

# HTML 5

- HTML5 is the latest and most enhanced version of HTML. Technically, HTML is not a Programming language, but rather a markup language. This tutorial gives very well Understanding on HTML5.
- HTML5 is the next major revision of the HTML standard superseding HTML 4.01, XHTML 1.0, and XHTML 1.1. HTML5 is a standard for structuring and presenting content on the World Wide Web.
- HTML5 is a cooperation between the World Wide Web Consortium (W3C) and the Web Hypertext Application Technology Working Group (WHATWG).

## Browser Support:

- The latest versions of Apple Safari, Google Chrome, Mozilla Firefox, and Opera all support many HTML5 features and Internet Explorer 9.0 will also have support for some HTML5 functionality.
- The mobile web browsers that come pre-installed on iPhones, iPads, and Android phones all have excellent support for HTML5.

## New Features:

- HTML5 introduces a number of new elements and attributes that helps in building a modern websites.
- Following are great features introduced in HTML5.
  - **New Semantic Elements:** These are like <header>, <footer>, and <section>.
  - **Forms 2.0:** Improvements to HTML web forms where new attributes have been introduced for <input> tag.
  - **Audio & Video:** You can embed audio or video on your web pages without resorting to third-party plugins.

- **Drag and drop:** Drag and drop the items from one location to another location on the same webpage.

## HTML5 Syntax:

- HTML 5 does not have the same syntax rules as XHTML where we needed lower case tag Names, quoting our attributes, an attribute had to have a value and to close all empty elements. But HTML5 is coming with lots of flexibility and would support the followings:
  - Uppercase tag names.
  - Quotes are optional for attributes.
  - Attribute values are optional.
  - Closing empty elements are optional.

## The DOCTYPE:

- DOCTYPEs in older versions of HTML were longer because the HTML language was SGML based and therefore required a reference to a DTD.
- HTML 5 authors would use simple syntax to specify DOCTYPE as follows:

```
<!DOCTYPE html>
```

- All the above syntax is case-insensitive.

## Character Encoding:

- HTML 5 authors can use simple syntax to specify Character Encoding as follows:

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

- All the above syntax is case-insensitive.

## HTML5 Document:

- The following tags have been introduced for better structure:

- **header:** This tag represents the header of a section.
- **nav:** This tag represents a section of the document intended for navigation.
- **article:** This tag represents an independent piece of content of a document, such as a blog entry or newspaper article.
- **section:** This tag represents a generic document or application section. It can be used together with h1-h6 to indicate the document structure.
- **aside:** This tag represents a piece of content that is only slightly related to the rest of the page.
- **footer:** This tag represents a footer for a section and can contain information about the author, copyright information, et cetera.
- **dialog:** This tag can be used to mark up a conversation.
- **figure:** This tag can be used to associate a caption together with some embedded content, such as a graphic or video.

## Using the new semantic elements:

➤ The basic structure of these elements will adhere to the following outline:

- header
  - hgroup
- nav
- article
  - header
  - section
    - header
- footer

### Ex. 1:- (for <header>&<hgroup>)

1. Index.html :-

```
<header>
  <hgroup>
    <h1>Future Vision</h1>
    <h2>An example of HTML5 and CSS3 in action</h2>
  </hgroup>
</header>
```

2. Style.css :-

```
header h1 {
  font-size: 36px;
  margin: 0px;
}
header h2 {
  font-size: 18px;
  margin: 0px;
  color: #888;
  font-style: italic;
}
```

Output:-

# Future Vision

*An example of HTML5 and CSS3 in action*

Ex. 2:- (for <nav>)

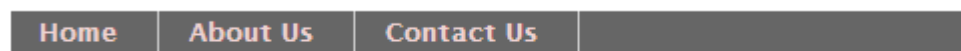
1. Index.html :-

```
<nav>
  <ul>
    <li><a href="#">Home</a></li>
    <li><a href="#">About Us</a></li>
    <li><a href="#">Contact Us</a></li>
  </ul>
</nav>
```

2. Style.css :-

```
nav ul {
  list-style: none;
  padding: 0px;
  display: block;
  background-color: #666;
  padding-left: 4px;
  height: 24px;
}
nav ul li {
  display: inline;
  padding: 0px 20px 5px 10px;
  height: 24px;
  border-right: 1px solid #ccc;
}
nav ul li a {
  color: #EFD3D3;
  text-decoration: none;
  font-size: 13px;
  font-weight: bold;
}
nav ul li a:hover {
  color: #fff;
}
```

