

HTML & XHTML (Part 1)

Erick Kurniawan, S.Kom, .M.Kom



Web Standard

- Content : koleksi dari semua text, images, videos, sounds, animations, dan files
- XHTML (eXtensible Markup Language) : merepresentasikan struktur dokumen
- CSS (Cascading Style Sheet)



Keuntungan Web Standard

- **Deliver to multiple user agents:** dapat dibuka diberbagai browser dan perangkat lain seperti PDA, Cell Phones
- **Improve performance:** halaman menjadi lebih ringan / lebih kecil, dapat didownload dengan cepat, sebab hanya membutuhkan minimal structural markup (cukup menggunakan satu style sheet)
- **Serve All Browser:** dapat di browse di berbagai browser, baru maupun lama



Keuntungan Web Standard

- **Separate content and presentation:** memisahkan isi dengan style (dapat melakukan perubahan dengan mudah)
- **Confirm your code is good:** ada fasilitas validasi / debugging pada page yang dibuat
- **Distribute content more easily:** didistribusikan dengan mudah
- **Do less work:** kode menjadi lebih sedikit dan simple



HTML

- HTML (Hypertext Markup Language)
- Bahasa untuk representasi informasi halaman web
- Didefinisikan pada November 1995 dalam dokumen RFC 18669 (HTML v.3.2)
- Desember 1999 (HTML v.4.0.1)
- Versi terakhir muncul XHTML



Contoh file HTML sederhana

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0  
  Transitional//EN">  
<HTML>  
<HEAD>  
<TITLE>Contoh Sederhana</TITLE>  
<META NAME="Generator" CONTENT="EditPlus">  
<META NAME="Author" CONTENT="erick">  
<META NAME="Keywords" CONTENT="contoh">  
<META NAME="Description" CONTENT="dokumen  
  contoh">  
</HEAD>  
<BODY>  
Hello World !  
</BODY>  
</HTML>
```

Informasi Versi dan DTD HTML

- DTD (Document Type Definition) -> sebuah file yang mendefinisikan semua tag yang valid. Ada 3 macam :
- **HTML 4.01 Strict DTD** : Dengan DTD ini, hanya tag dan atribut yang pemakaiannya secara eksplisit diijinkan dalam spesifikasi HTML boleh dipakai (kecuali tag tag untuk *frames*). Dengan demikian, inilah DTD yang paling ketat (dan oleh karena itu, jarang dipakai dalam web).

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"  
"http://www.w3.org/TR/html4/strict.dtd">
```

Informasi Versi dan DTD HTML

- **HTML 4.01 Transitional DTD** : Semua tag (kecuali tag tag untuk *frames*) dalam spesifikasi HTML 4.01 termasuk tag tag yang menurut spesifikasi “sebaiknya tidak dipakai lagi” tetap bisa dipakai dengan DTD kedua ini.

```
<!DOCTYPE HTML PUBLIC "-//  
W3C//DTD HTML 4.01 Transitional//EN"  
"http://www.w3.org/TR/html4/loose.dtd">
```

Informasi Versi dan DTD HTML

- **HTML 4.01 *Frameset* DTD** : DTD ini sama dengan *Transitional DTD* ditambah tag tag untuk *frame* (jadi, inilah DTD yang paling umum).

```
<!DOCTYPE HTML PUBLIC "-//  
W3C//DTD HTML 4.01 Frameset//EN"  
"http://www.w3.org/TR/html4/ frameset.dtd">
```



XHTML

- Extensible HyperText Markup Language
- XHTML versi 1.0 diumumkan pada awal Agustus 2002.
- Formulasi bahasa HTML sebagai aplikasi XML
- Konsisten dengan aturan penulisan XML
- XHTML mirip dengan HTML tidak ada perbedaan yang signifikan
- Dokumen XHTML sepenuhnya didukung semua program yang bisa membaca, menulis, atau mengedit dokumen XML yang sah.
- XML mendukung penambahan tag baru dengan relatif mudah.



Contoh file XHTML

```
<?xml version = "1.0"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
  "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">

<html xmlns = "http://www.w3.org/1999/xhtml">
  <head>
    <title>Internet and WWW How to Program -
    Welcome</title>
  </head>

  <body>
    <p>Welcome to XHTML!</p>
  </body>
</html>
```



Perbedaan HTML & XHTML

- Dokumen XHTML harus terbentuk dengan baik (*wellformed*) yaitu bahwa semua tag pembuka harus mempunyai tag penutup, mis (`<p></p>`)
- Semua elemen dan atribut harus ditulis dengan huruf kecil.
- Untuk tag seperti `
` dan `<hr>` yang tidak memiliki tag penutup, harus diberi notasi `
`, `<hr/>`
- Nilai untuk atribut harus berada dalam tanda kutip.
- Atribut tanpa nilai tidak diijinkan lagi di XHTML. Setiap atribut harus mempunyai nilai.



