

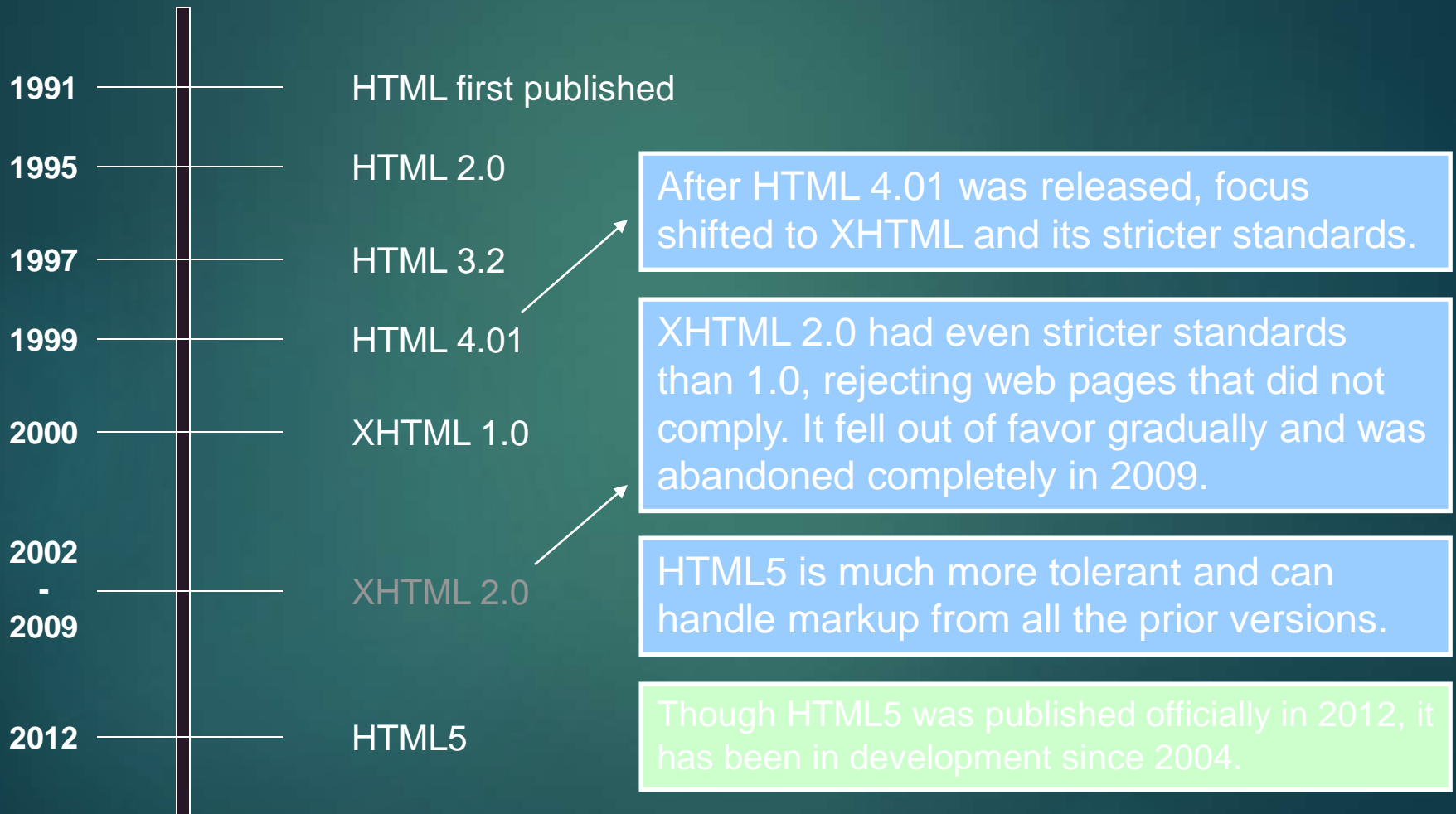
# زبان نشانه گذاری صفحات وب

# HTML

M.MADADYAR

[HTTP://WWW.MADADYAR.IR](http://WWW.MADADYAR.IR)

