Introduction to HTML

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Definitions

HTML: **HyperText Markup Language** – The Language of Web Pages on the World Wide Web.

HTML is a text formatting language.

URL: Uniform Resource Locator.

Browser: A software program which is used to show webpages.

WWW: A collection of websites or web pages stored in web servers.Building blocks of webpages connected by hyperlinks and HTTP

- "Normal text" surrounded by bracketed tags that tell browsers how to display web pages
- Pages end with ".htm" or ".html"
- Hypertext Markup Language, a standardized system for tagging text files to achieve font, colour, graphic, and hyperlink effects on World Wide Web pages.

Tags

- Codes enclosed in brackets
- Usually paired
 - <TITLE>My Web Page</TITLE>
- Not case sensitive

But preferably upper case is used

Creating a Basic Starting Document

```
<HTML>
<HEAD>
<TITLE>Alva's Institute of Engineering & Technology</TITLE>
</HEAD>
<BODY>
 This is what is displayed on webpage
</BODY>
</HTML>
```

Creating a Basic Starting Document

- The HEAD of your document point to above window part. The TITLE of your document appears in the **very top line** of the user's browser.
- The text in your TITLE should be as descriptive as possible because this is what many search engines, on the internet, use for indexing your site.

Setting Document Properties

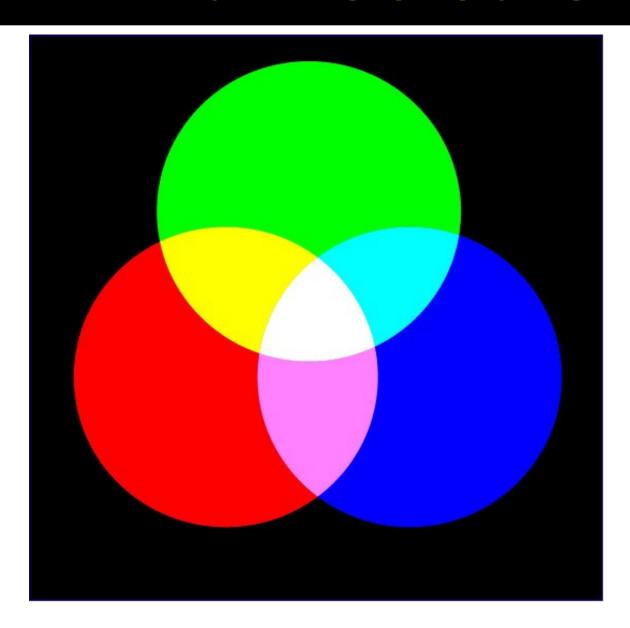
Document properties are controlled by attributes of the BODY element. For example, there are color settings for the background color of the page, the document's text and different states of links.

<BODY BGCOLOR="#FFFFFF" text=#000000></BODY>

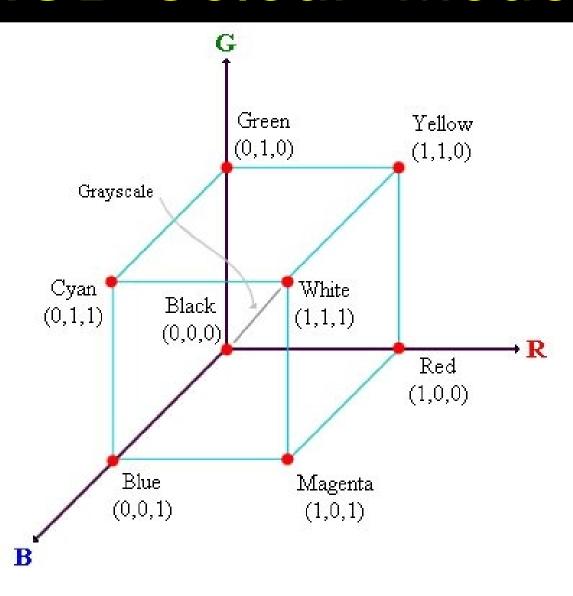
Color Codes

 Colors are set using "RGB" color codes, which are, represented as hexadecimal values. Each 2-digit section of the code represents the amount, in sequence, of red, green or blue that forms the color. For example, a RGB value with 00 as the first two digits has no red in the color.