Perbedaan HTML & XHTML

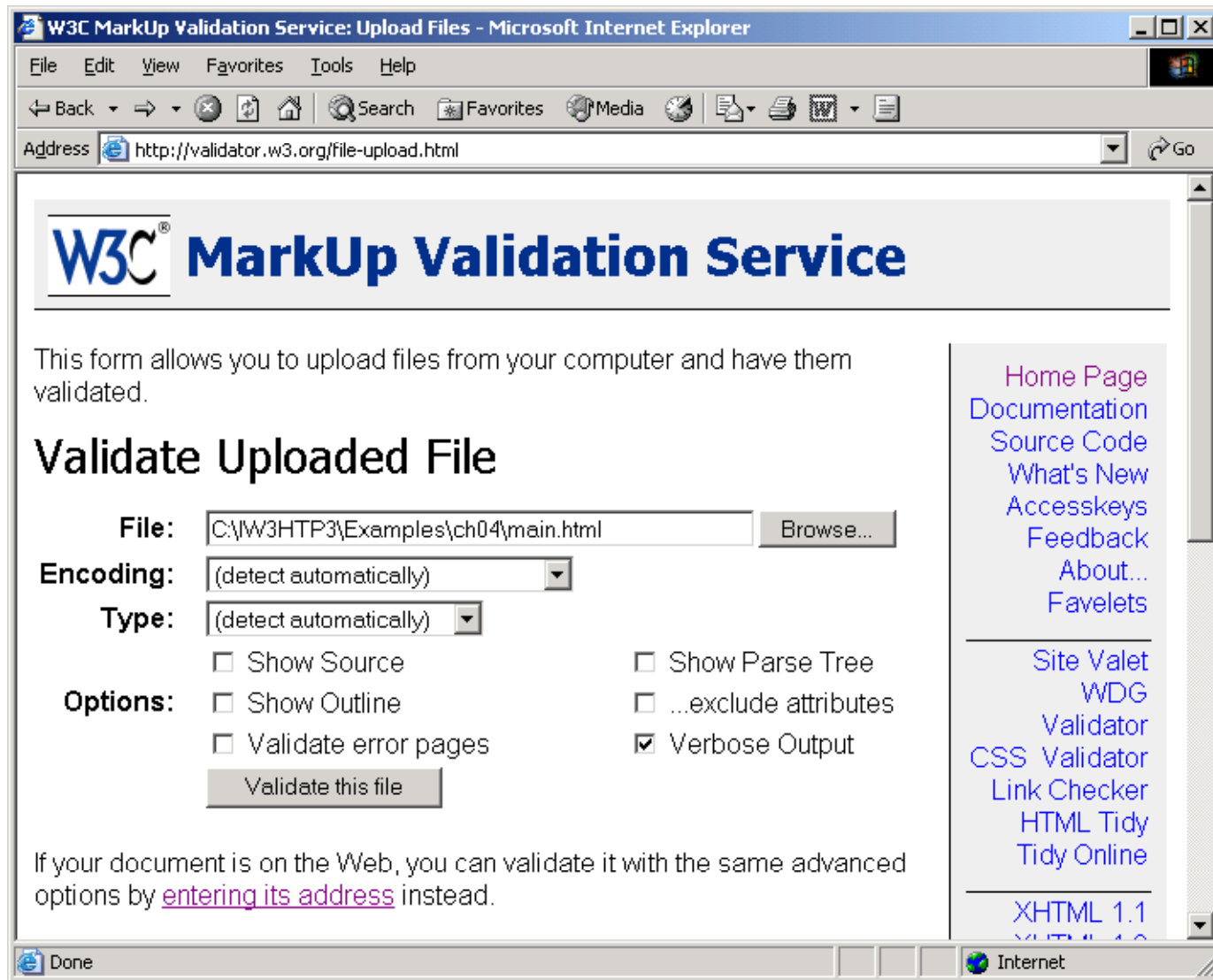
- Beberapa tanda spasi atau karakter *white space* lain dalam string yang menyimpan nilai sebuah atribut digabungkan menjadi satu spasi saja.
- Atribut “name” untuk beberapa tag diubah menjadi atribut “id” sehingga penamaan menjadi konsisten untuk semua tag
- XHTML (seperti XML) adalah *case sensitive*,
- Format karakter dalam bentuk heksadesimal harus dimulai dengan &#x (dengan x kecil), misalnya �



W3C XHTML Validation Service

- Validation service (`validator.w3.org`)
 - Checking a document's syntax
 - URL that specifies the location of the file
 - Uploading a file to the site
`validator.w3.org/file-upload.html`

W3C XHTML Validation Service



W3C XHTML Validation Service

Validation Results - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://validator.w3.org/check> Go

W3C[®] MarkUp Validation Service

Jump To: [\[Results\]](#)

File: C:\W3HTP3\Examples\ch04\main.html
Content-Type: text/xml
Encoding: us-ascii
Doctype: [XHTML 1.1](#)
Root Namespace: <http://www.w3.org/1999/xhtml>

- *Note:* The HTTP Content-Type header sent by your web browser (unknown) did not contain a "charset" parameter, but the Content-Type was one of the XML text* sub-types (`text/xml`). The relevant specification (RFC 3023) specifies a strong default of "us-ascii" for such documents so we will use this value regardless of any encoding you may have indicated elsewhere. If you would like to use a different encoding, you should arrange to have your browser send this new encoding information.
- *Note:* The Validator XML support has [some limitations](#).

This Page Is Valid [XHTML 1.1!](#)

Home Page
Documentation
Source Code
What's New
Accesskeys
Feedback
About...
Favelets

Site Valet
WDG
Validator
CSS Validator
Link Checker
HTML Tidy
Tidy Online

XHTML 1.1
XHTML 1.0
HTML 4.01

XSL 1.0
CSS Level 2
CSS Level 1

Done Internet



Header

- Six headers (header elements)
 - h1 through h6

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.4: header.html -->
6 <!-- XHTML headers -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Headers</title>
11   </head>
12
13   <body>
14
15     <h1>Level 1 Header</h1>
16     <h2>Level 2 header</h2>
17     <h3>Level 3 header</h3>
18     <h4>Level 4 header</h4>
19     <h5>Level 5 header</h5>
20     <h6>Level 6 header</h6>
21
22   </body>
23 </html >
```



Linking

- Hyperlink

- Menghubungkan ke halaman XHTML yang lain atau image
- Dapat berupa teks maupun image
- Dibuat menggunakan a (anchor) element

- Attribute href

- Mendefinisikan alamat dari halaman yang di link

- Link ke e-mail addresses menggunakan mailto: URL

- tag

- Bold (tag yang lama)

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.5: links.html -->
6 <!-- Introduction to hyperlinks -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Links</title>
11   </head>
12
13   <body>
14
15     <h1>Here are my favorite sites</h1>
16
17     <p><strong>Click a name to go to that page.</strong></p>
18
19     <!-- Create four text hyperlinks -->
20     <p><a href = "http://www.deltel.com">Del tel </a></p>
21
22     <p><a href = "http://www.prenhall.com">Prentice Hall </a></p>
23
24     <p><a href = "http://www.yahoo.com">Yahoo! </a></p>
25
26     <p><a href = "http://www.usatoday.com">USA Today</a></p>
27
28   </body>
29 </html >
```

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.6: contact.html -->
6 <!-- Adding email hyperlinks -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Contact Page</title>
11   </head>
12
13   <body>
14
15     <p>
16       My email address is
17       <a href = "mailto:deitel@deitel.com">
18         deitel@deitel.com
19       </a>
20       . Click the address and your browser will
21       open an e-mail message and address it to me.
22     </p>
23   </body>
24 </html >
```



Images

- Tiga Format yang paling populer
 - Graphics Interchange Format (GIF)
 - Joint Photographic Experts Group (JPEG)
 - Portable Network Graphics (PNG)
 - `img` element
 - `src` attribute
 - Lokasi dari file imagenya
 - `width` dan `height`



Images

- Pixels (“picture elements”)
- Empty elements
 - Terminated by character / inside the closing right angle bracket (>), or by explicitly including the end tag
- br element
 - Line break

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.7: picture.html -->
6 <!-- Adding images with XHTML -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Welcome</title>
11   </head>
12
13   <body>
14
15     <p>
16       <img src = "xml htp.jpg" height = "238" width = "183"
17         alt = "XML How to Program book cover" />
18       <img src = "j htp.jpg" height = "238" width = "183"
19         alt = "Java How to Program book cover" />
20     </p>
21   </body>
22 </html >
```

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.8: nav.html -->
6 <!-- Using images as link anchors -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Navigation Bar
11     </title>
12   </head>
13
14   <body>
15
16     <p>
17       <a href = "links.html">
18         <img src = "buttons/links.jpg" width = "65"
19           height = "50" alt = "Links Page" />
20       </a><br />
21
22       <a href = "list.html">
23         <img src = "buttons/list.jpg" width = "65"
24           height = "50" alt = "List Example Page" />
25       </a><br />
```