# History of HTML



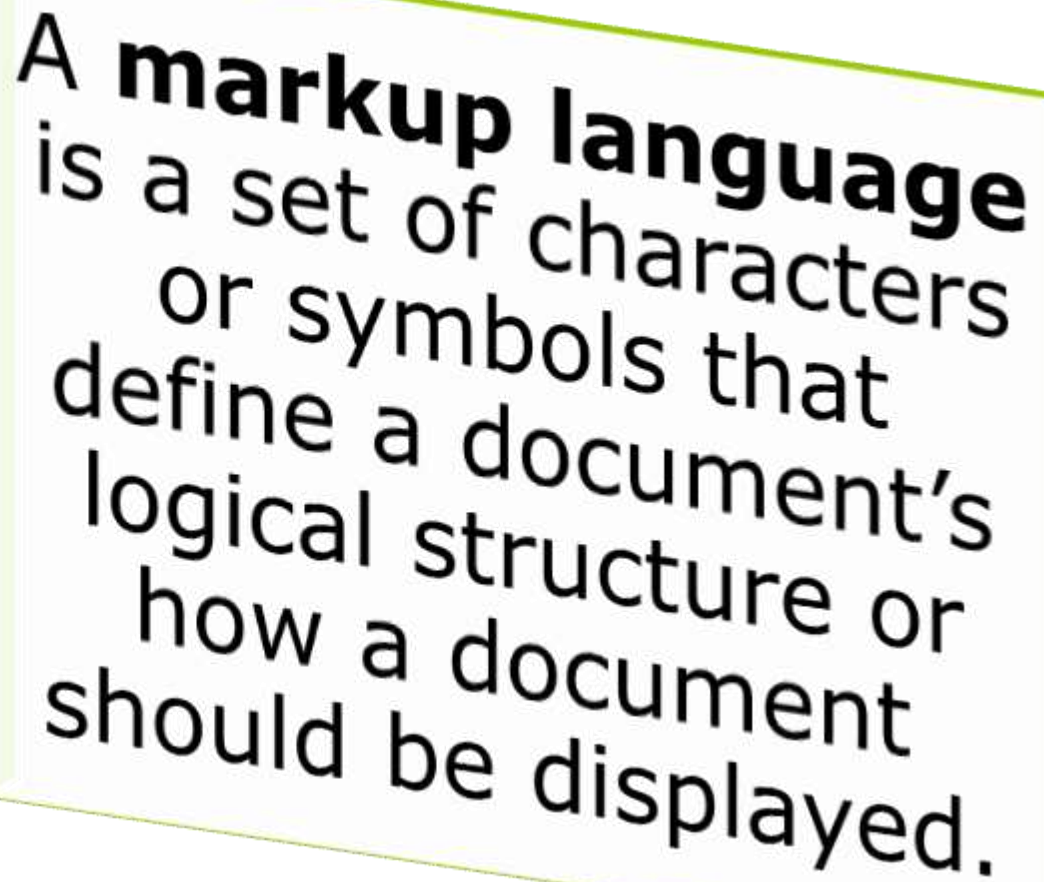
# Markup Languages - HTML

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- ❑ **Hyper Text Markup Language**
  - HTML is a language for describing web pages.
- ❑ HTML is not a programming language, it is a **markup language**
- ❑ A markup language is a set of **markup tags**.
- ❑ Clear text, case insensitive.
- ❑ Ignores white space.

# HTML Documents

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A **markup language** is a set of characters or symbols that define a document's logical structure or how a document should be displayed.

# What is an HTML File?

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An HTML file is a text file containing small **markup tags**.

An HTML file must have an **htm** or **html** file extension.

An HTML file can be created using a **simple text editor**.

# HTML - TAG

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## □ Open tags

- `<name attributes />`
- `<hr/>`, `<br/>`
- ``

## □ Closed tags

- `<name attributes> stuff </name>`
- `<b>A Bold Text</b>`
- `<h1>level 1 heading text</h1>`

## □ Comments

- `< ! - - comment text -- >`

# HTML 5 – Fundamentals

## Basic Structure

---

**<!DOCTYPE html>**

**<html>**

**<head>**

محل تگهایی که قابل نمایش نبوده و مورد استفاده موتورهای جستجو و خود مرورگر  
برای نمایش درست صفحه وب می باشد.

