee is scrolling piece of text displayed either horizontally across or vertically down

```
<marquee direction="left">hi</marquee>
<marquee direction="up" behavior="alternate" scrolldelay="50" bgcolor="pink">
<img src="1.jpg"></marquee>
```

Audio

add html background music code to your webpage using hidden attribute of the <embed> tag

<audio controls>

<source src="1.mp3" type="audio/mp3">

</audio>

VIDEO

<video controls>

<source src="1.mp4" type="audio/mp4">>>

</video>

HTML Iframes

An iframe is used to display a web page within a web page.

Iframe Syntax

An HTML iframe is defined with the <iframe> tag:

```
<iframe src="URL"></iframe>
```

Iframe - Set Height and Width

Use the height and width attributes to specify the size of the iframe.

The attribute values are specified in pixels by default, but they can also be in percent (like "80%").

```
<!DOCTYPE html>
<html>
<body>
<h2>HTML Iframes</h2>
You can use the height and width attributes to specify the size of the iframe:
<iframe src="demo_iframe.html" height="200" width="300"></iframe>
</body>
</html>
```

HTML Head

The HTML <head> Element

The <head> element is a container for metadata (data about data) and is placed between the <html> tag and the <body> tag.

HTML metadata is data about the HTML document. Metadata is not displayed.

Metadata typically define the document title, character set, styles, links, scripts, and other meta information.

```
The following tags describe metadata: <title>, <style>, <meta>, <link>, <script>, and <base>.
```

The HTML <title> Element

The <title> element defines the title of the document, and is required in all HTML/XHTML documents.

The <title> element:

- defines a title in the browser tab
- provides a title for the page when it is added to favorites
- displays a title for the page in search engine results

A simple HTML document:

Example

The HTML <style> Element

The <style> element is used to define style information for a single HTML page:

Example

```
<style>
  body {background-color: powderblue;}
  h1 {color: red;}
  p {color: blue;}
</style>
```

The HTML < link > Element

The element is used to link to external style sheets:

Example

```
<link rel="stylesheet" href="mystyle.css">
```

The HTML <meta> Element

The <meta> element is used to specify which character set is used, page description, keywords, author, and other metadata.

Metadata is used by browsers (how to display content), by search engines (keywords), and other web services.

Define the character set used:

```
<meta charset="UTF-8">
Define a description of your web page:
<meta name="description" content="Free Web tutorials">
Define keywords for search engines:
<meta name="keywords" content="HTML, CSS, XML, JavaScript">
Define the author of a page:
<meta name="author" content="John Doe">
Refresh document every 30 seconds:
<meta http-equiv="refresh" content="30">
```

Example

Example of <meta> tags:

```
<meta charset="UTF-8">
<meta name="description" content="Free Web tutorials">
<meta name="keywords" content="HTML,CSS,XML,JavaScript">
<meta name="author" content="John Doe">
```

Setting The Viewport

HTML5 introduced a method to let web designers take control over the viewport, through the <meta> tag.

The viewport is the user's visible area of a web page. It varies with the device, and will be smaller on a mobile phone than on a computer screen.

You should include the following <meta> viewport element in all your web pages:

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

A <meta> viewport element gives the browser instructions on how to control the page's dimensions and scaling.

The width=device-width part sets the width of the page to follow the screenwidth of the device (which will vary depending on the device).

The initial-scale=1.0 part sets the initial zoom level when the page is first loaded by the browser.

Here is an example of a web page *without* the viewport meta tag, and the same web page *with* the viewport <meta>tag:

The HTML <script> Element

The <script> element is used to define client-side JavaScripts.

This JavaScript writes "Hello JavaScript!" into an HTML element with id="demo":

Differences Between Character Sets

The following table displays the differences between the character sets described above:

Numb	ASCII	ANSI	8859	UTF-8	Description
32					space
33	!	!	!	!	exclamation mark
34	"	"	"	"	quotation mark
35	#	#	#	#	number sign
36	\$	\$	\$	\$	dollar sign
37	%	%	%	%	percent sign
38	&	&	&	&	ampersand
39	,	,	•	•	apostrophe
40	((((left parenthesis

41))))	right parenthesis
42	*	*	*	*	asterisk
43	+	+	+	+	plus sign
44	,	,	,	,	comma
45	-	-	-	-	hyphen-minus
46	·	·	·	·	full stop
47	/	/	/	/	solidus
48	0	0	0	0	digit zero
49	1	1	1	1	digit one
50	2	2	2	2	digit two
51	3	3	3	3	digit three

52	4	4	4	4	digit four
53	5	5	5	5	digit five
54	6	6	6	6	digit six
55	7	7	7	7	digit seven
56	8	8	8	8	digit eight
57	9	9	9	9	digit nine
58	:	:	:	:	colon
59	;	;	;	;	semicolon
60	<	<	<	<	less-than sign
61	=	=	=	=	equals sign
62	>	>	>	>	greater-than sign

