

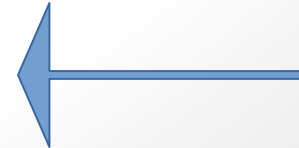
Tutorial 4

Web Development Technologies

Agenda

- Downloads
- HTTP
- HTML
- PHP
- JSON
- XML
- Exercise (registration/login page)

Android Studio



Follow Link

Android Studio

The Official IDE for Android

Android Studio provides the fastest tools for building apps on every type of Android device.

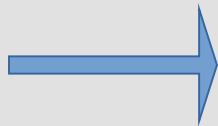
World-class code editing, debugging, performance tooling, a flexible build system, and an instant build/deploy system all allow you to focus on building unique and high quality apps.

DOWNLOAD ANDROID STUDIO 2.1
FOR WINDOWS (1262 MB)

› Read the docs › See the release notes



Download
Tool



Get HAMX(Only for INTEL)



The screenshot shows the Intel Developer Zone header with the Intel logo, 'Developer Zone' text, and navigation links for 'Development', 'Tools', and 'Resources'. A 'Join' button is in the top right. Below the header, the article title 'Installation Instructions for Intel® Hardware Accelerated Execution Manager - Microsoft Windows*' is displayed. The date 'October 24, 2014' and 'Last updated on November 23, 2015' are shown. Social sharing buttons for Facebook, Twitter, and Google+ are at the bottom left. On the right, there are buttons for 'Android*' and 'Forum'. A 'powered by Google' badge is also visible.

intel Developer Zone

Join

Development > Tools > Resources >

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Installation Instructions for Intel® Hardware Accelerated Execution Manager - Microsoft Windows*

October 24, 2014

Last updated on November 23, 2015

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Android*

Forum

FOR WINDOWS:

- <https://software.intel.com/en-us/android/articles/installation-instructions-for-intel-hardware-accelerated-execution-manager-windows>

Get HAMX (Contd.....)



The screenshot shows the Intel Developer Zone header with the Intel logo, 'Developer Zone' text, and navigation links for 'Development', 'Tools', and 'Resources'. A 'Join' button is in the top right. Below the header, the article title 'Installation Instructions for Intel® Hardware Accelerated Execution Manager - Microsoft Windows*' is displayed. The date 'October 24, 2014' and 'Last updated on November 23, 2015' are shown. Social sharing buttons for Facebook, Twitter, and Google+ are at the bottom left. On the right, there are buttons for 'Android*' and 'Forum'. A 'powered by Google' badge is also visible.

intel Developer Zone

Join

Development > Tools > Resources >

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Installation Instructions for Intel® Hardware Accelerated Execution Manager - Microsoft Windows*

October 24, 2014

Last updated on November 23, 2015

f Share Tweet g+Share

Android*

Forum

- <https://software.intel.com/en-us/android/articles/intel-hardware-accelerated-execution-manager>

- Download **Genymotion** for AMD

Start XAMPP

XAMPP Control Panel v3.2.2 [Compiled: Nov 12th 2015]

XAMPP Control Panel v3.2.2

Service	Module	PID(s)	Port(s)	Actions
<input type="checkbox"/>	Apache	6580 4504	80, 443	Stop Admin Config Logs
<input type="checkbox"/>	MySQL	6160	3306	Stop Admin Config Logs
<input type="checkbox"/>	FileZilla			Start Admin Config Logs
<input type="checkbox"/>	Mercury			Start Admin Config Logs
<input type="checkbox"/>	Tomcat			Start Admin Config Logs

Config Netstat Shell Explorer Services Help Quit

5:03:24 PM [main] All prerequisites found
5:03:24 PM [main] Initializing Modules
5:03:24 PM [main] Starting Check-Timer
5:03:24 PM [main] Control Panel Ready
5:03:30 PM [Apache] Attempting to start Apache app...
5:03:30 PM [Apache] Status change detected: running
5:06:32 PM [mysql] Attempting to start MySQL app...
5:06:32 PM [mysql] Status change detected: running

HTTP



- GET request vs POST request

HTTP

- The Hypertext Transfer Protocol (HTTP) is designed to enable communications between clients and servers.
- HTTP works as a request--response protocol between a client and server.
- GET request appears in the query string (URL).
- POST request appears in the http message body.
- POST requests are never cached.
- POST requests do not remain in browser history.

HTML

- HTML stands for Hyper Text Markup Languages, which is the most widely used language on the Web to develop web pages.
- HTML is a Markup Language which means you use it to simply “markup” a text document with tags that tells a Web browser how to structure it to display.
- HTML extension is .html

HTML

Example.html

```
<html>  
  <head>  
    <title>This is the title</title>  
  </head>  
  <body>  
    <h1> This is the Heading </h1>  
    <p> This is a Paragraph </p>  
  </body>  
</html>
```