Main Colours



RGB Colour Model



16 Basic Colors

Color Name	RGB Triplet	Hexadecimal	Color Name	RGB Triplet	Hexadecimal
Aqua	(0,255,255)	00FFFF	Navy	(0,0,128)	080000
Black	(0,0,0)	000000	Olive	(128,128,0)	808000
Blue	(0,0,255)	0000FF	Purple	(128,0,128)	800080
Fuchsia	(255,0,255)	FF00FF	Red	(255,0,0)	FF0000
Gray	(128,128,128)	808080	Silver	(192,192,192)	C0C0C0
Green	(0,128,0)	008000	Teal	(0,128,128)	080800
Lime	(0,255,0)	00FF00	White	(255,255,255)	FFFFFF
Maroon	(128,0,0)	800000	Yellow	(255,255,0)	FFFF00

Color Codes

- 1. WHITE
- 2. BLACK
- 3. RED
- 4. GREEN
- 5. BLUE
- 6. MAGENTA
- 7. CYAN
- 8. YELLOW
- 9. AQUAMARINE
- 10. BAKER'S CHOCOLATE
- 11. VIOLET
- 12. BRASS
- 13. COPPER
- 14. PINK
- 15. ORANGE

- 1. #FFFFFF
- 2. #000000
- 3. #FF0000
- 4. #00FF00
- 5. #0000FF
- 6. #FF**00**FF
- 7. #00FFFF
- 8. #FFFF00
- 9. #70DB93
- 10. #5C3317
- 11. #9F5F9F
- 12. #B5A642
- 13. #B87333
- 14. #FF6EC7
- 15. #FF7F00

The Body Element

- The BODY element of a web page is an important element in regards to the page's appearance. Here are the attributes of the BODY tag to control all the levels:
 - TEXT="#RRGGBB" to change the color of all the text on the page (full page text color.)
- This element contains information about the page's background color, the background image, as well as the text and link colors.

Background Color

- It is very common to see web pages with their background color set to white or some other colors.
- To set your document's background color, you need to edit the <BODY> element by adding the BGCOLOR attribute. The following example will display a document with a white background color:

<BODY BGCOLOR="#FFFFFF"></BODY>

TEXT Color

The TEXT attribute is used to control the color of all the normal text in the document. The default color for text is black. The TEXT attribute would be added as follows:

<BODY BGCOLOR="#FFFFFF" TEXT="#FF0000"></BODY>

In this example the document's page color is white and the text would be red.

Using Image Background

- The BODY element also gives you ability of setting an image as the document's background.
- An example of a background image's HTML code is as follows:

```
<BODY BACKGROUND="hi.gif" BGCOLOR="#FFFFFF"></BODY>
```

Headings, <Hx> </Hx>

- Inside the **BODY** element, heading elements **H1** through **H6** are generally used for major divisions of the document. Headings are permitted to appear in any order, but you will obtain the best results when your documents are displayed in a browser if you follow these guidelines:
- 1. **H1**: should be used as the highest level of heading, **H2** as the next highest, and so forth.
- 2. You should not skip heading levels: e.g., an **H3** should not appear after an **H1**, unless there is an **H2** between them.

Headings, <Hx> </Hx>

```
<HTML>
<HEAD>
<TITLE> Example Page</TITLE>
</HEAD>
<BODY>
<H1> Heading 1 </H1>
<H2> Heading 2 </H2>
<H3> Heading 3 </H3>
<H4> Heading 4 </H4>
<H5> Heading 5 </H5>
<H6> Heading 6 </H6>
</BODY>
</HTMI >
```

Heading 1
Heading 2
Heading 3
Heading 4
Heading 5
Heading 6

Paragraphs, <P> </P>

Paragraphs allow you to add text to a document in such a way that it will automatically adjust the end of line to suite the window size of the browser in which it is being displayed. Each line of text will stretch the entire length of the window.

Paragraphs, <P> </P>

```
<HTML><HEAD>
<TITLE> Example Page</TITLE>
</HEAD>
<BODY></H1> Heading 1 </H1>
<P> Paragraph 1, ....</P>
<H2> Heading 2 </H2>
<P> Paragraph 2, ....</P>
<H3> Heading 3 </H3>
<P> Paragraph 3, ....</P>
<H4> Heading 4 </H4>
<P> Paragraph 4, ....</P>
<H5> Heading 5 </H5>
<P> Paragraph 5, ....</P>
<H6> Heading 6</H6>
<P> Paragraph 6, ....</P>
</BODY></HTML>
```

Heading 1

Paragraph 1,....