**<title> عنوان صفحه </title>**

**</head>**

**<body>**

محل قرار گیری تگها

**</body>**

**</html>**

# Head Tags Sample

---

□ `<head>`

□ `<meta charset="utf-8" />`

□ `<meta name="Keywords"  
content="Football, sport, ورزش" />`

□ `</head>`



# Example

---

```
<!DOCTYPE html>
<html>
<head>
  <title> Sama Class</title>
  <meta charset="utf-8" />
  <meta name="Keywords" content="Football, فوٹبال" />
</head>
<body dir="ltr">
<h1>My First Heading</h1>
<hr/>
<p>My first paragraph.</p>
</body>
</html>
```

# Text Formatting Tags

<h1> to <h6>

<p>

<div>

<big>

<em>

<i>

<small>

<strong>

<del>

<code>

<kbd>

<samp>

<strike>

<u>

<sub>

<sup>

<mark>

<q>

## Special Characters (& < > , ...)

     
<p> &gt;, &lt; and &amp; &#36; are special in HTML </p>

Space ..... &nbsp;

# The Image Tag

```

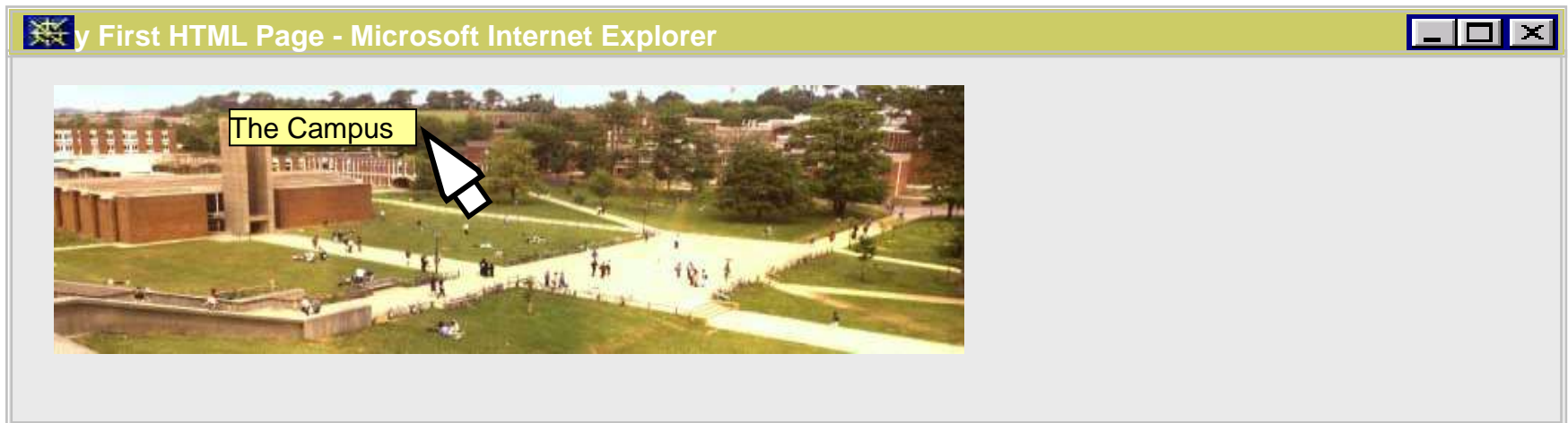
```

```

```

```

```



# HTML - Fundamentals

---

## ANCHORS (Hypertext Link)

**<a href="address" attributes>text or image or ... </a>**

- **URL(Absolute)** (like: <http://www.yahoo.com>)

- **LOCAL(Relative)** (like: [contact.html](#))

- **<a href="mypage.html"> GO TO PAGE </a>**

# LINK

---

- LINK
  - **Internal Link**
  - **External Link**
  - **External/Internal Link**