HTML

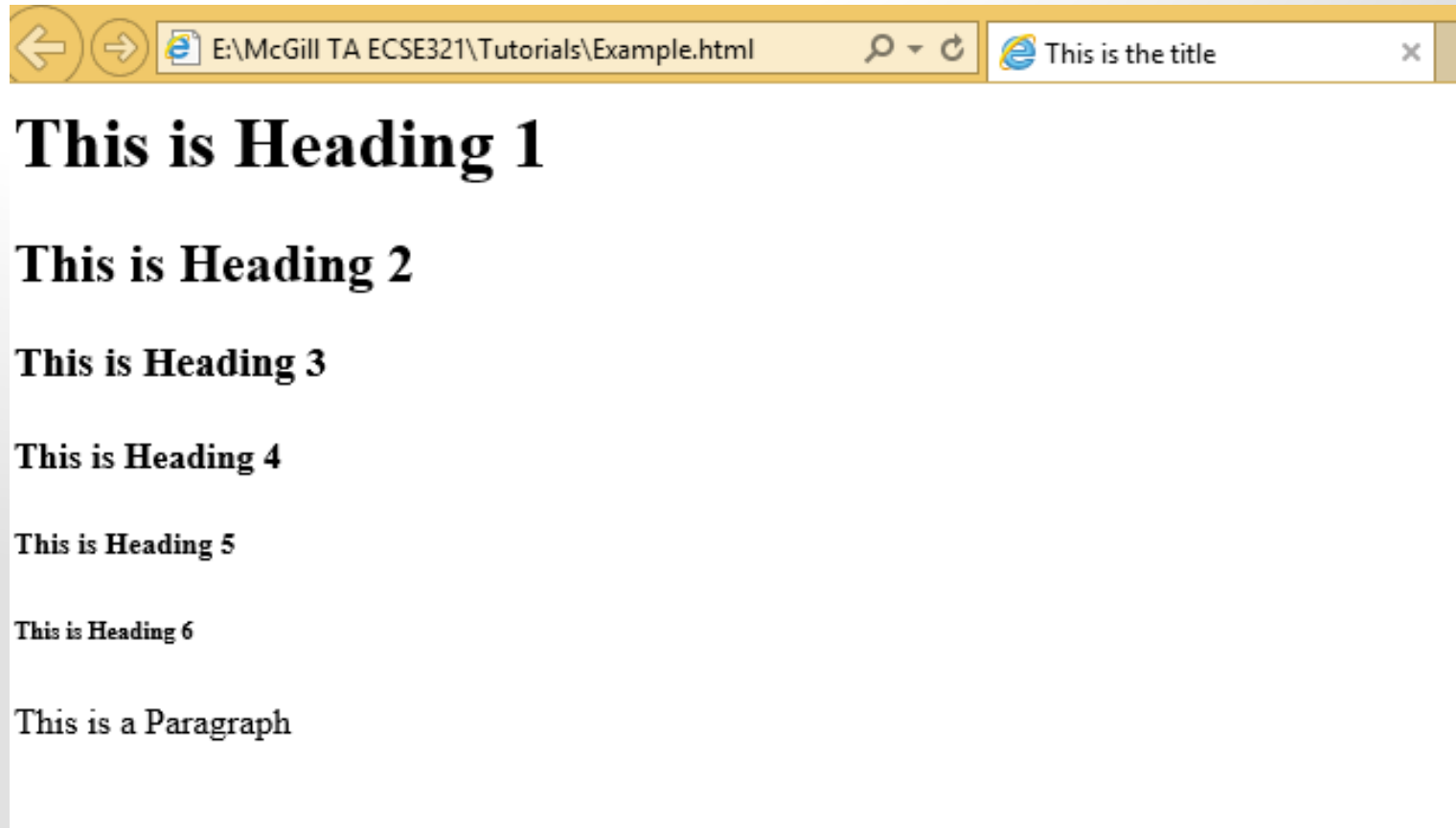


HTML

Example.html

```
<html>
  <head>
    <title>This is the title</title>
  </head>
  <body>
    <h1> This is Heading 1 </h1>
    <h2> This is Heading 2 </h2>
    <h3> This is Heading 3 </h3>
    <h4> This is Heading 4 </h4>
    <h5> This is Heading 5 </h5>
    <h6> This is Heading 6 </h6>
    <p> This is a Paragraph </p>
  </body>
</html>
```

HTML



HTML

- HTML is a collection of tags
- Tags can be categorized into two types of tags
 1. Tags with attributes and text in between
`<TagName attr1="Value" attr2="Value"> Text </TagName>`
 2. Tags with attributes only
`<TagName attr1="Value"/>`
- The text has to be contained within the opening and the closing tags of the corresponding element.

HTML

Example.html

```
<html>
  <head>
    <title>This is the title</title>
  </head>
  <body>
    <h1> This is Heading 1 </h1>
    <h2> This is Heading 2 </h2>
    <h3> This is Heading 3 </h3>
    <h4> This is Heading 4 </h4>
    <h5> This is Heading 5 </h5>
    <h6> This is Heading 6 </h6>
    <center> This is a centered text </center>
    <p> This is not a centered Paragraph <b> "This text is bold" </b> </p>
  </body>
</html>
```

