# HTML5

[Web Designing, Web Development, .NET Web Applications]

# 01 | Introduction

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# Meet Your Instructor – Qasim Nadeem

- Microsoft Certified Professional in Many Web and Cloud Technologies

- Started Professional Life in 1989-90

- Spend 7 years in Low Level Software Engineering

- A Decade in Networks i.e. MCSE CCNA CCNP

- Last Decade in Web & Software Engineering  i.e. HTML5, PHP, Java, Android, ASP.Net, C#, SQL Server, SharePoint, MEAN Stack

- Running a Software House, Provides Consultancy to Ecommerce & Web Industry.

- Working in capacity of Principal Technologist & Head of Trainings

# Introduction to Web

# What is Internet?

- The Internet is a global network connecting millions of computers, routers, switches, wired & wireless devices and protocols.

- Provides a variety of information and communication facilities i.e. websites, search engines, emails, online communities.

- More than 190 countries are linked into exchanges of data, news and opinions. According to Internet Live Stats, as of December 30, 2014 there was an estimated 3,037,608,300 Internet users worldwide.

# Protocol?

- Protocols are set of rules. i.e. HTTP for world wide web, SMTP for sending emails, POP3/IMAP for receiving emails, FTP for file transfers etc.

# WWW?

- WWW is world wide web, consists of websites majorly. WWW standards are set by w3c.org, lead by Tim Berners Lee.

- Tim Berners Lee, one  who created HTML in 1993.

# How WWW Works?

- WWW has two main objects in setup:

- Web Server, a machine which hosts are websites, popular web servers are Apache  and IIS.
- Web Clients called Web Browsers, a program use to access, download and view websites.

# URLs?

**A URL contains the following information:**

- the internet name of the site containing the resource (document or data).

- the *type* of service the resource is served by (eg. HTTP, Gopher, WAIS).

- the Internet *port number* of the service. If this is omitted the browser assumes a commonly accepted default value.

- the location of the resource in the directory structure of the server.

# URLs Structure?

http://www.w3.org/hypertext/WWW/Addressing/URL/Overview.html.

```
        http://www.address.edu:1234/path/subdir/file.ext
    |           |                    |     |                          |
    |service    |                    |     |                          |
            |____   host _____|     |                          |
                                      |     |                          |
                                      |port|                          |
                                      |           path &file &        |
                                      |_ resource details _|
```

# Ignition with HTML5

[Web Designing, Web Development, .NET Web Applications]

# Lets Install & Start HTML

- Install DreamWeaver/Visual Studio for Web/Sublime/Ms Code
- Open the File menu
- Select HTML in the Language
- Save & give name to your html page

# HTML5 – HyperText Markup Language

ICT trainings

# Course Topics

| HyperText Markup Language | |
|---|---|
| 01 \| Introduction to HTML5 | 07 \| Create Tables & Nested Tables |
| 02 \| Know the Structure | 08 \| HTML5 Layout |
| 03 \| Basic HTML Tags [Meta, Title, BR, WBR, HR] | 09 \| Forms [Input types i.e.Radio, Checkbox] |
| 04 \| Text [H1, P, Pre, Span, Dfn, UL, OL, DL, Details, Marquee, HtmlEntities] | 10 \| Select, DataList, Textarea, Meter, Progress, Figure, Embed Plugins, Dialog |
| 05 \| Incorporate Images & Image Map | 11 \| HTML5 Graphics [SVG & Canvas] |
| 06 \| Hyperlinks [Internal,External,SamePage] | 12 \| Validating HTML5 Standards |

# What is HTML5?

HTML5 is a markup language used for structuring and presenting content on the World Wide Web. It is the fifth and current version of the HTML standard.

HTML is client-side technology, this means that web browser compiles it.

# Know the Structure

```
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Know the Structure</title>
    </head>

    <body>
    </body>
</html>
```

<!doctype html>   specifies that webpage follows the standard of HTML5
<html></html>    opening/closing tags of HTML document
<head></head>   contains information for web browsers, web bots etc
<body></body>   place where user writes it code/ contents

# Basic HTML Tags

```
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Basic HTML Tags</title>
    </head>

    <body>
            <h1>Headings</h1>
            <p>Html is very <mark>simple</mark> to use and it is also <mark>easy</mark> to learn.</p>
            <hr>
    </body>
</html>
<h1></h1>  heading1 - creates heading of level1, heading levels are h1, h2,h3,h4,h5,h6
<hr>    horizontal rule - draws a line
<br>  break or blank row – breaks the current line and moves to next, or use to give blank row
<wbr> is used to specify a line break within an HTML document only if it is necessary other wise no line break.
but <br> tag force to line break.
```

# DEMO

Creating Structure & Implementing Basic Tags

# Text Tags [P, Pre, Span, Dfn, HTML Entities]

```
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Text Tags [P, Span]</title>
    </head>
    <body>
        <p>text   here</p>
        <pre>text                here</pre>
        <span>text here</span>
        <p><dfn>HTML</dfn> is the standard markup language for creating web pages.</p>
    </body>
</html>
```

<p></p>   paragraph – use to display plain text in block formation
<span></span>    span - use to display plain text in non-block formation

