

Pemrograman Web

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HTML

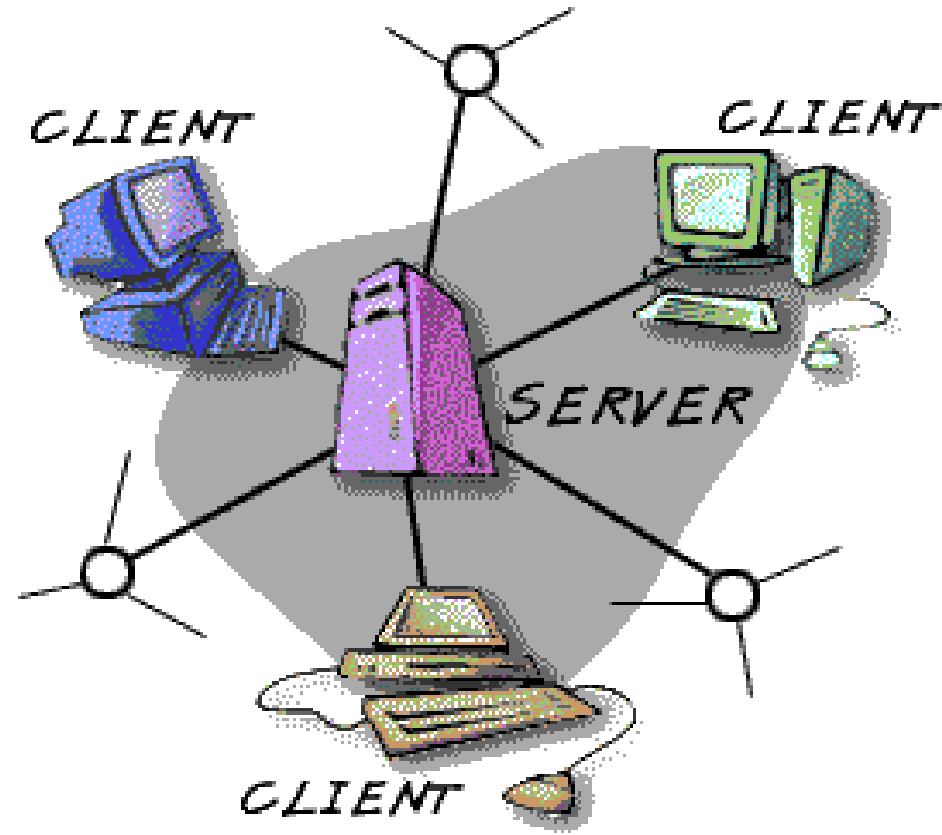
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Internet – Protocol - www

- Internet
 - Jaringan komputer yang menghubungkan komputer-komputer di seluruh belahan dunia/ global.
- Internet protocol
 - Aturan komunikasi untuk pertukaran data / informasi
 - HTTP : Hyper Text Transfer Protocol
 - FTP : File Transfer Protocol
 - SMTP : Simple Mail Transfer Protocol
- WWW
 - Himpunan halaman html yang diakses menggunakan protocol HTTP

HTTP

- Protokol network yang digunakan oleh aplikasi web untuk bertukar informasi
- Karakteristik:
 - Client – Server
 - Request – Response
 - Sessionless



Definisi

- ❖ **www : world wide web**
- ❖ **HTML : Bahasa yang mendeskripsikan halaman web**
 - ❖ HTML : HyperText Markup Language
 - ❖ HTML ada markup language yang terdiri dari kumpulan markup tags
 - ❖ Tag-tag mendeskripsikan konten dokumen
 - ❖ Dokumen HTML terdiri atas : tag-tag dan plaint text
 - ❖ Dokumen2 HTML dapat disebut juga web pages
 - ❖ Dokumen HTML ber-ektensi file : **.htm** atau **.html**
- ❖ **URL : Uniform Resource Locator**
- ❖ **Browse : program aplikasi untuk menampilkan halaman web**