HTML



This is Heading 1

This is Heading 2

This is Heading 3

This is Heading 4

This is Heading 5

This is Heading 6

This is a centered text

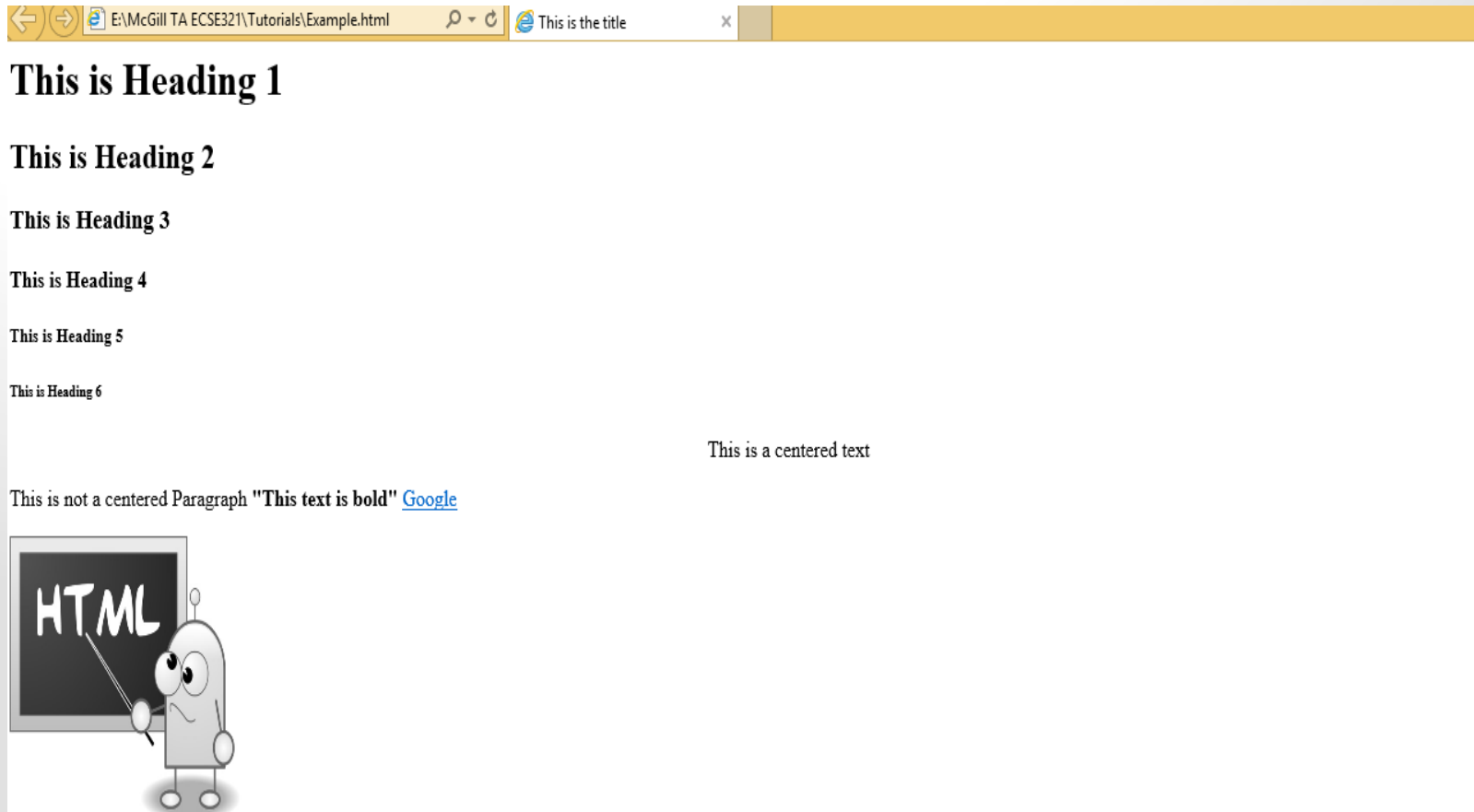
This is not a centered Paragraph "**This text is bold**"

HTML

Example.html

```
<html>
  <head>
    <title>This is the title</title>
  </head>
  <body>
    <h1> This is Heading 1 </h1>
    <h2> This is Heading 2 </h2>
    <h3> This is Heading 3 </h3>
    <h4> This is Heading 4 </h4>
    <h5> This is Heading 5 </h5>
    <h6> This is Heading 6 </h6>
    <center> This is a centered text </center>
    <p> This is not a centered Paragraph <b> "This text is bold" </b>
    <a href="https://www.google.ca/?gfe_rd=cr&ei=miPbV-730Kjd8geCkaIg&gws_rd=ssl"> Google </a>
    </p>
    <img src = "http://www.html-helper.net/wp-content/uploads/2013/07/HTML.jpg" width="200" height="200"/>
  </body>
</html>
```