## Create Label

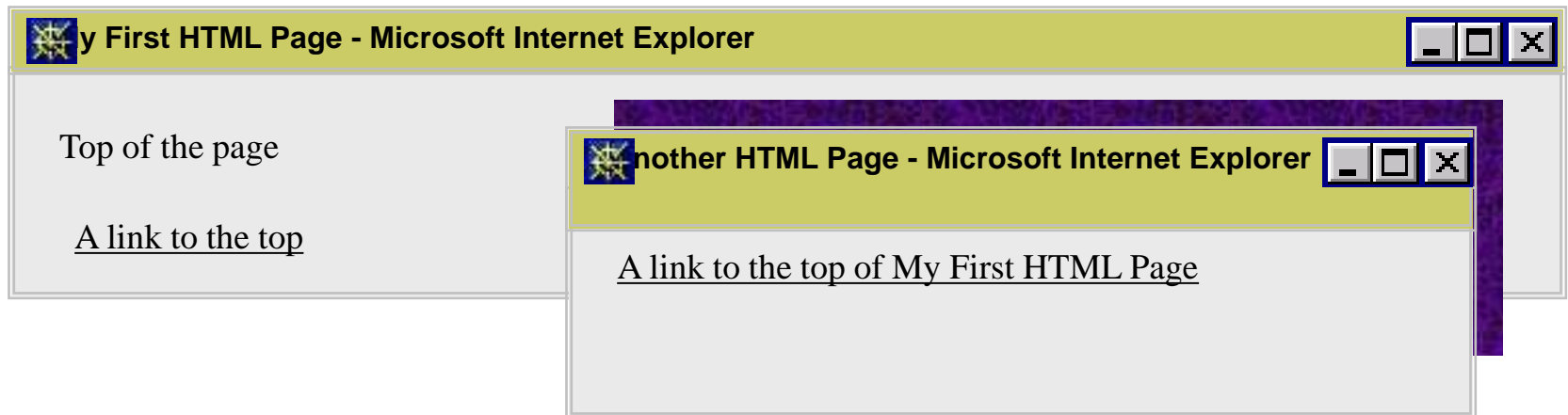
# The Anchor Tag as an Anchor

`<a name="top"></a>`Top of the page

`<a href="#top">` A link to the top `</a>`

`<a href="mydoc.html#top">` A link to `</a>`

Link To Label



## The Anchor Tag as an Email Link

---

```
<a href="mailto:info@madadyar.ir" >  
    Send Email For ME !!!  
</a>
```



# HTML – Fundamentals

## Lists

---

### **Unordered list**

```
<ul>  
  <li>Item 1</li>  
  <li>Item 2</li>  
</ul>
```

### **Ordered list**

```
<ol type="i" start="2">  
  <li>Item 1</li>  
  <li>Item 2</li>  
</ol>
```

# HTML – Fundamentals

## Lists

---

### Unordered list

- ❑ Item 1
- ❑ Item 2

### Ordered list

- II. Item 1
- III. Item2

# MENU

---

## □ List & Anchors

### □ <ul>

- <li><a href="p1.html">Page 1</a> </li>

- <li><a href="p2.html">Page 2</a> </li>

### □ </ul>

## □ New Tab

- <a href="p1.html" target="\_blank">Page1</a>

# HTML – Fundamentals

## Tables

---

student	grade
tom	b+
jack	a-

class grades

# HTML – Fundamentals

## Tables

---

```
<table border="1px">
  <caption align="bottom">class grades</caption>
  <tr>
    <th>student</th>
    <th>grade</th>
  </tr>
  <tr>
    <td>tom</td>
    <td>b+</td>
  </tr>
  <tr>
    <td>sue</td>
    <td>a-</td>
  </tr>
</table>
```

# HTML – Fundamentals

## Tables

---

- ❑ **border=***value*
- ❑ **cellspacing=***value*
- ❑ **cellpadding=***value*
- ❑ **width=***value (pixel) | percent*

# HTML – Fundamentals

## Tables

---

```
<table border="1" width="50%" cellpadding="6"
  cellspacing="2" align="right">
```

```
  <caption align="bottom">class grades</caption>
```

```
  <tr>
```

```
    <th>student</th>
```

```
    <th>grade</th>
```

```
  </tr>
```

```
  <tr>
```

```
    <td>tom</td>
```

```
    <td>b+</td>
```

```
  </tr>
```

```
  <tr>
```

```
    <td>sue</td>
```

```
    <td>a-</td>
```

```
  </tr>
```

```
</table>
```