Tags

- Esensi dari pemrograman HTML adalah tag
- Sebuah TAG adalah keyword yang dilingkup tanda bracket < >
- Setiap tag memiliki tag pembuka dan penutup
 - <h1> </h1>
 - <body> </body>
- Sebuah TAG dimungkinkan tidak memiliki tag penutup
 - <hr/> : tag cetak garis
 -
 : tag pindah baris
- Nested Tag : sebuah tag HTML dapat berada dalam tag HTML lainnya
 - <h1><l> Selamat Belajar HTML </l></h1>
 - ~~<h1><l> Selamat Belajar HTML </h1></l>~~

Struktur halaman web

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

 `<h1>This is a Heading</h1>`
 `<p>This is a paragraph.</p>`

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

Heading Tag

❄ Heading Tags (levels 1-6)

- ❄ `<H1>` Largest Heading `</H1>`
- ❄ `<H2>` Major Subdivision `</H2>`
- ❄ `<H3>` Minor Subheading `</H3>`
- ❄ `<P>` Regular Text `</P>`
- ❄ `<H4>` `</H4>`
- ❄ `<H5>` `</H5>`
- ❄ `<H6>` `</H6>`

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_headings

Paragraph

`<P> ... </P>`

- ❄ Blank line inserted before the start of the paragraph
- ❄ One space between adjacent words regardless of the number of spaces in the source
- ❄ Extra spaces and lines are ignored

`<P>Learning HTML is a lot of fun!</P>`

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_paragraphs1

Style Element / Attribute

The `<style>` element and the **style=** attribute

- The **style=** attribute can be used on most tags
 - defines features for a single HTML element, e.g.

```
<p style="text-align: center">Center me.</p>
```

- The `<style>` element: `<style type="text/css"> ... </style>`
 - `<style>` tag always goes in the `<head>` section
 - defines style information for the whole HTML page
 - requires the **type="text/css"** attribute
 - more details to come in the description of CSS
 - to link to a separate CSS style sheet, use instead:

```
<link rel="stylesheet" type="text/css" href="string">
```

Alignment Text

Align headings and text with the ALIGN command

- ❄ left, center, and right justify a heading

`<H1 ALIGN=LEFT>Joe's home page</H1>`

`<H1 ALIGN=CENTER>Joe's home page</H1>`

`<H1 ALIGN=RIGHT>Joe's home page</H1>`

- ❄ left, center, and right justify a paragraph

`<P ALIGN=LEFT>imagine a BIG paragraph in here</P>`

`<P ALIGN=CENTER> imagine a BIG paragraph in here </P>`

`<P ALIGN=RIGHT> imagine a BIG paragraph in here </P>`

- ❄ note that the `</P>` is used here to end the paragraph and turn off the alignment

Line break & Dividing line

`
`

Forces a new line

`<P>Learning HTML is a lot of
fun!</P>`

Dividing lines for separating sections of page

`<HR/>`

will insert a standard line in your page

❄ other options include size, width, alignment, and no bevel

`<HR SIZE=25 WIDTH=150 ALIGN=CENTER NOSHADE>`

Formatted Text

- ❄ `` - Bold text
- ❄ `` - Important text
- ❄ `<i>` - Italic text
- ❄ `` - Emphasized text
- ❄ `<mark>` - Marked text
- ❄ `<small>` - Small text
- ❄ `` - Deleted text
- ❄ `<ins>` - Inserted
- ❄ `<sub>` - Subscript text
- ❄ `<sup>` - Superscript text

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_formatting_b

<blockquote>

- element defines a section that is quoted from another source

```
<p>Here is a quote from WWF's website:</p>  
<blockquote cite="http://www.worldwildlife.org/who/index.html">  
For 50 years, WWF has been protecting the future of nature.  
The world's leading conservation organization,  
WWF works in 100 countries and is supported by  
1.2 million members in the United States and  
close to 5 million globally.  
</blockquote>
```

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_formatting_blockquote

LIST :

 Unordered List and Ordered List

```
<ul>
  <li>Apple</li>
  <li>Pear</li>
  <li>Kiwi</li>
  <li><ul>
    <li>Big</li>
    <li>Small</li>
  </ul>
</li>
</ul>
```

```
<ol>
  <li>Apple</li>
  <li>Pear</li>
  <li>Kiwi</li>
  <li><ul>
    <li>Big</li>
    <li>Small</li>
  </ul>
</li>
</ol>
```