HTML



HTML

Example.html

```
|<html>
  <head>
    <title>This is the title</title>
  </head>
  <body>
    <pre>
      This is a preformatted text.
      I can format the text here.

      Two breaks.

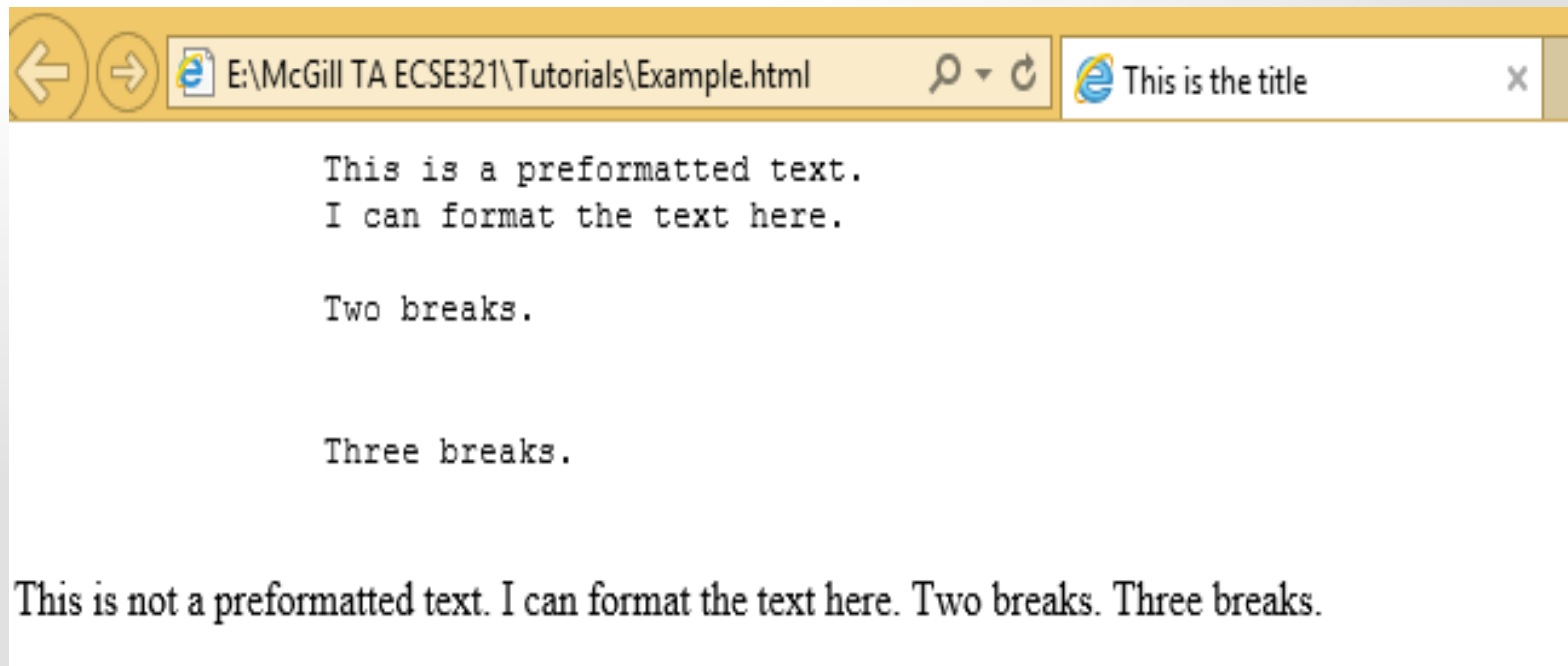
      Three breaks.
    </pre>

    <p>
      This is not a preformatted text.
      I can format the text here.

      Two breaks.

      Three breaks.
    </p>
  </body>
</html>
```

HTML



HTML (adding some styles)

Example.html

```
<html>
  <head>
    <title>This is the title</title>
  </head>
  <body>
    <pre style= "background-color:grey;">
      This is a preformatted text.
      I can format the text here.

      Two breaks.

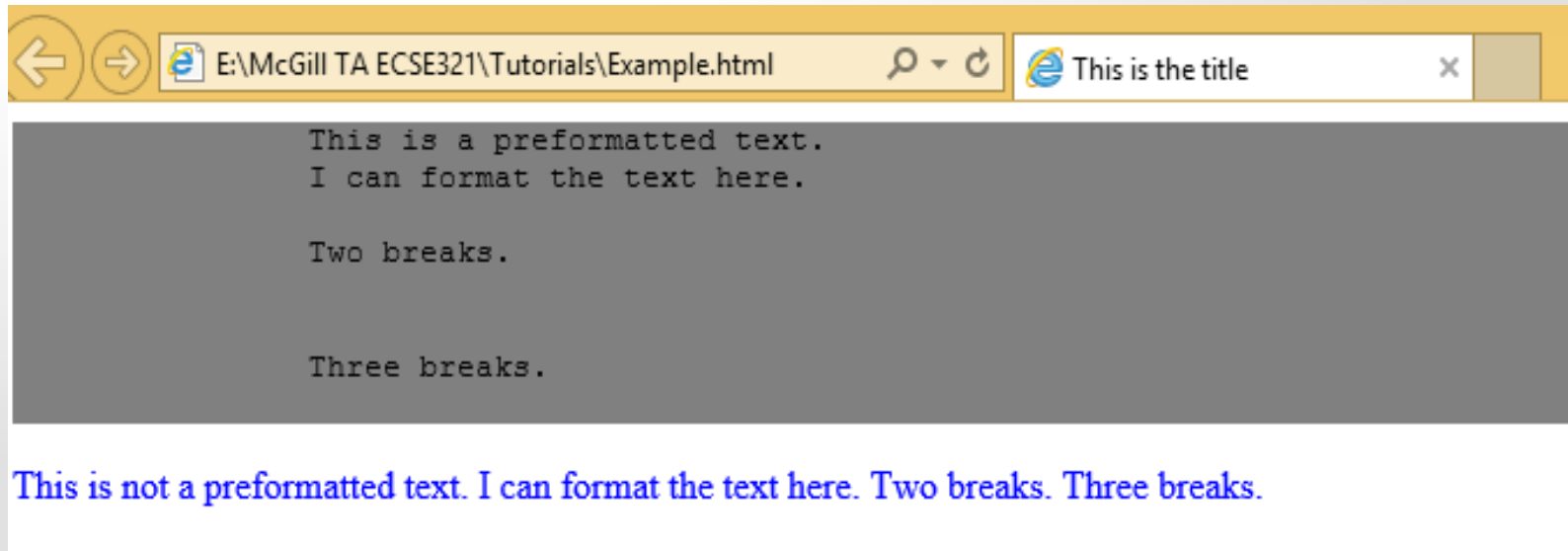
      Three breaks.
    </pre>

    <p style= "color:blue; font=family:verdana;">
      This is not a preformatted text.
      I can format the text here.

      Two breaks.

      Three breaks.
    </p>
  </body>
</html>
```

HTML (adding some styles)