	2	2			
63	?	?	?	?	question mark
64	@	@	@	@	commercial at
65	A	A	A	A	Latin capital letter A
66	В	В	В	В	Latin capital letter B
67	С	C	С	С	Latin capital letter C
68	D	D	D	D	Latin capital letter D
69	E	E	E	E	Latin capital letter E
70	F	F	F	F	Latin capital letter F
71	G	G	G	G	Latin capital letter G
, 1	O .	3	J	0	Zutin euptur tetter G
72	Н	Н	Н	Н	Latin capital letter H
73	I	I	I	I	Latin capital letter I

74	J	J	J	J	Latin capital letter J
75	K	K	K	K	Latin capital letter K
76	L	L	L	L	Latin capital letter L
77	M	M	M	M	Latin capital letter M
78	N	N	N	N	Latin capital letter N
79	О	O	O	O	Latin capital letter O
80	P	P	P	P	Latin capital letter P
81	Q	Q	Q	Q	Latin capital letter Q
82	R	R	R	R	Latin capital letter R
83	S	S	S	S	Latin capital letter S
84	Т	T	Т	Т	Latin capital letter T

85	U	U	U	U	Latin capital letter U
86	V	V	V	V	Latin capital letter V
87	W	W	W	W	Latin capital letter W
88	X	X	X	X	Latin capital letter X
89	Y	Y	Y	Y	Latin capital letter Y
90	Z	Z	Z	Z	Latin capital letter Z
91]	[]	[left square bracket
92	\	\	\	\	reverse solidus
93]]]]	right square bracket
94	٨	^	٨	۸	circumflex accent
95	_	_	_	_	low line

96					grave accent
97	a	a	a	a	Latin small letter a
98	b	b	b	b	Latin small letter b
99	c	c	c	c	Latin small letter c
100	d	d	d	d	Latin small letter d
101	e	e	e	e	Latin small letter e
102	f	f	f	f	Latin small letter f
103	g	g	g	g	Latin small letter g
104	h	h	h	h	Latin small letter h
105	i	i	i	i	Latin small letter i
106	j	j	j	j	Latin small letter j

107	k	k	k	k	Latin small letter k
108	1	1	1	1	Latin small letter l
109	m	m	m	m	Latin small letter m
110	n	n	n	n	Latin small letter n
111	O	0	O	0	Latin small letter o
112	p	p	p	p	Latin small letter p
113	q	q	q	q	Latin small letter q
114	r	r	r	r	Latin small letter r
115	S	S	S	S	Latin small letter s
116	t	t	t	t	Latin small letter t
117	u	u	u	u	Latin small letter u

118	v	v	V	V	Latin small letter v
119	w	W	W	W	Latin small letter w
120	X	X	X	X	Latin small letter x
121	у	у	у	У	Latin small letter y
122	Z	Z	Z	Z	Latin small letter z
123	{	{	{	{	left curly bracket
124	l	I	l	l	vertical line
125	}	}	}	}	right curly bracket
126	~	~	~	~	tilde
127	DEL				
128		€			euro sign

129		NOT USED
130	,	single low-9 quotation mark
131	f	Latin small letter f with hook
132	"	double low-9 quotation mark
133		horizontal ellipsis
134	†	dagger
135	;	double dagger
136	^	modifier letter circumflex accent
137	‰	per mille sign
138	Š	Latin capital letter S with caron
139	(single left-pointing angle quotation mark

140	Œ			Latin capital ligature OE
141	•	•	•	NOT USED
142	Ž			Latin capital letter Z with caron
143	•	•	•	NOT USED
144	•	•	•	NOT USED
145	•			left single quotation mark
146	,			right single quotation mark
147	66			left double quotation mark
148	"			right double quotation mark
149	•			bullet
150	_			en dash

151			em dash
152	~		small tilde
153	ТМ		trade mark sign
154	š		Latin small letter s with caron
155	>		single right-pointing angle quotation mark
156	œ		Latin small ligature oe
157	•	• •	NOT USED
158	ž		Latin small letter z with caron
159	Ÿ		Latin capital letter Y with diaeresis
160			no-break space
161	i	i i	inverted exclamation mark

162	¢	¢	¢	cent sign
163	£	£	£	pound sign
164	д	¤	¤	currency sign
165	¥	¥	¥	yen sign
166	1	1	1	broken bar
167	§	§	§	section sign
168				diaeresis
169	©	©	©	copyright sign
170	a	a	a	feminine ordinal indicator
171	«	«	«	left-pointing double angle quotation mark
172	٦	٦	٦	not sign

173				soft hyphen
174	®	®	®	registered sign
175	-	-	-	macron
176	0	0	0	degree sign
177	±	±	±	plus-minus sign
178	2	2	2	superscript two
179	3	3	3	superscript three
180	,	,	,	acute accent
181	μ	μ	μ	micro sign
182	¶	¶	¶	pilcrow sign
183				middle dot