Unordered List

- `...`
 - List Item: surrounds each list item inside a list
 - used inside both `` and `` list types
- `...`
 - surrounds an **unordered list** – no numbering
 - `...` items each indented and bulleted
 - use styles (**style=** attribute) to change type of bullet:
 - CSS style: `list-style-type: string`
 - *string* can be: circle, disc, square
 - e.g. `<ul style="list-style-type: square"> ... `

Ordered List

- ` ... `
 - surrounds an **ordered list**
 - items are indented and numbered (or alphabetized)
 - use styles (**style=**) to change type of numbering:
 - CSS style: `list-style-type: string`
 - examples of *string*: decimal, lower-alpha, upper-roman
 - e.g. `<ol style="list-style-type: upper-latin"> ... `
 - the `start=` attribute determines first item's value
 - e.g. `<ol start="3">` - begin numbering at 3 (or c, or iii)
 - but this is deprecated, with no CSS replacement!

https://www.w3schools.com/html/html_lists.asp

Definition List

- `<dl>...</dl>`
 - definition list containing `<dt>` and `<dd>` items
 - `<dt>...</dt>` definition title
 - `<dd>...</dd>` definition description
- Example definition list containing two definitions:

`<dl>`

`<dt>Hacker</dt>`

`<dd>An expert or enthusiast of any kind.</dd>`

`<dt>Cracker</dt>`

`<dd>An intruder into computer systems.</dd>`

`</dl>`

Links - Hyperlinks

https://www.w3schools.com/html/html_links.asp

Link to

Other sites

Between your own pages

To e-mail

`hypertext`

`Kodak`

`John's Page`

`John's mail`

`John's Page`

Text Hyperlinks

Text links

- ❄ use `` to link to another HTML page
- ❄ HREF points to new page
- ❄ text between `<A...>` and `` will be highlighted as a link, e.g., “click here for syllabus” below will be highlighted

```
<A HREF=“http://cis519dhm.bus.umich.edu”>  
click here for syllabus  
</A>
```

Link dalam dokumen

- ❄ `<p> `
- ❄ `See also Chapter 4. </p>`
- ❄ `<p> <h2>Chapter 1</h2>`
- ❄ `<p>This chapter explains ba bla bla</p>`
- ❄ `<h2>Chapter 2</h2> <p>This chapter explains ba bla bla</p>`
- ❄ `<h2>Chapter 3</h2> <p>This chapter explains ba bla bla</p>`
- ❄ `<h2>Chapter 4</h2> <p>This chapter explains ba bla bla</p>`
- ❄ `<h2>Chapter 5</h2> <p>This chapter explains ba bla bla</p>`

- ❄ [See also Chapter 4.](#)
- ❄ **Chapter 1**
- ❄ This chapter explains ba bla bla
- ❄ **Chapter 2**
- ❄ This chapter explains ba bla bla
- ❄ **Chapter 3**
- ❄ This chapter explains ba bla bla
- ❄ **Chapter 4**
- ❄ This chapter explains ba bla bla
- ❄ **Chapter 5**
- ❄ This chapter explains ba bla bla

Link Email

- ❄ <p> This is a mail link:
- ❄
- ❄ Send Mail </p>
- ❄ <p>
- ❄ Note: Spaces between words should be replaced by %20 to ensure that the browser will display your text properly.
- ❄ </p>

- ❄ This is a mail link: [Send Mail](#)
- ❄ **Note:** Spaces between words should be replaced by %20 to **ensure** that the browser will display your text properly.

HTML Image

- <!DOCTYPE html>

<html>

<body>

<h2>Spectacular Mountain</h2>

</body>

</html>

HTML – Identify / Group Tag

Identifying and Grouping elements (e.g. for CSS)

- `<div>...</div>`
 - division or section
 - groups and identifies one or more block-elements
 - usually causes a line break before and after
`<div style="color:red">red</div>`
- `...`
 - groups and identifies in-line elements (e.g. words)
 - no visual change by itself (no line break)
 - used to apply styles to parts of a text line, e.g.
This `red` apple.

HTML Background

❄ Attribute of Body Tag

- ❄ bgcolor

❄ Types of Background:

- ❄ a background color and a text color that makes the text on the page easy to read.

- ❄ `<body bgcolor="#d0d0d0">`

- ❄ a background color and a text color that makes the text on the page difficult to read.