Heading 2

Paragraph 2,....

Heading 3

Paragraph 3,....

Heading 4

Paragraph 4,....

Heading 5

Paragraph 5,....

Heading 6

Paragraph 6,....

Break,

- Line breaks allow you to decide where the text will break on a line or continue to the end of the window.
- A
 is an empty Element, meaning that it may contain attributes but it does not contain content.
- The
 element does not have a closing tag.

Break,


```
<HTML>
<HEAD>
<TITLE> Example Page</TITLE>
</HEAD>
<BODY>
<H1> Heading 1 </H1>
<P>Paragraph 1, <BR>
Line 2 <BR> Line 3 <BR>....
</P>
</BODY>
</HTML>
```

Heading 1

Paragraph 1,....

Line 2

Line 3

. . . .

Horizontal Rule, <HR>

- The <HR> element causes the browser to display a horizontal line (rule) in your document.
- <HR> does not use a closing tag,

Horizontal Rule, <HR>

Attribute	Description	Default Value
SIZE	Height of the rule in pixels	2 pixels
WIDTH	Width of the rule in pixels or percentage of screen width	100%
NOSHADE	Draw the rule with a flat look instead of a 3D look	Not set (3D look)
ALIGN	Aligns the line (Left, Center, Right)	Center
COLOR	Sets a color for the rule (IE 3.0 or later)	Not set

Horizontal Rule, <HR>

```
<HTMI>
<HEAD>
<TITLE> Example Page</TITLE>
</HFAD>
<BODY>
<H1> Heading 1 </H1>
<P>Paragraph 1, <BR>
Line 2 <BR>
<HR>Line 3 <BR>
</P>
</BODY>
</HTML>
```

Heading 1

Paragraph 1,....

Line 2

Line 3

Bold, Italic and other Character Formatting Elements

- Two sizes bigger/FONT>
- The size attribute can be set as an absolute value from 1 to 7 or as a relative value using the "+" or "-" sign. Normal text size is 3 (from -2 to +4).
- Bold
- <U> Underline </U>
- Color = "#RRGGBB" The COLOR attribute of the FONT element. E.g., this text has color
- <PRE> Preformatted </PRE> Text enclosed by PRE tags is displayed in a mono-spaced font. Spaces and line breaks are supported without additional elements or special characters.

Bold, Italic and other Character Formatting Elements

- Emphasis Browsers usually display this as italics.
- **STRONG > STRONG ** Browsers display this as bold.
- <TT> TELETYPE </TT> Text is displayed in a mono-spaced font. A typewriter text, e.g. fixed-width font.
- <CITE> Citation </CITE> represents a document citation (italics). For titles of books, films, etc. Typically displayed in italics. (A Beginner's Guide to HTML)

Bold, Italic and other Character Formatting Elements

```
<P> <FONT SIZE="+1"> One
  Size Larger </FONT> - Normal
<FONT SIZE="-1"> One Size
  Smaller </FONT> <BR>
<B> Bold</B> - <I> italics</I> -
  <U> Underlined </U> -
<FONT COLOR="#FF0000">
  Colored </FONT> <BR>
<EM> Emphasized</EM> -
  <STRONG> Strong
  </STRONG> - <TT> Tele Type
  </TT> <BR>
```

```
One Size Larger - Normal – One
Size Smaller
Bold - italics - <u>Underlined</u> -
Colored
Emphasized - Strong - Tele
Type
```

Alignment

- Some elements have attributes for alignment (ALIGN) e.g. Headings, Paragraphs and Horizontal Rules.
- The Three alignment values are: LEFT, RIGHT, CENTER.
- <CENTER></CENTER> Will center elements.

Alignment

- **DIV ALIGN="value"></DIV>** Represents a division in the document and can contain most other element type. The alignment attribute of the DIV element is well supported.
- <TABLE></TABLE> Inside a TABLE, alignment can be set for each individual cell.