# HTML – Fundamentals

## Tables

---

Student	Grade
Tom	B-
Sue	A+

Class Grades



# HTML – Fundamentals

## Tables

---

rowspan and colspan


# HTML – Fundamentals

---

```
<table border="1" width="50%" cellpadding="5" align="center">
  <tr>
    <td colspan="2" align="center">
      <b>student grades</b>
    </td>
  </tr>
  <tr>
    <td><b>student</b></td>
    <td><b>grade</b></td>
  </tr>
  <tr>
    <td>tom</td>
    <td rowspan="2">a</td>
  </tr>
  <tr>
    <td>sue</td>
  </tr>
</table>
```

# HTML – Fundamentals

---

Student Grades	
Student	Grade
Tom	A
Sue	

# HTML – Fundamentals

## Frames

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- ❑ **Floating Frames (inline frames)(iframe).**
  - *Frames let you divide a screen into windows with each window viewing a different web page.*

# HTML – Fundamentals

## Floating Frames

---

`<iframe attributes ></iframe>`

### Attributes

- ❑ `src=url`
- ❑ `height=pixels|percent`
- ❑ `width=pixels|percent`
- ❑ `frameborder=0`
- ❑ `scrolling="yes|no|auto"`

# HTML FORMS

**<form>**

**<input>**

- **type**

- text
- password
- radio
- checkbox
- submit
- reset

- **value**

**<select>**

- option

```
<form>
```

This is Radio:

```
<input type="radio" name="vehicle" value="Bike" /><br />
```

This is Checkbox:

```
<input type="checkbox" name="v2" value="Car" /><br />
```

This is TextBox:

```
<input type="text" name="txtname" value="None" />
```

```
<br/>
```

This is Password:

```
<input type="password" name="txtpass" />
```

```
<br />
```

This is Select:

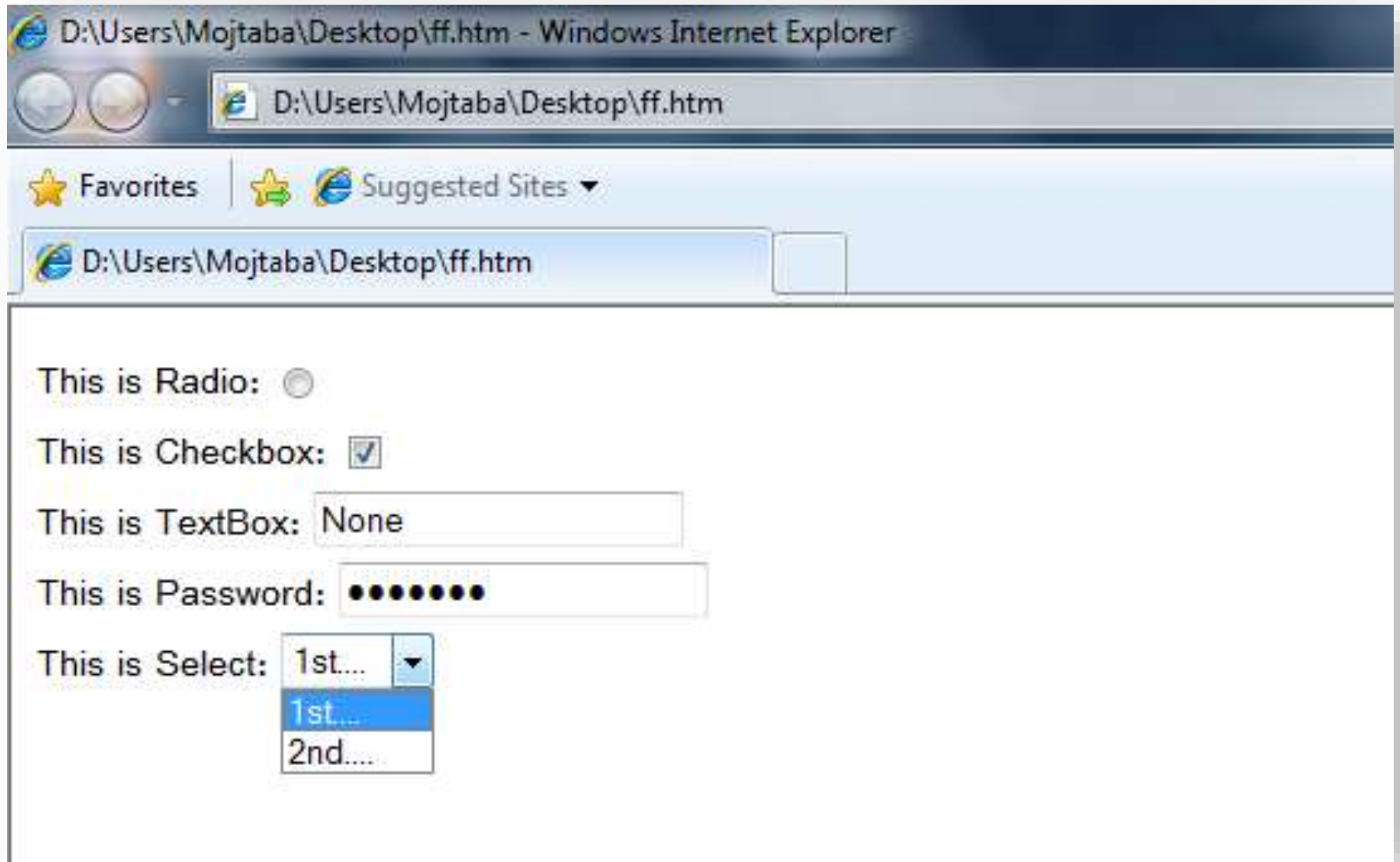
```
<select>
```

```
    <option>1st.... </option>
```

```
    <option>2nd.... </option>
```

```
</select>
```

```
</form>
```