- ❄ `<body bgcolor="#ffffff" text="yellow">`

Background Color / Graphics

Backgrounds can be added to each document, **but are not readable on all browsers.**

Attributes of <BODY>

BGCOLOR="code" Specify color for background of the screen

BACKGROUND="path/file" Tiles the graphic in the file to fit the screen

<BODY BGCOLOR="green">

<BODY BGCOLOR="#00FF00">

<BODY BACKGROUND="BrickWall.gif">

❄ black is "000000" (i.e., no color)

❄ white is "ffffff"

Defining a table structure

- The first step to creating a table is to specify the table structure:
 - the number of rows and columns
 - the location of column headings
 - the placement of a table caption
- Once the table structure is in place, you can start entering data into the table.
- Graphical tables are enclosed within a two-sided **<table>** tag that identifies the start and ending of the table structure.
- Each row of the table is indicated using a two-sided **<tr>** (for table row).
- Within each table row, a two-sided **<td>** (for table data) tag indicates the presence of individual table cells.

Table syntax

```
<table>
  <tr>
    <td> First Cell </td>
    <td> Second Cell </td>
  </tr>
  <tr>
    <td> Third Cell </td>
    <td> Fourth Cell </td>
  </tr>
</table>
```

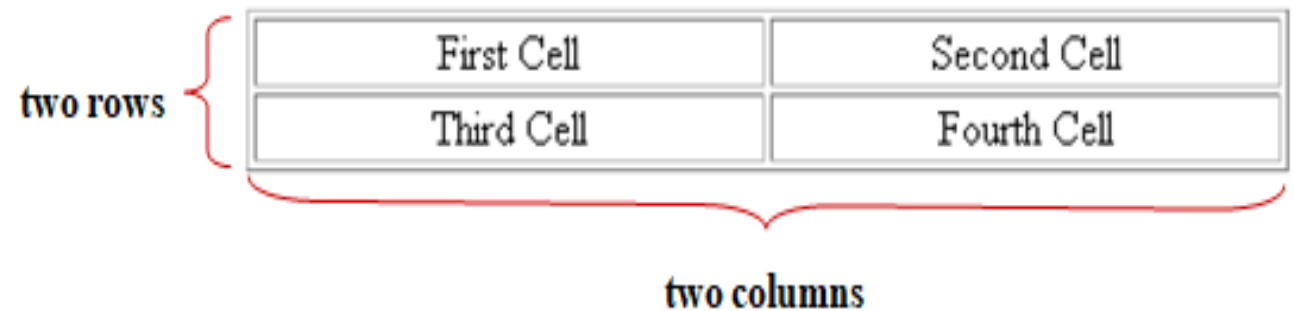


Table syntax

```
<table>
  <caption>Nama Anak</caption>
  <thead>
    <tr>
      <th>No</th>
      <th>Nama Lengkap</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td> 1</td>
      <td> Runy </td>
    </tr>
    <tr>
      <td> 2 </td>
      <td> Kalla </td>
    </tr>
  </tbody>
</table>
```

Nama Anak

No	Nama Lengkap
1	Runy
2	Kalla

Apa bedanya dengan table sebelumnya ?

Controlling Cell Spacing

- The **cellspacing** attribute controls the amount of space inserted between table cells.
- The syntax for specifying the cell space is:

<table cellspacing="value">

- **value** is the width of the interior borders in pixels
 - the default cell spacing is 2 pixels
- Cell spacing refers to the space between the cells.

Defining Cell Padding

- To control the space between the table text and the cell borders, add the **cellpadding** attribute to the table tag.
- The syntax for this attribute is:

<table cellpadding="value">

- **value** is the distance from the table text to the cell border, as measured in pixels
 - the default cell padding value is 1 pixel
- Cell padding refers to the space within the cells.

Tables with Different Cell Spacing Values

different cell spacing values

A	B
C	D

0 pixels

A	B
C	D

1 pixel

A	B
C	D

5 pixels

A	B
C	D

10 pixels

different cell padding values

A	B
C	D

0 pixels

A	B
C	D

1 pixel

A	B
C	D

5 pixels

A	B
C	D

10 pixels

Alignment Content Table

- By default, cell text is placed in the middle of the cell, aligned with the cell's left edge.
- By using the **align** and **valign** attributes, you can specify the text's horizontal and vertical placement.
- To align the text for a single column, you must apply the align attribute to every cell in that column.