HTML

Example.html

```
<!DOCTYPE html>
<!--This is how to write comments-->
<html>
  <head>
    <style>
      table, th, td {
        border: 1px solid black;
        border-collapse: collapse;
      }
      th, td {
        padding: 5px;
        text-align: left;
      }
      table#t01 {
        width: 100%;
        background-color: #f1f1c1;
      }
    </style>
  </head>

  <body>
    <table style="width: 100%;">
      <tr>
        <th>First Name</th>
        <th>Last Name</th>
        <th>Points</th>
      </tr>

      <tr>
        <td>Jill</td>
        <td>Smith</td>
```

```
        <td>50</td>
      </tr>

      <tr>
        <td>Eve</td>
        <td>Jackson</td>
        <td>94</td>
      </tr>

      <tr>
        <td>John</td>
        <td>Doe</td>
        <td>80</td>
      </tr>
    </table>

    <br>

    <table id="t01">
      <tr>
        <th>First Name</th>
        <th>Last Name</th>
        <th>Points</th>
      </tr>

      <tr>
        <td>Jill</td>
        <td>Smith</td>
        <td>50</td>
      </tr>
```

```
      <tr>
        <td>Eve</td>
        <td>Jackson</td>
        <td>94</td>
      </tr>

      <tr>
        <td>John</td>
        <td>Doe</td>
        <td>80</td>
      </tr>
    </table>

  </body>

</html>
```

HTML

First Name	Last Name	Points
Jill	Smith	50
Eve	Jackson	94
John	Doe	80


First Name	Last Name	Points
Jill	Smith	50
Eve	Jackson	94
John	Doe	80

HTML FORMS

Example.html

```
<html>
  <head>
    <title>This is the title</title>
  </head>
  <body>
    <h1> A form example </h1>
    <form action = "action_page.php">
      <fieldset>
        <legend>Personal information:</legend>
        First Name:<br>
        <input type="text" name="firstname" value="Your First Name..."><br>
        Last Name:<br>
        <input type="text" name="lastname" value="Your Last Name..."><br><br>
        Gender: <br>
        <input type="radio" name="gender" value="Male" checked="checked">Male<br>
        <input type="radio" name="gender" value="Female">Female<br><br>
        <input type="submit" value="Submit">
      </fieldset>
    </form>
  </body>
</html>
```

HTML FORMS



The screenshot shows a web browser window with a yellow title bar. The address bar contains the path `C:\Users\Sahil Luthra\workspace\Tutorials\WebConte` and the title bar contains the text "This is the title". The main content area displays a form titled "A form example" in a large, bold, black serif font. Below the title, the form is organized into sections. The first section, "Personal information:", is followed by two text input fields: "First Name:" with a placeholder "Your First Name..." and "Last Name:" with a placeholder "Your Last Name...". The second section, "Gender:", includes two radio button options: "Male" (which is selected) and "Female". At the bottom of the form is a "Submit" button.

A form example

Personal information:

First Name:

Last Name:

Gender:
☒ Male
☐ Female

HTML FORMS

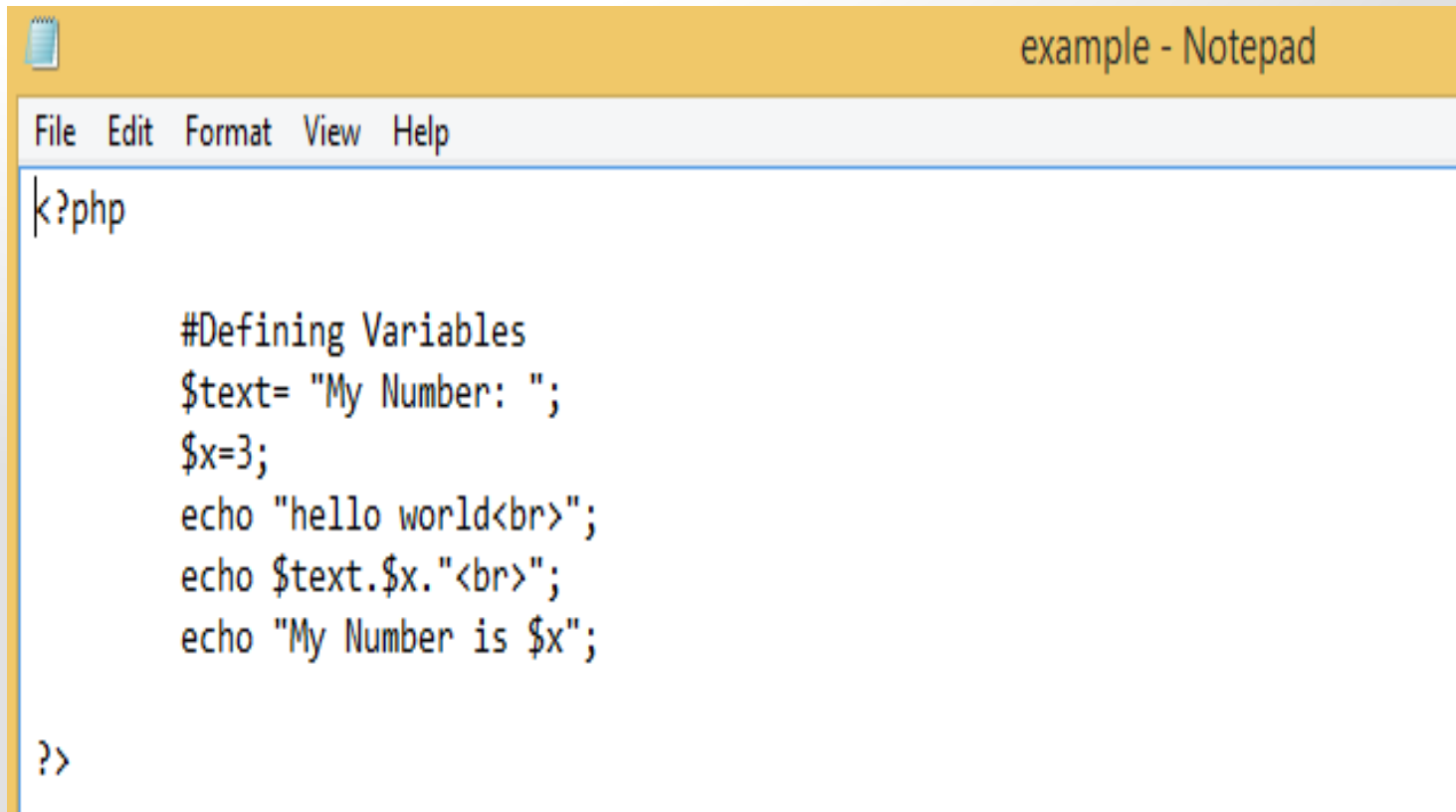
- Text Fields
`<input name="email" type="text" />`
- Password Fields
`<input name="password" type="password" />`
- Hidden Fields
`<input name="id" value="123" />`
- Checkboxes
`<input checked="checked" name="remember" type="checkbox" />`
- Radio Buttons
`<input name="gender" type="radio" value="F" />`
`<input name="gender" type="radio" value="M" />`
- Drop-Down Menus
`<select name="state">`
 `<option value=""></option>`
 `<option value="MA"></option>`
 `<option value="NY"></option>`
`</select>`
- Text Areas
`<textarea name="comments"></textarea>`