# Introduction to HTML5



# What is HTML5?

---

HTML5 is the newest version of HTML, only recently gaining support by the makers of web browsers.

It incorporates all features from earlier versions of HTML, including the stricter XHTML.

It adds a diverse set of new tools for the web developer to use.

# Goals of HTML5

---

Support all existing web pages. With HTML5, there is no requirement to go back and revise older websites.

Reduce the need for external plugins and scripts to show website content.

Improve the semantic definition (i.e. meaning and purpose) of page elements.

Make the rendering of web content universal and independent of the device being used.

Handle web documents errors in a better and more consistent fashion.

# Other New Features in HTML5

---

Built-in audio and video support (without plugins)

Enhanced form controls and attributes

The Canvas (a way to draw directly on a web page)

Drag and Drop functionality

Support for CSS3 (the newer and more powerful version of CSS)

More advanced features for web developers, such as data storage and offline applications.

# First Look at HTML5

---

Remember the DOCTYPE declaration from XHTML?

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

In HTML5, there is just one possible DOCTYPE declaration and it is simpler:

```
<!DOCTYPE html>
```

Just 15 characters!

The DOCTYPE tells the browser which type and version of document to expect. This should be the last time the DOCTYPE is ever changed. From now on, all future versions of HTML will use this same simplified declaration.

# The <html> Element

---

This is what the <html> element looked like in XHTML:

```
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en"
      lang="en">
```

Again, HTML5 simplifies this line:

```
<html lang="en">
```

The **lang** attribute in the <html> element declares which language the page content is in. Though not strictly required, it should always be specified, as it can assist search engines and screen readers.

Each of the world's major languages has a two-character code, e.g. Spanish = "es", French = "fr", German = "de", Persian = "fa".

# The <head> Section

Here is a typical XHTML <head> section:

```
<head>
  <meta http-equiv="Content-type" content="text/html; charset=UTF-8" />
  <title>My First XHTML Page</title>
  <link rel="stylesheet" type="text/css" href="style.css" />
</head>
```

And the HTML5 version:

```
<head>
  <meta charset="utf-8">
  <title>My First HTML5 Page</title>
  <link rel="stylesheet" href="style.css">
</head>
```

Notice the simplified character set declaration, the shorter CSS stylesheet link text, and the removal of the trailing slashes for these two lines.