Values of the Align and Valign Attributes

<code>align="left"</code> <code>valign="top"</code>	<code>align="left"</code> <code>valign="middle"</code>	<code>align="left"</code> <code>valign="bottom"</code>
<code>align="center"</code> <code>valign="top"</code>	<code>align="center"</code> <code>valign="middle"</code>	<code>align="center"</code> <code>valign="bottom"</code>
<code>align="right"</code> <code>valign="top"</code>	<code>align="right"</code> <code>valign="middle"</code>	<code>align="right"</code> <code>valign="bottom"</code>

Spanning Rows & Columns

- To merge several cells into one, you need to create a **spanning cell**.
- A spanning cell is a cell that occupies more than one row or column in a table.
- Spanning cells are created by inserting the **rowspan** and **colspan** attribute in a **<td>** or **<th>** tag.
- The syntax for these attributes is: **rowspan="value"**
colspan="value"
 - **value** is the number of rows or columns that the cell spans in the table

Spanning Cells

**This cell
spans two
columns and
two rows**

**This cell
spans three
rows**

Today's Opinion Poll Question		Political Party		
		Democrat	Republican	Independent
"Do you favor or oppose increasing the minimum wage?"	Favor	70%	35%	55%
	Oppose	25%	60%	30%
	Unsure	5%	5%	15%

**this cell
spans three
columns**

Table Rows Spanning

four table cells
in the first row

only three table
cells are required
for the second and
third rows

```
<table>
<tr>
  <td rowspan="3">1: This cell spans three rows</td>
  <td>2</td>
  <td>3</td>
  <td>4</td>
</tr>
<tr>
  <td>5</td>
  <td>6</td>
  <td>7</td>
</tr>
<tr>
  <td>8</td>
  <td>9</td>
  <td>10</td>
</tr>
</table>
```

HTML code

1: This cell spans three rows	2	3	4
	5	6	7
	8	9	10

resulting table

Adding Spanning Cells to a Table

```
<table border="5" cellspacing="0" cellpadding="4" width="500" align="right">
  <caption align="top"><b>Race Results</b></caption>
  <tr>
    <th colspan="2">Runner</th>
    <th>Time</th>
    <th>Origin</th>
  </tr>
  <tr>
    <td rowspan="3">Men</td>
    <td>1. Peter Teagan</td>
    <td align="right">2:12:34</td>
    <td>San Antonio, Texas</td>
  </tr>
  <tr>
    <td>2. Kyle Wills</td>
    <td align="right">2:13:05</td>
    <td>Billings, Montana</td>
  </tr>
  <tr>
    <td>3. Jason Wu</td>
    <td align="right">2:14:28</td>
    <td>Cutler, Colorado</td>
  </tr>
  <tr>
    <td rowspan="3">Women</td>
    <td>1. Laura Blake</td>
    <td align="right">2:28:21</td>
    <td>Park City, Colorado</td>
  </tr>
  <tr>
    <td>2. Kathy Lasker</td>
    <td align="right">2:30:11</td>
    <td>Chicago, Illinois</td>
  </tr>
  <tr>
    <td>3. Lisa Peterson</td>
    <td align="right">2:31:14</td>
    <td>Seattle, Washington</td>
  </tr>
</table>
```

	Runner	Time	Origin
Men	1. Peter Teagan	2:12:34	San Antonio, Texas
	2. Kyle Wills	2:13:05	Billings, Montana
	3. Jason Wu	2:14:28	Cutler, Colorado
Women	1. Laura Blake	2:28:21	Park City, Colorado
	2. Kathy Lasker	2:30:11	Chicago, Illinois
	3. Lisa Peterson	2:31:14	Seattle, Washington

