Introduction to HTML5

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HTML

- HTML is the standard markup language for creating Web pages.
- HTML stands for Hyper Text Markup Language
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- 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

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html
```

- The `<!DOCTYPE html>` 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 `<p>` element defines a paragraph
- </body>, </html> closing tags " /"
- < ! To express as comment

Structure

```
<html>

    <head>

        <title>Page title</title>

    </head>

    <body>

        <h1>This is a heading</h1>

        <p>This is a paragraph.</p>

        <p>This is another paragraph.</p>

    </body>

</html>
```
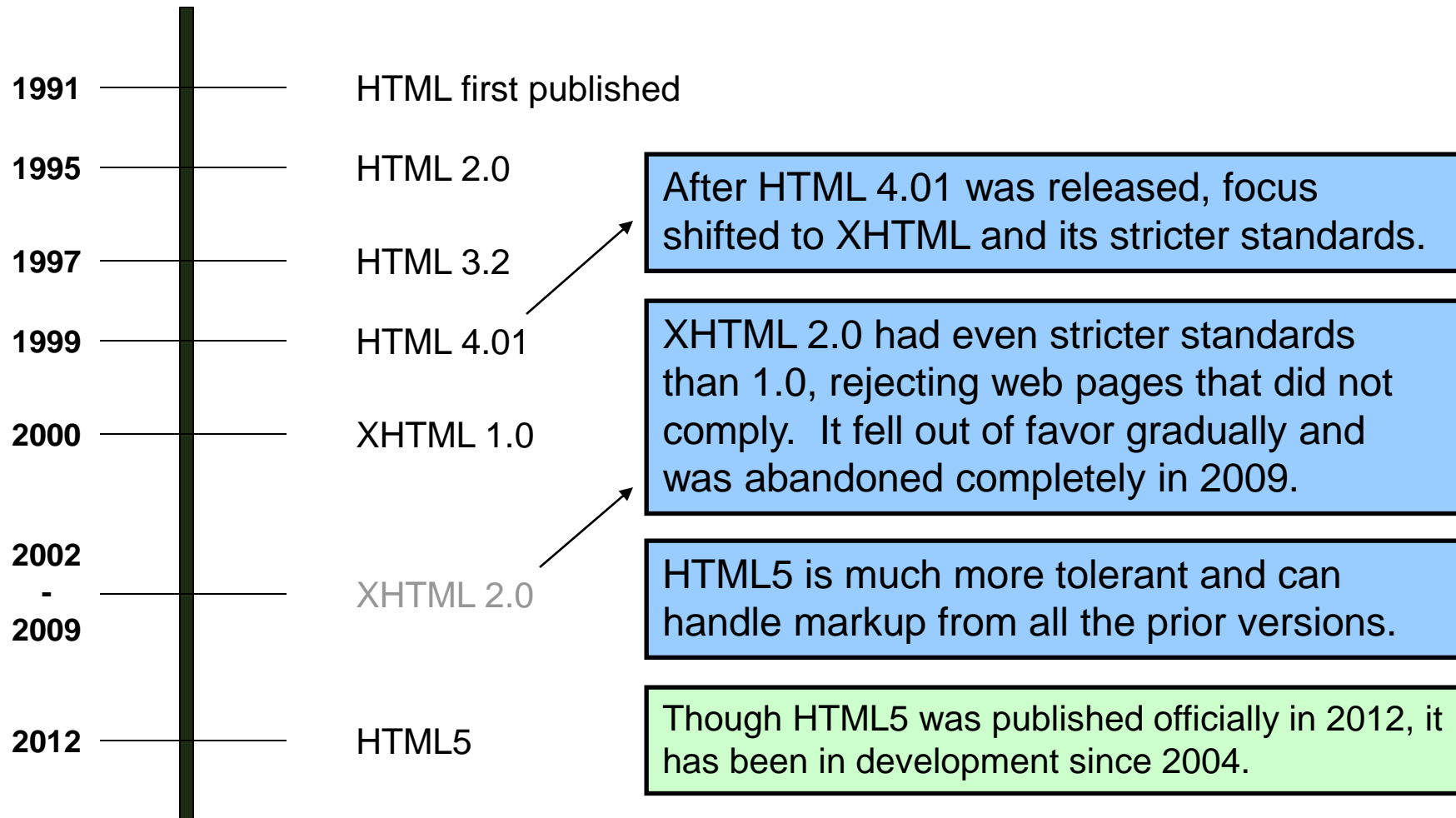
History of HTML

1991	HTML first published	
1995	HTML 2.0	After HTML 4.01 was released, focus shifted to XHTML and its stricter standards.
1997	HTML 3.2	
1999	HTML 4.01	XHTML 2.0 had even stricter standards than 1.0, rejecting web pages that did not comply. It fell out of favor gradually and was abandoned completely in 2009.
2000	XHTML 1.0	
2002 - 2009	XHTML 2.0	HTML5 is much more tolerant and can handle markup from all the prior versions.
2012	HTML5	Though HTML5 was published officially in 2012, it has been in development since 2004.

2014	W3C Recommendation: HTML5
2016	W3C Candidate Recommendation: HTML 5.1
2017	W3C Recommendation: HTML5.1 2nd Edition
2017	W3C Recommendation: HTML5.2

What is HTML5?

- HTML5 is the newest version of HTML support by the makers of web browsers.

- HTML is not a programming language,

- It is a markup language for Web design

- It incorporates all features from earlier versions of HTML & 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.

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.

Features of HTML5

- New Semantic Elements: These are like <header>, <footer>, and <section>.

- Persistent Local Storage: To achieve without resorting to third-party plugins.

- WebSocket : A next-generation bidirectional communication technology for web applications.