Special Characters & Symbols

- These Characters are recognized in HTML as they begin with an ampersand and end with with a semi-colon e.g. **&value**; The value will either be an entity name or a standard ASCII character number. They are called **escape sequences**.
- The next table represents some of the more commonly used special characters. For a comprehensive listing, visit the W3C's section on special characters at:

http://www.w3.org/MarkUp/HTMLPlus/htmlplus_13.html

Special Characters & Symbols

Special Character	Entity Name	Special Character	Entity Name
Ampersand	& &	Greater-than sign	> >
Asterisk	∗	Less-than sign	< <
Cent sign	¢ ¢	Non-breaking space	
Copyright	© ©	Quotation mark	" "
Fraction one qtr	¼	Registration mark	® ®
Fraction one half	½	Trademark sign	™

Special Characters & Symbols

- Additional escape sequences support accented characters, such as:
- ö
 - a lowercase o with an umlaut: ö
- ñ
 - a lowercase n with a tilde: ñ
- È
 - an uppercase E with a grave accent: È
- NOTE: <u>Unlike the rest of HTML, the escape</u> <u>sequences are case sensitive</u>. You cannot, for <u>instance, use < instead of <</u>.

Additional Character Formatting Elements

- <STRIKE> strike-through text</strike>
 DEL is used for STRIKE at the latest
 browsers
- <BIG> places text in a big font</BIG>
- <SMALL> places text in a small
 font/SMALL>
- **SUB>** places text in subscript position
- **SUP>** places text in superscript style position

Example

<P><STRIKE> strike-through text </STRIKE></BR>

<BIG>places text in a big font </BIG>

<SMALL> places text in a small font</SMALL>

_{places text in subscript position}

Normal

^{places text in superscript style position}
 </P>

List Elements

- HTML supplies several list elements. Most list elements are composed of one or more (List Item) elements.
- UL: Unordered List. Items in this list start with a list mark such as a bullet. Browsers will usually change the list mark in nested lists.

```
<UL><LI> List item ...</LI></UL>List item ...
```

List item ...

- You have the choice of three bullet types: disc(default), circle, square.
- These are controlled in Netscape Navigator by the "TYPE" attribute for the element.

```
<UL TYPE="square">
<LI> List item ...</LI>
<LI> List item ...</LI>
<LI> List item ...</LI>
</UL>
```

- List item ...
- List item ...
- List item ...

OL: Ordered List. Items in this list are numbered automatically by the browser.

```
<OL>
<LI> List item ...</LI>
<LI> List item ...</LI>
<LI> List item ...</LI>
</OL>
1. List item ...
2. List item ...
3. List item
```

You have the choice of setting the TYPE Attribute to one of five numbering styles.

TYPE	Numbering Styles	
1	Arabic numbers	1,2,3,
a	Lower alpha	a, b, c,
Α	Upper alpha	A, B, C,
i	Lower roman	i, ii, iii,
I	Upper roman	I, II, III,

You can specify a starting number for an ordered list.

```
<OL TYPE ="i">
<LI> List item ...</LI>
<LI> List item ...</LI>
</OL>
<P> text ....</P>
<OL TYPE="i" START="3">
<LI> List item ...</LI>
</OL>
```

```
List item ...
List item ...
 Text ....
List item ...
```

DL: Definition List. This kind of list is different from the others. Each item in a DL consists of one or more **Definition Terms (DT elements)**, followed by one or more **Definition Description (DD elements)**.

Nesting Lists

You can nest lists by inserting a UL, OL, etc., inside a list item (LI).

```
EXample
<UL TYPE = "square">
<LI> List item ...</LI>
<LI> List item ...
<OL TYPE="i" START="3">
<LI> List item ...</LI>
</OL>
</LI>
<LI> List item ...</LI>
</UL>
```

```
■ List item ...
■ List item ....
   iii. List item ...
   iv. List item ...
   v. List item ...
   vi. List item ...
  vii. List item ...
■ List item ....
```

What will be the output?

```
<H1 ALIGN="CENTER">SAFETY TIPS FOR
CANOEISTS</H1>
<OL TYPE="a" START="2">
<LI>Be able to swim </LI>
<LI>Wear a life jacket at all times </LI>
<LI>Don't stand up or move around. If canoe tips,
   \langle IJI \rangle
   <LI>Hang on to the canoe </LI>
   <LI>Use the canoe for support and </LI>
    <LI>Swim to shore
   </UL> </LI>
<LI>Don't overexert yourself </LI>
<LI>Use a bow light at night </LI>
</OI>
```

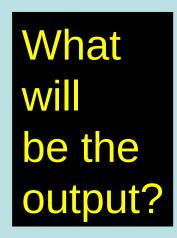
The output....

