

XHTML

Scripting and Computer Environment - Lecture 08

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Introduction

XHTML stands for eXtensible HyperText Markup Language. It is combination of XML and HTML. XML is a markup language where everything must be marked up correctly, which results in well-formed documents.

Well formed documents are easy to interpret and hence browsers which can display well formed documents can be very lightweight and would consume less resources in comparison to browsers which interpret even bad code really well.



Simple rules

- XHTML elements must be properly nested
- XHTML elements must always be closed
- XHTML elements must be in lowercase
- XHTML documents must have one root element (any Guesses?)



Examples - Wrong and Right - 1

Proper nesting is necessary in XHTML

Example 1 - Wrong

```
<b><i>This text is bold and italic</b></i>
```

Example 1 - Right

```
<b><i>This text is bold and italic</i></b>
```



Examples - Wrong and Right - 2

All tags should be properly closed in XHTML

Example 2 - Wrong

```
<ul>
  <li>Coffee</li>
  <li>Tea
    <ul>
      <li>Black tea</li>
      <li>Green tea</li>
    </ul>
  <li>Milk</li>
</ul>
```



Examples - Wrong and Right - 3

Example 2 - Right

```
<ul>
  <li>Coffee</li>
  <li>Tea
    <ul>
      <li>Black tea</li>
      <li>Green tea</li>
    </ul>
  </li>
  <li>Milk</li>
</ul>
```



Examples - Wrong and Right - 4

Example 3 - Wrong

```
<p>This is a paragraph  
<p>This is another paragraph
```

Example 3 - Right

```
<p>This is a paragraph</p>  
<p>This is another paragraph</p>
```



Examples - Wrong and Right - 5

Example 4 - Wrong

A break: `
`

A horizontal rule: `<hr>`

An image: ``

Example 4 - Right

A break: `
`

A horizontal rule: `<hr />`

An image: ``



Examples - Wrong and Right - 6

Only small letters must be used for tag and attribute names.

Example 5 - Wrong

```
<BODY>  
<P>This is a paragraph</P>  
</BODY>
```

Example 5 - Right

```
<body>  
<p>This is a paragraph</p>  
</body>
```



Examples - Wrong and Right - 7

Example 6 - Wrong

```
<table WIDTH="100%">
```

Example 6 - Right

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



Examples - Wrong and Right - 8

Example 7 - Wrong

```
<table width=100%>
```

Example 7 - Right

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



Examples - Wrong and Right - 9

All tags should be properly closed in XHTML

Example 8 - Wrong

```
<input checked>  
<input readonly>  
<input disabled>  
<option selected>  
<frame noresize>
```



Examples - Wrong and Right - 10

Example 8 - Right

```
<input checked="checked" />  
<input readonly="readonly" />  
<input disabled="disabled" />  
<option selected="selected" />  
<frame noresize="noresize" />
```

For complete list you can refer [w3schools website](http://www.w3schools.com).



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Example- 1

Minimal XHTML code

```
<!DOCTYPE html PUBLIC
"-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <meta http-equiv="Content-Type"
      content="text/html; charset=utf-8"/>
    <title> </title>
  </head>
  <body>
  </body>
</html>
```



Example - 2

Note that:

- The DOCTYPE declaration is not a part of the XHTML document itself. It is not an XHTML element. But it must be present in all XHTML documents to specify which XML Doctype to apply to this XHTML document.
- The xmlns attribute in `<html>`, specifies the xml namespace for a document,
- HTTP meta 'Content-Type' tag is required to tell encoding of content. It can also be sent by web server in HTTP headers if not included in XHTML document.



XHTML DTD - 1

There are three different XHTML DTDs

Strict

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

Use the strict DOCTYPE when you want really clean markup, free of presentational clutter. Use it together with CSS.



XHTML DTD - 2

Transitional

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

Use the transitional DOCTYPE when you want to still use HTML's presentational features.



XHTML DTD - 3

Frameset

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

Use the frameset DOCTYPE when you want to use HTML frames.

You can see which tags are supported in specific DocTypes at [w3schools website](http://www.w3schools.com)



Validation

One can validate XML documents against its DocType declaration. Hence all XHTML documents can be verified against the DocType specified in first line of XHTML document.

A free online validation tool is available at [w3 website](#). You can use it validate your documents. (Especially assignments before submitting 😊)