Another Example of Spanning Cells

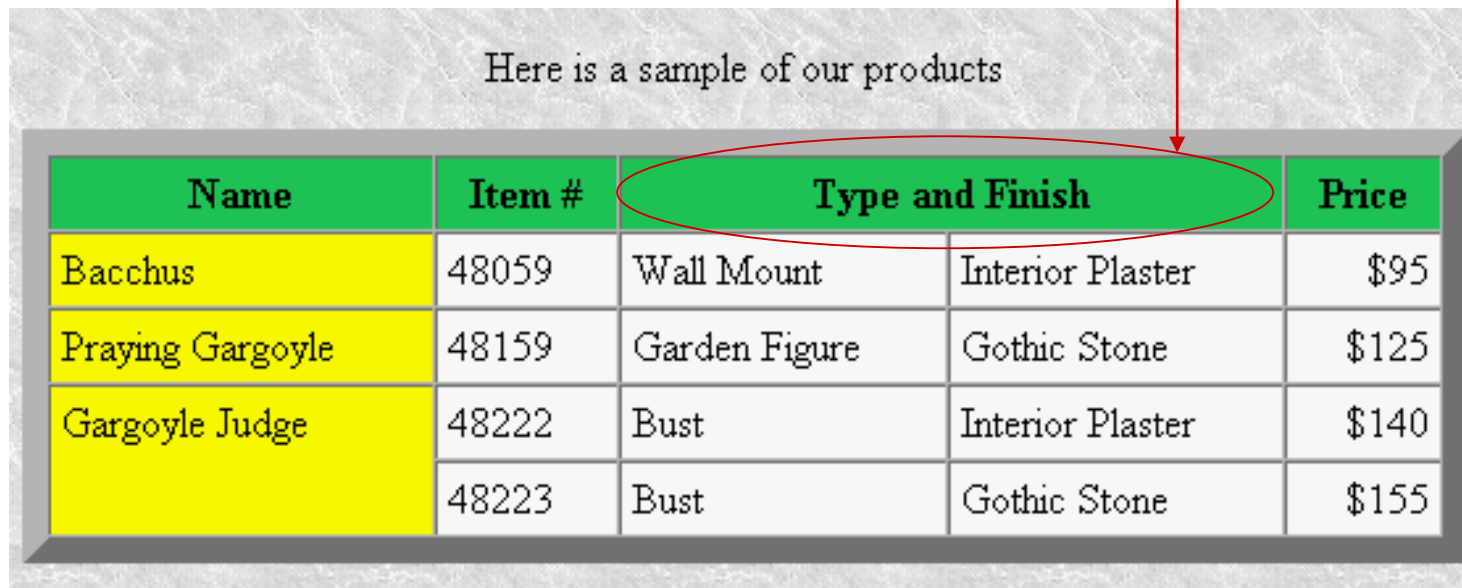
```
<TR>
  <TD BGCOLOR=YELLOW ROWSPAN=2>Gargoyle Judge</TD>
  <TD WIDTH=60>48222</TD>
  <TD>Bust</TD>
  <TD>Interior Plaster</TD>
  <TD ALIGN=RIGHT WIDTH=50>$140</TD>
</TR>
<TR>
  <TD WIDTH=60>48223</TD>
  <TD>Bust</TD>
  <TD>Gothic Stone</TD>
  <TD ALIGN=RIGHT WIDTH=50>$155</TD>
</TR>
</TABLE>
```

Here is a sample of our products

Name	Item #	Type	Finish	Price
Bacchus	48059	Wall Mount	Interior Plaster	\$95
Praying Gargoyle	48159	Garden Figure	Gothic Stone	\$125
Gargoyle Judge	48222	Bust	Interior Plaster	\$140
	48223	Bust	Gothic Stone	\$155

Another Example of Spanning Cells

```
<TABLE BORDER=10 CELLSPACING=0 CELLPADDING=4 ALIGN=CENTER WIDTH=550  
  BGCOLOR=WHITE>  
<CAPTION ALIGN=TOP>Here is a sample of our products</CAPTION>  
<TR BGCOLOR="#33CC66">  
  <TH>Name</TH>  
  <TH WIDTH=60>Item #</TH>  
  <TH COLSPAN=2>Type and Finish</TH> ←  
  <TH WIDTH=50>Price</TH>  
</TR>
```



Name	Item #	Type and Finish		Price
Bacchus	48059	Wall Mount	Interior Plaster	\$95
Praying Gargoyle	48159	Garden Figure	Gothic Stone	\$125
Gargoyle Judge	48222	Bust	Interior Plaster	\$140
	48223	Bust	Gothic Stone	\$155