PHP

- The PHP HyperText Preprocessor is a programming language that allows web developers to create dynamic content that interacts with databases.
- PHP is a loosely typed language, which means it automatically converts the datatype of the variable depending on its value. You don't specify the data value beforehand like in C, Java..etc
- Any file that contains php code should be stored with the extension .php

PHP

Example.php

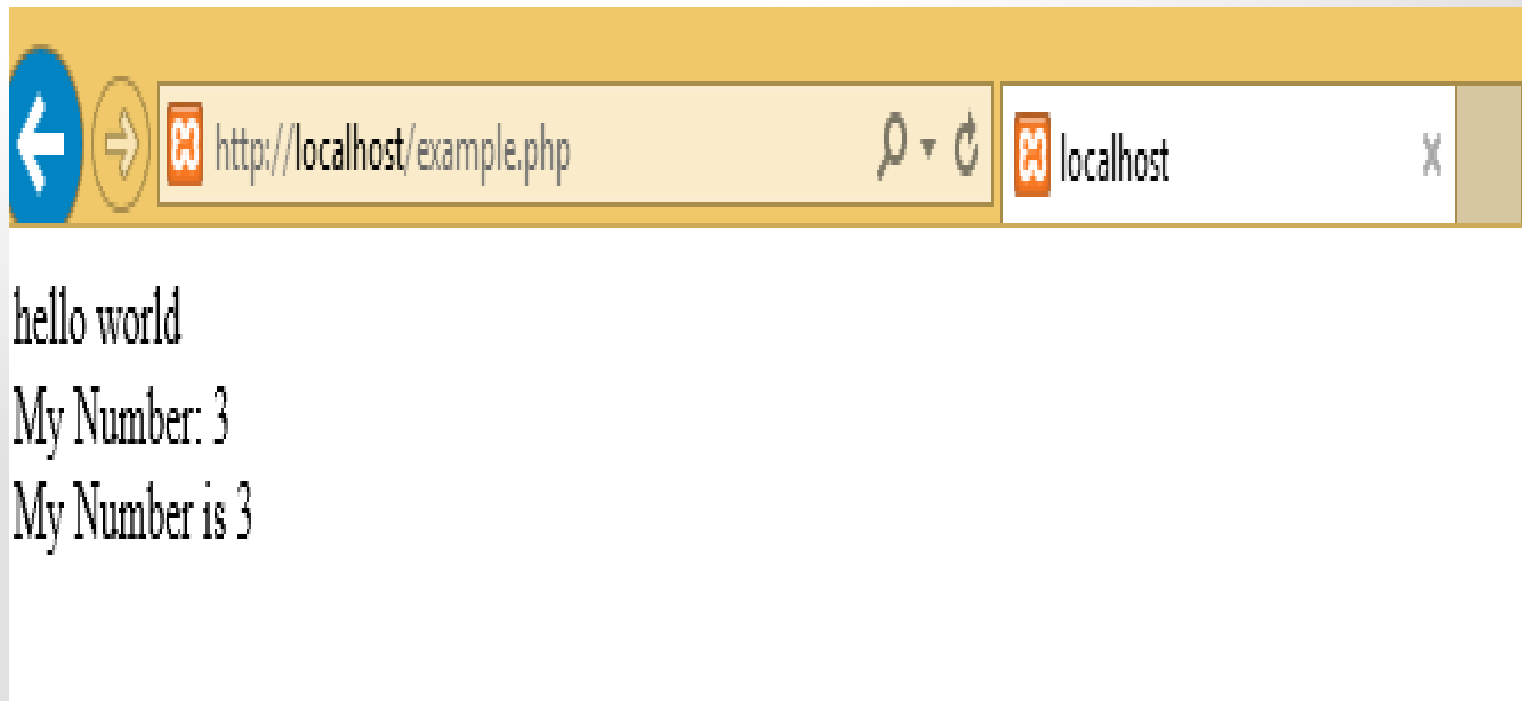


```
<?php

#Defining Variables
$text= "My Number: ";
$x=3;
echo "hello world<br>";
echo $text.$x."<br>";
echo "My Number is $x";

?>
```