Output:-



### Ex. 3:- (for <article>&<section>)

#### 1. Index.html :-

```
<article>
  <header>
    <time datetime="2010-01-12" pubdate> <span>Jan</span> 12 </time>
    <h1> <a href="#" title="Link to this post" rel="bookmark">Article Heading</a> </h1>
  </header>
  <p>This is an article that demonstrates some of the new features that HTML5 and CSS3
  has to offer. This article contains several sections, each with its own heading,
  as well as a video element which will play a video without Flash on browsers that
  support it.</p>
  <section>
    <header>
      <h1>This is a section heading</h1>
    </header>
    <p>This is an example of a basic section of a document.
    A section can refer to different parts of a document, application, or page.
    According to the draft W3C spec, HTML5 sections usually have headings.</p>
  </section>
</article>
```

#### 2. Style.css :-

```
article > header time {
  font-size: 14px;
  display: block;
  width: 26px;
  padding: 2px;
  text-align: center;
  background-color: #993333;
  color: #fff;
  font-weight: bold;
  -moz-border-radius: 6px;
  -webkit-border-radius: 6px;
  border-radius: 6px;
  float: left;
  margin-bottom: 10px;
}
article > header time span {
  font-size: 10px;
  font-weight: normal;
  text-transform: uppercase;
}
article > header h1 {
  font-size: 20px;
  float: left;
  margin-left: 14px;
  text-shadow: 2px 2px 5px #333;
}
article > header h1 a {
  color: #993333;
}
article > section header h1 {
  font-size: 16px;
}
article p {
  clear: both;
}
```

Output:-

JAN  
12

## Article Heading

This is an article that demonstrates some of the new features that HTML5 and CSS3 has to offer. This article contains several sections, each with its own heading, as well as a video element which will play a video without Flash on browsers that support it.

### This is a section heading

This is an example of a basic section of a document. A section can refer to different parts of a document, application, or page. According to the draft W3C spec, HTML5 sections usually have headings.

#### Ex. 4:- (for <footer>)

1. Index.html :-

```
<footer>
  <p>&copy; 2014 Future Vision. All rights reserved.</p>
</footer>
```

2. Style.css :-

```
footer p {
  text-align: center;
  font-size: 12px;
  color: #888;
  margin-top: 24px;
}
```

Output:-

© 2014 Future Vision. All rights reserved.

## Final Output:-

# Future Vision

*An example of HTML5 and CSS3 in action*

[Home](#) [About Us](#) [Contact Us](#)

JAN  
12

## Article Heading

This is an article that demonstrates some of the new features that HTML5 and CSS3 has to offer. This article contains several sections, each with its own heading, as well as a video element which will play a video without Flash on browsers that support it.

**This is a section heading**

This is an example of a basic section of a document. A section can refer to different parts of a document, application, or page. According to the draft W3C spec, HTML5 sections usually have headings.

© 2014 Future Vision. All rights reserved.

## Adding a video to the page:

### Ex. 4:- (for <video>)

1. Index.html :-

```
<section>
  <header>
    <h1>This is a video section</h1>
  </header>
  <p>
    <video src="http://www.double.co.nz/video_test/transformers480.ogg" controls autoplay>
      <div class="no-html5-video">
        <p>This video will work in Mozilla Firefox or Google Chrome only.</p>
      </div>
    </video>
  </p>
</section>
```



## 2. Style.css :-

```
article > section video {  
    width: 480px;  
    height: 200px;  
}  
article > section div.no-html5-video, article > section div#no-canvas {  
    width: 480px;  
    height: 40px;  
    border: 1px solid #993333;  
    text-align: center;  
    color: #993333;  
    font-size: 13px;  
    font-style: italic;  
    background-color: #F7E9E9;  
}
```

Output:-



## The <input> element in HTML5:

- Apart from the above mentioned attributes, HTML5 input elements introduced several new values for the type attribute. These are listed below.

**NOTE:** Try all the following example using latest version of Opera browser.

Type	Description
<b>text</b>	A free-form text field, nominally free of line breaks.
<b>password</b>	A free-form text field for sensitive information, nominally free of line breaks.
<b>checkbox</b>	A set of zero or more values from a predefined list.
<b>radio</b>	An enumerated value.
<b>submit</b>	A free form of button initiates form submission.
<b>file</b>	An arbitrary file with a MIME type and optionally a file name.
<b>image</b>	A coordinate, relative to a particular image's size, with the extra semantic that it must be the last value selected and initiates form submission.
<b>hidden</b>	An arbitrary string that is not normally displayed to the user.
<b>select</b>	An enumerated value, much like the radio type.
<b>textarea</b>	A free-form text field, nominally with no line break restrictions.