- Server-Sent Events: HTML5 introduces events which flow from web server to the web browsers

- Canvas: This supports a two-dimensional drawing surface that you can program with JavaScript.

- Audio & Video: You can embed audio or video on your webpages without resorting third-party plugins.

- Geolocation: Now visitors can choose to share their physical location with your web application.

- Microdata: This lets you create your own vocabularies beyond HTML5 with custom semantics.

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

Other New Features in HTML5

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

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

Structure of HTML5 Script

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!

It is case in-sensitive

The DOCTYPE tells the browser which type and version of document to expect. This should be the last time the DOCTYPE is ever changed.

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", Chinese = "zh", Arabic = "ar".

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

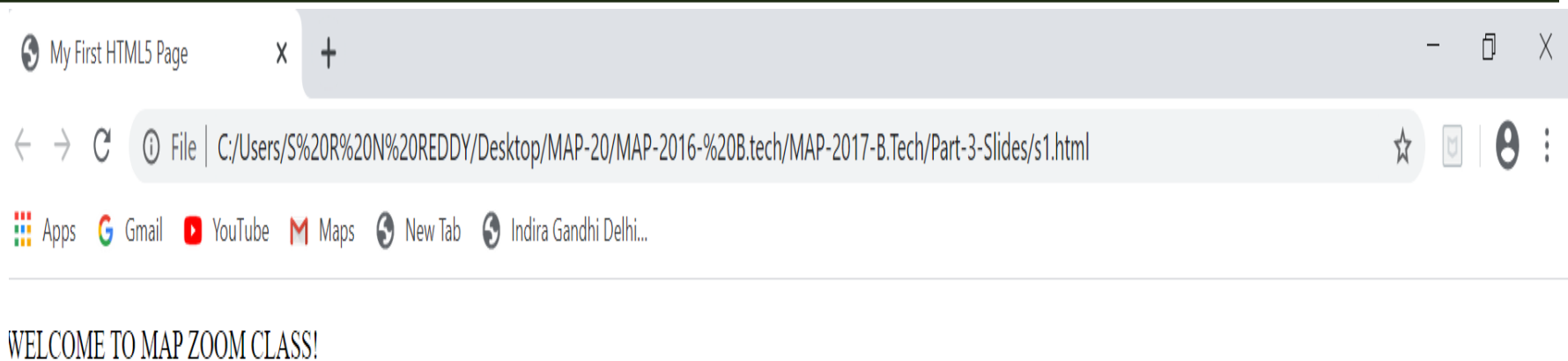Putting the prior sections together, and now adding the <body> section and closing tags, we have our first complete web page in HTML5:

```
<!DOCTYPE html>
<html lang="en">
<head>
                                        DEMO
  <meta charset="utf-8">
  <title>My First HTML5 Page</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <p> WELCOME TO MAP ZOOM CLASS !</p>
</body>
</html>
```

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

Viewing the HTML5 Web Page

Even though we used HTML5, the page looks exactly the same in a web browser as it would in XHTML. Without looking at the source code, web visitors will not know which version of HTML the page was created with.

1. Demos

2. Assignment: Study various HTML5 tags and create simple web document with basic details of individual [like CV]

3. Test: Test on 15/ 04/2020 , topics: HTML5 and introduction to iOS

References

- http://index-of.es/Varios-2/HTML5%20Tutorial.pdf

- https://www.w3schools.com/html/html_intro.asp

- https://www.htmlgoodies.com/html5/javascript/build-an-html5-audio-player.html

Thanks

Q& A