PHP



PHP

```
example.php
1  <?php
2
3      #Defining constant variables
4
5      define("GREETING", "Welcome to ECSE321 Tutorial 4<br>");
6      echo GREETING;
7      $t = date("H"); //gets the current hour
8      if ($t < "20") {
9          echo "Have a good day!";
10     }
11     else{
12         echo "Have a good night";
13     }
14
15     # Loops are the same like Java or C
16
17     $x = 1;
18
19     while($x <= 5) {
20         echo "The number is: $x <br>";
21         $x++;
22     }
23
24     #arrays and for loops
25
26     $colors = array("red", "green", "blue", "yellow");
27     $colors[6] = "grey";
28     foreach ($colors as $value) {
29         echo "$value <br>";
30     }
31
32     //adding an element to the array
33     for ($x = 0; $x < count($colors); $x++) {
34         echo "$colors[$x] <br>";
35     }
36
```

PHP

```
example.php
36
37
38
39
40
41 # associative arrays, like a dictionary
42
43 $age = array("Peter"=>"35", "Ben"=>"37", "Joe"=>"43");
44 echo "Peter is " . $age['Peter'] . " years old. <br>";
45
46 $age = array("Peter"=>"35", "Ben"=>"37", "Joe"=>"43");
47
48 foreach($age as $x => $x_value) {
49     echo "Key=" . $x . ", Value=" . $x_value;
50     echo "<br>";
51 }
52
53 #defining functions with arguments
54
55 function familyName($fname) {
56     echo "$fname Refsnes.<br>";
57 }
58
59 familyName("Jani");
60 familyName("Hege");
61 familyName("Stale");
62 familyName("Kai Jim");
63 familyName("Borge");
64
65 #defining functions with arguments that hold a default value
66
67 function setHeight($minheight = 50) {
68     echo "The height is : $minheight <br>";
69 }
70
71 setHeight(350);
72 setHeight(); // will use the default value of 50
73 setHeight(135);
74 setHeight(80);
75 ?>
```


PHP (Working With HTML)

```
Example.html x example.php
1 <html>
2   <body>
3     Welcome <?php echo $_GET["firstname"]." ".$_GET["lastname"]; ?> to ECSE321 tutorial 4<br>
4   </body>
5 </html>
6
7 <!-- or you can use this -->
8 <?
9   echo "<html>
10     <body>
11       Welcome " . $_GET["firstname"]." ".$_GET["lastname"]." to ECSE321 tutorial 4
12     </body>
13   </html>"
14 ?>
15
```

PHP (form validation)

- How to Validate your input fields ?
- Form Validation Example, can be found on
<https://github.com/sahilluthra/ecse321tutF2016>
Under TutorialExamples/Example5

JSON and XML

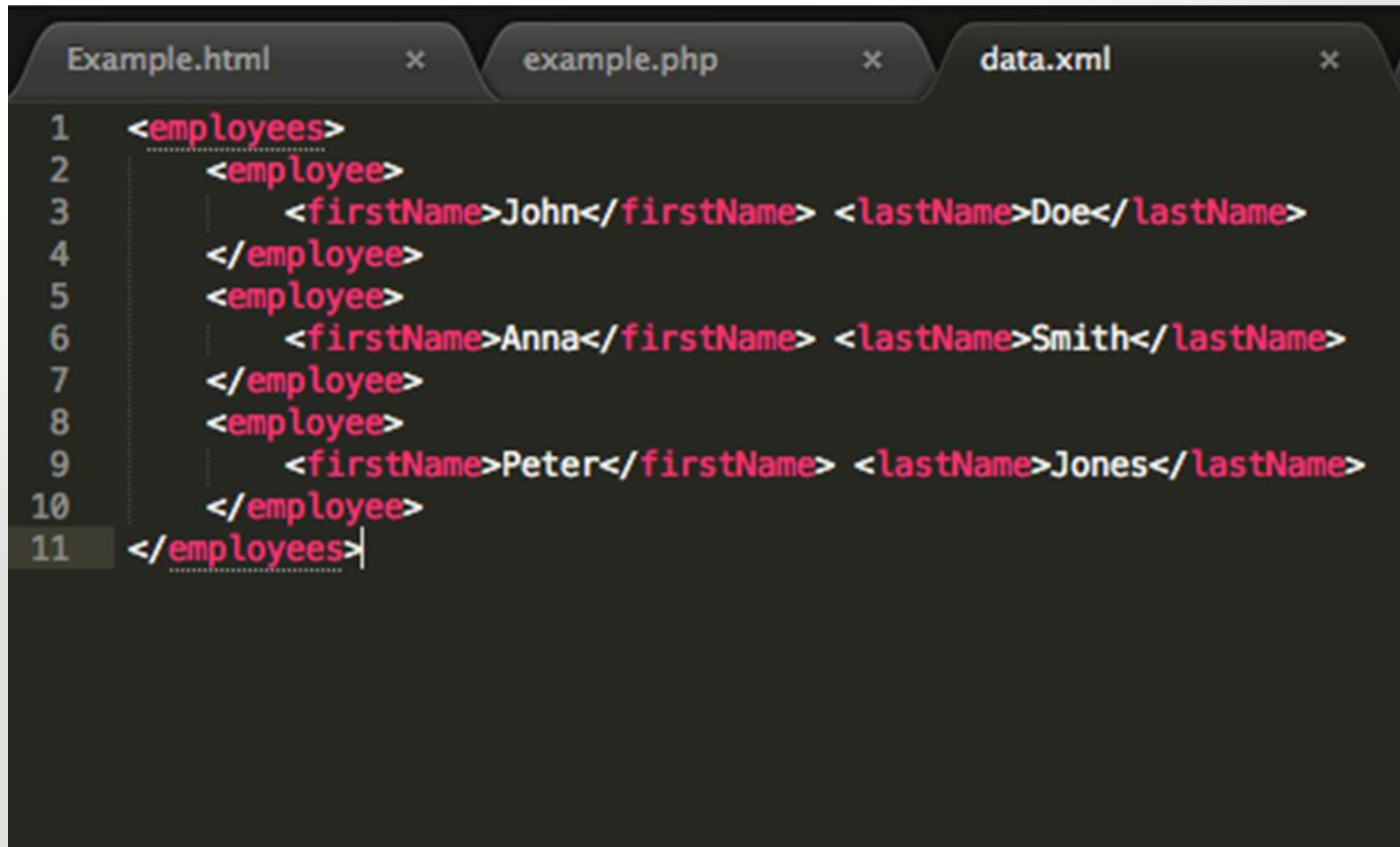
- XML and JSON are used to exchange and store data for later use.
- They just carry the data in a specified form, they DO NOT present it like HTML does.
- JSON files extension is .json
- XML files extension is .xml