<b>button</b>	A free form of button which can initiates any event related to button.
---------------	--

## Adding a Web form:

### Ex. 5:- (for <form>)

#### 1. Index.html :-

```


<section>
  <header>
    <h1>This is a feedback form</h1>
  </header>
  <p>
    <form>
      <label for="contact_name">Name:</label>
      <input id="contact_name" placeholder="Enter your name" autofocus>
      <br />
      <label for="contact_email">E-mail:</label>
      <input type="email" id="contact_email" placeholder="Enter your email address">
      <br />
      <label for="contact_phone">Phone:</label>
      <input type="tel" id="contact_phone" placeholder="Enter your phone number">
      <br />
      <label for="contact_callback">Callback on:</label>
    </form>
  </p>

```

Future Vision Computers

**FUTURE VISION**

 PAL | VESU | CITYLIGHT

 +91-9825771678

 [FutureVisionComputers.com](https://FutureVisionComputers.com)

## 2. Style.css :-

```
article > section form {  
  border: 1px solid #888;  
  -moz-border-radius: 10px;  
  -webkit-border-radius: 10px;  
  border-radius: 10px;  
  -moz-box-shadow: 10px 10px 5px #888;  
  -webkit-box-shadow: 10px 10px 5px #888;  
  box-shadow: 10px 10px 5px #888;  
  background-color: #eee;  
  padding: 10px;  
  margin-bottom: 30px;  
}  
article > section label {  
  font-weight: bold;  
  font-size: 13px;  
}  
article > section input {  
  margin-bottom: 3px;  
  font-size: 13px;  
}
```

Output:-

**This is a feedback form**

The image shows a feedback form with a light gray background and rounded corners. It contains the following elements:

- Name:** A text input field with the placeholder text "Enter your name".
- E-mail:** A text input field with the placeholder text "Enter your email address".
- Phone:** A text input field with the placeholder text "Enter your phone number".
- Callback on:** A date selection field showing "mm/dd/yyyy" with a dropdown arrow.
- Priority:** A horizontal range slider with a small icon on the left.
- Request Call:** A button with the text "Request Call".