# Basic HTML5 Web Page

---

Putting the prior sections together, and now adding the `<body>` section and closing tags, we have our first complete web page in HTML5:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>My First HTML5 Page</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <p>HTML5 is fun!</p>
</body>
</html>
```

Let's open this page in a web browser to see how it looks...



# New Elements in HTML5

---

<article>

<figcaption>

<progress>

<aside>

<footer>

<section>

<audio>

<header>

<source>

<canvas>

<hgroup>

<svg>

<datalist>

<mark>

<time>

<figure>

<nav>

<video>

These are just some of the new elements introduced in HTML5

# HTML 5 - Forms

control	Description
color	انتخاب رنگ
date	انتخاب تاریخ
email	وارد کردن ایمیل
number	وارد کردن عدد - فقط عدد مورد قبول است
range	وارد کردن یک مقدار - با محدوده مشخص
Tel	وارد کردن شماره تلفن
<ul style="list-style-type: none"><li>* <b>Placeholder:</b> برای تعیین مقدار نمایشی که با وارد کردن کاربر حذف می شود</li><li>* <b>Required:</b> تعیین فیلد ضروری</li><li>* <b>Pattern:</b> برای تعیین الگو برای مقدار ورودی</li></ul>	

# Pattern's Sample

---

## □ <input

- type="text"
- name="username"
- placeholder="Username"
- pattern="[a-z]{1,15}"
- title="Username should only contain lowercase letters. e.g. john" />

## □ Password (UpperCase, LowerCase, Number/SpecialChar and min 8 Chars)

- `(?=^.{8,}$)((?=.*\d)|(?=.*\W+))(?![\.\n])(?=.*[A-Z])(?=.*[a-z]).*$`

## □ Phone Number (Format: +99(99)9999-9999)

- `[\+]\d{2}[\(\)]\d{2}[\)]\d{4}[\-]\d{4}`

# Some HTML 5 Tags

---

## □ **<audio>**

■ برای تعریف صوت و یا موسیقی

## □ **<video>**

■ برای تعریف فیلم و یا فایل تصویری

## □ **<object>**

■ برای قرار دادن پلاگین هایی مانند PDF و فلش در سایت.

# Samples

---

```
<object width="400px" height="50px" data="test.pdf"></object>
```

```
<video width="320" height="240" autoplay>  
  <source src="movie.mp4" type="video/mp4">  
  <source src="movie.ogg" type="video/ogg">
```

Your browser does not support the video tag.

```
</video>
```

```
<audio controls>  
  <source src="horse.ogg" type="audio/ogg">  
  <source src="horse.mp3" type="audio/mpeg">
```

Your browser does not support the audio element.

```
</audio>
```

Browser	MP3	WAV	OGG
Edge/IE	YES	NO	NO
Chrome	YES	YES	YES
Firefox	YES	YES	YES
Safari	YES	YES	NO
Opera	YES	YES	YES

# HTML Graphics

---

## □ **HTML5 Canvas**

- The HTML `<canvas>` element is used to draw graphics on a web page.

## □ **HTML5 SVG**

- SVG stands for Scalable Vector Graphics
- SVG is used to define graphics for the Web
- SVG is a W3C recommendation

# SVG Sample

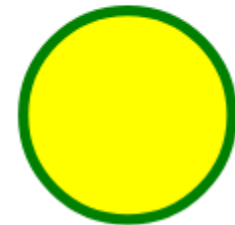
---

```
<!DOCTYPE html>
<html>
<body>

<svg width="100" height="100">
  <circle cx="50" cy="50" r="40" stroke="green" stroke-
width="4" fill="yellow" />
</svg>

</body>
</html>
```

SVG Circle



# HTML APIs

---

## □ HTML Geolocation

- The HTML Geolocation API is used to locate a user's position.

## □ HTML Drag/Drop

- Drag and drop is a very common feature. It is when you "grab" an object and drag it to a different location.

## □ HTML Web Storage

- With web storage, web applications can store data locally within the user's browser.



# HTML APIs

---

## □ HTML Web Workers

- A web worker is a JavaScript running in the background, without affecting the performance of the page.

## □ HTML SSE (**Server-Sent Events**)

- A server-sent event is when a web page automatically gets updates from a server.

HTML 5 API's

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# HTML API's In JavaScript Discussion