JSON

data.json

```
1  {"employees": [  
2    {"firstName": "John", "lastName": "Doe"},  
3    {"firstName": "Anna", "lastName": "Smith"},  
4    {"firstName": "Peter", "lastName": "Jones"}  
5  ]}
```

XML



A screenshot of a code editor with three tabs: 'Example.html', 'example.php', and 'data.xml'. The 'data.xml' tab is active, showing XML code for a list of employees. The code is as follows:

```
1 <employees>
2   <employee>
3     <firstName>John</firstName> <lastName>Doe</lastName>
4   </employee>
5   <employee>
6     <firstName>Anna</firstName> <lastName>Smith</lastName>
7   </employee>
8   <employee>
9     <firstName>Peter</firstName> <lastName>Jones</lastName>
10  </employee>
11 </employees>
```

PHP with XML

```
books.xml  x  example.php  x
1  <?xml version="1.0" encoding="utf-8"?>
2  <bookstore>
3      <book category="COOKING">
4          <title lang="en">Everyday Italian</title>
5          <author>Giada De Laurentiis</author>
6          <year>2005</year>
7          <price>30.00</price>
8      </book>
9      <book category="CHILDREN">
10         <title lang="en">Harry Potter</title>
11         <author>J K. Rowling</author>
12         <year>2005</year>
13         <price>29.99</price>
14     </book>
15     <book category="WEB">
16         <title lang="en-us">XQuery Kick Start</title>
17         <author>James McGovern</author>
18         <year>2003</year>
19         <price>49.99</price>
20     </book>
21     <book category="WEB">
22         <title lang="en-us">Learning XML</title>
23         <author>Erik T. Ray</author>
24         <year>2003</year>
25         <price>39.95</price>
26     </book>
27 </bookstore>
```

PHP with XML

```
books.xml  x  example.php  x
1  <?php
2      $xml=simplexml_load_file("books.xml") or die("Error: Cannot create object");
3      foreach($xml->children() as $books) {
4          echo $books->title . ", ";
5          echo $books->author . ", ";
6          echo $books->year . ", ";
7          echo $books->price . "<br>";
8      }
9      echo "A second way<br><br>";
10     print_r ($xml);
11     echo "<br>A third way<br><br>";
12     echo $xml->book[0]['category'] . "<br>";
13     echo $xml->book[1]->title['lang'];
14  ?>
```

PHP with XML

Everyday Italian, Giada De Laurentiis, 2005, 30.00

Harry Potter, J K. Rowling, 2005, 29.99

XQuery Kick Start, James McGovern, 2003, 49.99

Learning XML, Erik T. Ray, 2003, 39.95

A second way

```
SimpleXMLElement Object ( [book] => Array ( [0] => SimpleXMLElement Object ( [@attributes] => Array ( [category] => COOKING ) [title] => Everyday Italian [author] => Giada De  
Laurentiis [year] => 2005 [price] => 30.00 ) [1] => SimpleXMLElement Object ( [@attributes] => Array ( [category] => CHILDREN ) [title] => Harry Potter [author] => J K. Rowling [year] =>  
2005 [price] => 29.99 ) [2] => SimpleXMLElement Object ( [@attributes] => Array ( [category] => WEB ) [title] => XQuery Kick Start [author] => James McGovern [year] => 2003 [price] =>  
49.99 ) [3] => SimpleXMLElement Object ( [@attributes] => Array ( [category] => WEB ) [title] => Learning XML [author] => Erik T. Ray [year] => 2003 [price] => 39.95 ) )
```

A third way

COOKING

en

Pair Programming EXERCISE

- Create a registration page which takes the user's first name, last name, email and password. (to be stored in xml file)
- Create a login page which takes the user's email and password, and matches them with the data stored in the xml file. If no match was found, an error message should be given to the user.