## Example 2

```
<!DOCTYPE html>
```

```
<html>
```

```
<title></title>
```

```
<head>
```

```
</head>
```

```
<body>
```

```
<section>
```

```
<p>
```

```
<h2>Personal Inforamtion</h2>
```

```
</p>
```

```
<form action="action_page.php">
```

```
<table width="100%" border="0">
```

```
<tr>
```

```
<td><label>First Name</label></td>
```

```
<td><input type="text" name="bday"></td>
```

```
</tr>
```

```
<tr>
```

```
<td><label>Last Name</label></td>
```

```
<td><input type="text" name="bday"></td>
```

```
</tr>
```

```
<tr>
```

```
<td><label>Birthday:</label></td>
```

```
<td><input type="date" name="bday"></td>
```

```
</tr>
```

```
<tr>
```

```
<td><label>Email</label></td>
```

```
<td><input type="email" name="email"></td>
```

```

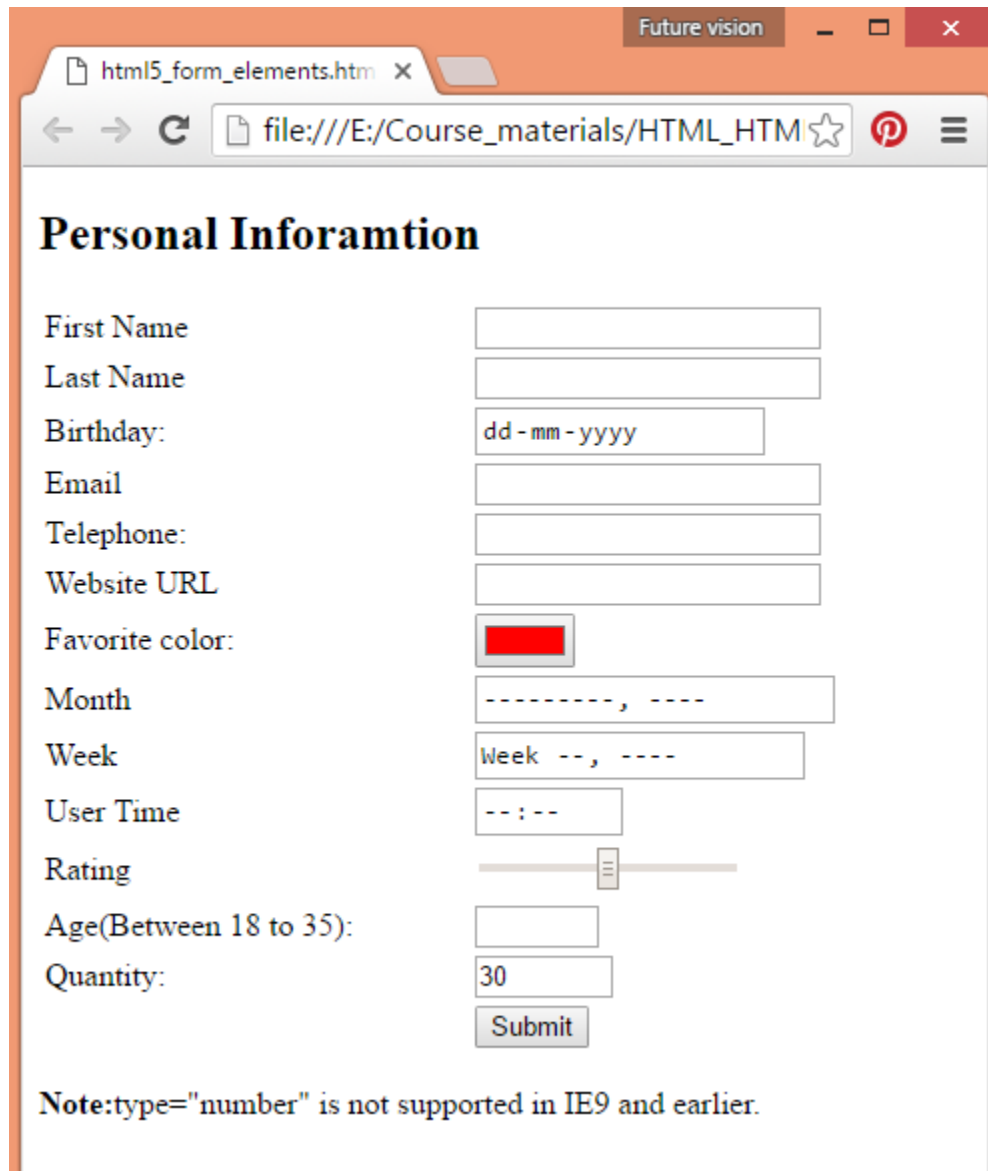
</tr>
<tr>
  <td><label>Telephone:</label></td>
  <td><input type="tel" name="usrtel"></td>
</tr>
<tr>
  <td><label>Website URL</label></td>
  <td><input type="url" name="homepage"></td>
</tr>
<tr>
  <td>Favorite color: </td>
  <td><input type="color" name="favcolor" value="#ff0000"></td>
</tr>
<tr>
  <td><label>Month</label></td>
  <td><input type="month" name="bdaymonth"></td>
</tr>
<tr>
  <td><label> Week </label></td>
  <td><input type="week" name="year_week"></td>
</tr>
<tr>
  <td><label>User Time</label></td>
  <td><input type="time" name="usr_time"></td>
</tr>
<tr>
  <td><label> Rating</label></td>
  <td><input type="range" name="points" min="0" max="10"></td>

```

```
</tr>
<tr>
  <td><label>Age(Between 18 to 35):</label></td>
  <td><input type="number" name="quantity" min="18" max="35"></td>
</tr>
<tr>
  <td><label>Quantity:</label></td>
  <td><input type="number" name="points"
min="0" max="100" step="10" value="30"></td>
</tr>
<tr>
  <td></td>
  <td><input type="button" value="Submit"></td>
</tr>
</table>
</form>
</section>
<p><b>Note:</b>type="number" is not supported in IE9 and earlier. </p>
</body>
</html>
```



## Output:



The screenshot shows a web browser window with the title 'Future vision'. The address bar displays 'file:///E:/Course\_materials/HTML\_HTM'. The page content is a form titled 'Personal Inforamtion'. The form includes the following fields and controls:

- First Name:
- Last Name:
- Birthday:
- Email:
- Telephone:
- Website URL:
- Favorite color:
- Month:
- Week:
- User Time:
- Rating:
- Age(Between 18 to 35):
- Quantity:
- 

**Note:**type="number" is not supported in IE9 and earlier.