# Text Tags [UL, OL]

```
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Text Tags [UL, OL]</title>
    </head>
    <body>
        <ul>
            <li>HTML5</li>
            <li>CSS3</li>
            <li>JS</li>
        </ul>
    </body>
</html>
```

<ul></ul>   unordered list – creates an unordered list
<ol></ol>   ordered list – creates an ordered list

# Text Tags [DL, Details]

```
<!doctype html>
<html>
   <head>
      <meta charset="utf-8">
      <title>Text Tags [DL, Details]</title>
   </head>
   <body>
      <details>
           <summary>List</summary>
           <dl>
             <dt>HTML5</dt><dd>HyperText Markup Language</dd>
             <dt>CSS3</dt><dd>Cascading Style Sheet</dd>
           </dl>
      </details>
   </body>
</html>
```

<dl></dl>  definition list – use to explain terms
<details></details>  details – create an expand/collapse effect

# DEMO

Implementing Text Tags

# Incorporate Images & Image Map

```
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Incorporate Images & Image Map</title>
    </head>
    <body>
        <img src="image.png" alt="image" usemap="#Map">
        <map name="Map">
            <area shape="circle" coords="225,65,48" href="http://ict-trainings.com" target="_blank">
            <area shape="circle" coords="311,250,40" href="http://ict-innovative.com" target="_blank" alt="">
        </map>
    </body>
</html>
```

<img>  image – display images on screen
<img usemap="#map">  image map – allows to place links on different parts of one image

# DEMO

Implementing Images & Image Map

# Hyperlinks [Link on Text & Image]

```
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Hyperlinks [Link on Text & Image]</title>
    </head>
    <body>
        <a href="http://ict-trainings.com" target="_blank">ICT Trainings</a>
        <a href="http://ict-innovative.com" target="_blank">
            <img src="image.png" alt="image" usemap="#Map">
        </a>
    </body>
</html>
```

<a></a>  anchor – used to place hyperlinks in webpage

# Hyperlinks [Internal,External,SamePage]

```html
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Hyperlinks [Internal,External,SamePage]</title>
    </head>
    <body>
        <a href="http://ict-trainings.com" target="_blank">External Link</a>
        <a href="contact.html">Internal Link</a>
        <a href="javascript:alert('Welcome')">This link executes any javascript function</a>
        <a href="#anyid">Samepage Link</a>
        <div id="anyid">It is any location down the page or above in page</div>
    </body>
</html>
```

<a></a>  anchor – used to place hyperlinks in webpage

# DEMO

Working with Hyperlinks

# Meter, Progress

```
<!doctype html>
<html>
   <head>
      <meta charset="utf-8">
      <title>Meter, Progress</title>
   </head>
   <body>
       <p>Display a guage: </p>
       <meter value="2" min="20" max="100">2 out of 10</meter>
       <meter value="0.7" >70%</meter>
       <progress></progress>
       <progress value="40" max="100"></progress>

   </body>
</html>
```

# DEMO

Meter, Progress

# Figure, Embed Plugins, Dialog

```html
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Meter, Progress</title>
    </head>
    <body>
        <figure><img src="sales2010.jpg"></figure>
        <!-- Used to add plugins to HTML-->
        <embed width="600" height="300" data="generater.swf"></embed>
        <dialog open>This is an open dialog window</dialog>
    </body>
</html>
```

# DEMO

Figure, Embed Plugins, Dialog

# HTML5 Graphics - SVG

```
<!doctype html>
<html>
  <head>
    <meta charset="utf-8">
    <title>Meter, Progress</title>
  </head>
  <body>
     <svg width="100" height="100">
        <circle cx="50" cy="50" r="40" stroke="yellow" stroke-width="4" fill="red" />
     </svg>
     <svg width="200" height="100">
        <rect width="200" height="100" stroke="yellow" stroke-width="4" fill="red" />
     </svg>
     <svg width="210" height="200">
        <polygon points="100,10 40,198 190,78 10,78 160,198" style="fill:red;stroke:yellow;stroke-width:5;fill-rule:nonzero;" />
     </svg>
  </body>
</html>
```

- SVG images can be saved as the smallest size, unlike png, jpeg and other image format.
- It does not contains fixed set of dots so it is easily print with high resolution.
- SVG image can zoom a certain level without decreasing the picture quality.
- You can easily edit SVG image with using any text editor.

# HTML5 Graphics - Canvas

```
<!doctype html>
<html>
  <head>
    <meta charset="utf-8">
    <title>Meter, Progress</title>
  </head>
  <body>
    <canvas id="myCanvas" width="200" height="100" style="border:3px solid #FDFF06;"> </canvas>
    <script>
        var c = document.getElementById("myCanvas");
        var ctx = c.getContext("2d");
        ctx.fillStyle = "#FF0000";
        ctx.fillRect(0,0,150,100);
    </script>
  </body>
</html>
```

- Html5 introduce new tag <canvas> which is used to draw graphics on the web page.
- It draw graphics on web by using JavaScript.
- canvas is only a container for graphics you must need to write a script to draw graphics on web page.

# DEMO

HTML5 Graphics – SVG & Canvas

# HTML5 Market

# HTML5 in Local and International Market?

Pakistani Market:

https://www.rozee.pk

https://www.jobee.pk

International Market:

https://www.careerone.com.au

https://www.bayt.com

https://www.upwork.com/o/jobs/browse/?q=html5

And many more...