SAFETY TIPS FOR CANOEISTS

- b. Be able to swim
- c. Wear a life jacket at all times
- d. Don't stand up or move around. If canoe tips,
 - o Hang on to the canoe
 - o Use the canoe for support and
 - o Swim to shore
- e. Don't overexert yourself
- f. Use a bow light at night

```
<H1 ALIGN="CENTER">SAFETY TIPS FOR
CANOEISTS</H1>
```

- <OL TYPE="a" START="2">
- Be able to swim
- Wear a life jacket at all times
- Don't stand up or move around. If canoe tips,
-
- Hang on to the canoe
- Use the canoe for support
- <OL type="I" start="4">
- Be careful
- Do not look around
-
- Swim to shore
-
- Don't overexert yourself
- Use a bow light at night
-



The output....

SAFETY TIPS FOR CANOEISTS

- b. Be able to swim
- c. Wear a life jacket at all times
- d. Don't stand up or move around. If canoe tips,
 - o Hang on to the canoe
 - o Use the canoe for support
 - IV. Be careful
 - V. Do not look around
 - o Swim to shore
- e. Don't overexert yourself
- f. Use a bow light at night

Images

- This element defines a graphic image on the page.
- Image File (SRC:source): This value will be a URL (location of the image) E.g.

or /dir/file.txt.

- Alternate Text (ALT): This is a text field that describes an image or acts as a label. It is displayed when they position the cursor over a graphic image.
- Alignment (ALIGN): This allows you to align the image on your page.

Images

- Width (WIDTH): is the width of the image in pixels.
- Height (HEIGHT): is the height of the image in pixels.
- Border (BORDER): is for a border around the image, specified in pixels.
- HSPACE: is for Horizontal Space on both sides of the image specified in pixels. A setting of 5 will put 5 pixels of invisible space on both sides of the image.
- VSPACE: is for Vertical Space on top and bottom of the image specified in pixels. A setting of 5 will put 5 pixels of invisible space above and bellow the image.

Some Examples on images

- 1)
- 2)
- 3)
- 4)
- 5) < IMG SRC =" jordan.gif" align="left"> blast blast blast blast

HOW TO MAKE A LINK

- 1) The tags used to produce links are the <A> and . The <A> tells where the link should start and the indicates where the link ends. Everything between these two will work as a link.
- 2) The example below shows how to make the word Here work as a link to yahoo.

Click here to go to yahoo.

LINK, VLINK, and ALINK

- These attributes control the colors of the different link states:
- 1. LINK initial appearance default = Blue.
- 2. VLINK visited link default = Purple.
- 3. ALINK –active link being clicked–default= Yellow.
- The Format for setting these attributes is:

ALINK="FFFF00"> </BODY>

```
<BODY BGCOLOR="#FFFFF" TEXT="#FF0000"
LINK="#0000FF"
VLINK="#FF00FF"
```

More on LINKs

```
<body LINK="#C0C0C0" VLINK="#808080"
ALINK="#FF0000">
```

LINK - standard link - to a page the visitor hasn't been to yet. (standard color is blue - #0000FF).
 VLINK - visited link - to a page the visitor has been to before. (standard color is purple - #800080).
 ALINK - active link - the color of the link when the mouse is on it. (standard color is red - #FF0000).

If the programmer what to change the color

 Click here to go to yahoo.

Internal Links

- Internal Links: Links can also be created inside large documents to simplify navigation. Today's world wants to be able to get the information quickly. Internal links can help you meet these goals.
- 1. Select some text at a place in the document that you would like to create a link to, then add an anchor to link to like this:
 -
 - The Name attribute of an anchor element specifies a location in the document that we link to shortly. All NAME attributes in a document must be unique.
- Next select the text that you would like to create as a link to the location created above.
 - Go To Book Mark

Tables

- The <TABLE></TABLE> element has four subelements:
- 1. Table Row<TR></TR>.
- 2. Table Header <TH></TH>.
- 3. Table Data <TD></TD>.
- 4. Caption <CAPTION></CAPTION>.
- The table row elements usually contain table header elements or table data elements.