184	5	5	5	cedilla
185	1	1	1	superscript one
186	o	o	o	masculine ordinal indicator
187	»	*	»	right-pointing double angle quotation mark
188	1/4	1/4	1/4	vulgar fraction one quarter
189	1/2	1/2	1/2	vulgar fraction one half
190	3/4	3/4	3/4	vulgar fraction three quarters
191	Ċ	i	i	inverted question mark
192	À	À	À	Latin capital letter A with grave
193	Á	Á	Á	Latin capital letter A with acute
194	Â	Â	Â	Latin capital letter A with circumflex

195	Ã	Ã	Ã	Latin capital letter A with tilde
196	Ä	Ä	Ä	Latin capital letter A with diaeresis
197	Å	Å	Å	Latin capital letter A with ring above
198	Æ	Æ	Æ	Latin capital letter AE
199	Ç	Ç	Ç	Latin capital letter C with cedilla
200	È	È	È	Latin capital letter E with grave
201	É	É	É	Latin capital letter E with acute
202	Ê	Ê	Ê	Latin capital letter E with circumflex
203	Ë	Ë	Ë	Latin capital letter E with diaeresis
204	Ì	Ì	Ì	Latin capital letter I with grave
205	Í	Í	Í	Latin capital letter I with acute

214	Ö	Ö	Ö	Latin capital letter O with diaeresis multiplication sign
213	Õ	Õ	Õ	Latin capital letter O with tilde
212	Ô	ô	Ô	Latin capital letter O with circumflex
211	Ó	Ó	Ó	Latin capital letter O with acute
210	Ò	Ò	Ò	Latin capital letter O with grave
209	Ñ	Ñ	Ñ	Latin capital letter N with tilde
208	Ð	Ð	Ð	Latin capital letter Eth
207	Ϊ	Ϊ	Ϊ	Latin capital letter I with diaeresis
206	Î	Î	Î	Latin capital letter I with circumflex

217	Ù	Ù	Ù	Latin capital letter U with grave
218	Ú	Ú	Ú	Latin capital letter U with acute
219	Û	Û	Û	Latin capital letter U with circumflex
220	Ü	Ü	Ü	Latin capital letter U with diaeresis
221	Ý	Ý	Ý	Latin capital letter Y with acute
222	Þ	Þ	Þ	Latin capital letter Thorn
223	ß	В	В	Latin small letter sharp s
224	à	à	à	Latin small letter a with grave
225	á	á	á	Latin small letter a with acute
226	â	â	â	Latin small letter a with circumflex
227	ã	ã	ã	Latin small letter a with tilde

233 é é é É Latin small letter e with acute 234 ê ê ê Latin small letter e with circumflex 235 ë ë ë Latin small letter e with diaeresis	
233 é é é Latin small letter e with acute	
232 è è è Latin small letter e with grave	
ç ç ç Latin small letter c with cedilla	
230 æ æ æ Latin small letter ae	
å å å Latin small letter a with ring above	
228 ä ä ä Latin small letter a with diaeresis	

239	ï	ï	ï	Latin small letter i with diaeresis
240	ð	ð	ð	Latin small letter eth
241	ñ	ñ	ñ	Latin small letter n with tilde
242	ò	ò	ò	Latin small letter o with grave
243	ó	ó	ó	Latin small letter o with acute
244	ô	ô	ô	Latin small letter o with circumflex
245	õ	õ	õ	Latin small letter o with tilde
246	ö	ö	ö	Latin small letter o with diaeresis
247	÷	÷	÷	division sign
248	Ø	ø	Ø	Latin small letter o with stroke
249	ù	ù	ù	Latin small letter u with grave

250	ú	ú	ú	Latin small letter u with acute
251	û	û	û	Latin small letter with circumflex
252	ü	ü	ü	Latin small letter u with diaeresis
253	ý	ý	ý	Latin small letter y with acute
254	þ	þ	þ	Latin small letter thorn
255	ÿ	ÿ	ÿ	Latin small letter y with diaeresis

URL

A URL is another word for a web address.

A URL can be composed of words (facebook.com), or an Internet Protocol (IP) address (192.68.20.50).

Most people enter the name when surfing, because names are easier to remember than numbers.

URL - Uniform Resource Locator

Web browsers request pages from web servers by using a URL.

A Uniform Resource Locator (URL) is used to address a document (or other data) on the web.

A web address like https://www.facebook.com/campaign/landing.php follows these syntax rules:

scheme://prefix.domain:port/path/filename

Explanation:

- scheme defines the type of Internet service (most common is http or https)
- prefix defines a domain prefix (default for http is www)
- **domain** defines the Internet **domain name** (like w3schools.com)
- port defines the port number at the host (default for http is 80)
- **path** defines a **path** at the server (If omitted: the root directory of the site)
- **filename** defines the name of a document or resource

Common URL Schemes

The table below lists some common schemes:

Scheme	Short for	Used for
http	HyperText Transfer Protocol	Common web pages. Not encrypted
https	Secure HyperText Transfer Protocol	Secure web pages. Encrypted

ftp	File Transfer Protocol	Downloading or uploading files
file		A file on your computer