```
26
27     <a href = "contact.html">
28         <img src = "buttons/contact.jpg" width = "65"
29             height = "50" alt = "Contact Page" />
30     </a><br />
31
32     <a href = "header.html">
33         <img src = "buttons/header.jpg" width = "65"
34             height = "50" alt = "Header Page" />
35     </a><br />
36
37     <a href = "table1.html">
38         <img src = "buttons/table.jpg" width = "65"
39             height = "50" alt = "Table Page" />
40     </a><br />
41
42     <a href = "form.html">
43         <img src = "buttons/form.jpg" width = "65"
44             height = "50" alt = "Feedback Form" />
45     </a><br />
46 </p>
47
48 </body>
49 </html >
```



Special Characters dan Line Breaks

- Character entity references (in the form `&code;`)
- Numeric character references (e.g. `&`)
- `del`
 - Strike-out text
- `sup`
 - Superscript text
- `sub`
 - Subscript text
- `<hr />`
 - Horizontal rule (horizontal line)

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.9: contact2.html -->
6 <!-- Inserting special characters -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Contact Page
11     </title>
12   </head>
13
14   <body>
15
16     <!-- special characters are entered -->
17     <!-- using the form &code; -->
18     <p>
19       Click
20       <a href = "mailto:deitel@deitel.com">here
21       </a> to open an e-mail message addressed to
22       deitel@deitel.com.
23     </p>
24
25     <hr /> <!-- inserts a horizontal rule -->
```

26

27 `<p>All information on this site is ©`
28 `Deitel & Associates, Inc. 2002. </p>`

29

30 `<!-- to strike through text use tags -->`

31 `<!-- to subscript text use <sub> tags -->`

32 `<!-- to superscript text use <sup> tags -->`

33 `<!-- these tags are nested inside other tags -->`

34 `<p>You may download 3.14 x 10²`
35 `characters worth of information from this site. `
36 `Only _{one} download per hour is permitted. </p>`

37

38 `<p>Note: < ¼ of the information`
39 `presented here is updated daily. </p>`

40

41 `</body>`

42 `</html >`



Unordered Lists

- Unordered list element ul
 - Membuat daftar non angka
 - l i (list item)
 - Urutan dalam unordered list

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.10: links2.html -->
6 <!-- Unordered list containing hyperlinks -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Links</title>
11   </head>
12
13   <body>
14
15     <h1>Here are my favorite sites</h1>
16
17     <p><strong>Click on a name to go to that page.</strong></p>
18
19     <!-- create an unordered list -->
20     <ul>
21
22       <!-- add four list items -->
23       <li><a href = "http://www.deitel.com">Deitel</a></li>
24
25       <li><a href = "http://www.w3.org">W3C</a></li>
```

26

```
<li><a href = "http://www.yahoo.com">Yahoo! </a></li>
```

28

```
<li><a href = "http://www.cnn.com">CNN</a></li>
```

```
</ul >
```

```
</body>
```

```
</html >
```



Nested dan Ordered Lists

- Merepresentasikan hierarchical relationships
- Ordered lists (ol)
 - Membuat daftar berupa urutan angka

```
1 <?xml version = "1.0"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 4.11: list.html -->
6 <!-- Advanced Lists: nested and ordered -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10     <title>Internet and WWW How to Program - Lists</title>
11   </head>
12
13   <body>
14
15     <h1>The Best Features of the Internet</h1>
16
17     <!-- create an unordered list -->
18     <ul>
19       <li>You can meet new people from countries around
20         the world.</li>
21       <li>
22         You have access to new media as it becomes public:
23
```

```
24      <!-- this starts a nested list, which uses a -->
25      <!-- modified bullet. The list ends when you -->
26      <!-- close the <ul> tag. -->
27      <ul>
28          <li>New games</li>
29          <li>
30              New applications
31
32              <!-- nested ordered list -->
33              <ol>
34                  <li>For business</li>
35                  <li>For pleasure</li>
36              </ol>
37          </li>
38
39          <li>Around the clock news</li>
40          <li>Search engines</li>
41          <li>Shopping</li>
42          <li>
43              Programming
44
45              <!-- another nested ordered list -->
46              <ol>
47                  <li>XML</li>
48                  <li>Java</li>
```

```
49         <li>XHTML</li>
50         <li>Scripts</li>
51         <li>New Languages</li>
52     </ol>
53
54     </li>
55
56     </ul> <!-- ends the nested list of line 27 -->
57 </li>
58
59     <li>Links</li>
60     <li>Keeping in touch with old friends</li>
61     <li>It is the technology of the future!</li>
62
63     </ul> <!-- ends the unordered list of line 18 -->
64
65 </body>
66 </html>
```