Tables

```
 Column 1 header 
 Column 2 header 
 Row1, Col1 
 Row1, Col2 
 Row2, Col1 
 Row2, Col2
```

Tables

Column 1 Header	Column 2 Header
Row1, Col1	Row1, Col2
Row2, Col1	Row2, Col2

Tables Attributes

- **BGColor:** Some browsers support background colors in a table.
- Width: you can specify the table width as an absolute number of pixels or a percentage of the document width. You can set the width for the table cells as well.
- **Border:** You can choose a numerical value for the border width, which specifies the border in pixels.
- CellSpacing: Cell Spacing represents the space between cells and is specified in pixels.

Table Attributes

- CellPadding: Cell Padding is the space between the cell border and the cell contents and is specified in pixels.
- Align: tables can have left, right, or center alignment.
- **Background:** Background Image, will be titled in IE3.0 and above.
- BorderColor, BorderColorDark.

Table Caption

A table caption allows you to specify a line of text that will appear centered above or bellow the table.

<TABLE BORDER=1 CELLPADDING=2>

<CAPTION ALIGN="BOTTOM"> Label For My Table </CAPTION>

The Caption element has one attribute ALIGN that can be either TOP (Above the table) or BOTTOM (below the table).

Table Header

Table Data cells are represented by the TD element. Cells can also be TH (Table Header) elements which results in the contents of the table header cells appearing centered and in bold text.

Table Data and Table Header Attributes

- Colspan: Specifies how many cell columns of the table this cell should span.
- Rowspan: Specifies how many cell rows of the table this cell should span.
- Align: cell data can have left, right, or center alignment.
- Valign: cell data can have top, middle, or bottom alignment.
- Width: you can specify the width as an absolute number of pixels or a percentage of the document width.
- Height: You can specify the height as an absolute number of pixels or a percentage of the document height.

Basic Table Code

```
<TABLE BORDER=1 width=50%>
<CAPTION> <h1>Spare Parts <h1> </Caption>
<TR><TH>Stock Number</TH><TH>Description</TH><TH>List Price</TH></TR>
<TR><TD bgcolor=red>3476-AB</TD><TD>76mm Socket</TD><TD>45.00</TD></TR>
<TR><TD >3478-AB</TD><TD><font color=blue>78mm Socket</font></TD><TD><TD>47.50</TD></TR>
<TR><TD>3480-AB</TD><TD>80mm Socket</TD><TD>50.00</TD></TR>
</TABLE>
```

Spare Parts

Stock Number	Description	List Price
3476-AB	76mm Socket	45.00
3478-AB	78mm Socket	47.50
3480-AB	80mm Socket	50.00

Table Data and Table Header Attributes

```
<Table border=1 cellpadding =2>
  Column 1 Header 
Column 2 Header
  Row 1 Col 1 
 Row 2 Col 1
 Row 2 Col2 
  Row 3 Col2
```

Table Data and Table Header Attributes

Column 1 Header	Column 2 Header	
Row 1 Col 1		
Row 2 Col 1	Row 2 Col 2	
	Row 3 Col 2	

Special Things to Note

- TH, TD and TR should always have end tags.
 Although the end tags are formally optional, many browsers will mess up the formatting of the table if you omit the end tags. In particular, you should always use end tags if you have a TABLE within a TABLE -- in this situation, the table parser gets hopelessly confused if you don't close your TH, TD and TR elements.
- A default TABLE has no borders
 By default, tables are drawn without border lines. You need the BORDER attribute to draw the lines.
- By default, a table is flush with the left margin
 TABLEs are plopped over on the left margin. If you want
 centered tables, You can either: place the table inside a DIV
 element with attribute ALIGN="center".
 Most current browsers also supports table alignment, using the
 ALIGN attribute. Allowed values are "left", "right", or "center", for
 example: <TABLE ALIGN="left">. The values "left" and "right"
 float the table to the left or right of the page, with text flow
 allowed around the table. This is entirely equivalent to IMG
 alignment

What will be the output?

```
<TABLE BORDER width="750">
<TR> <TD colspan="4" align="center">Page
 Banner</TD></TR>
<TR> <TD rowspan="2" width="25%">Nav
 Links</TD><TD colspan="2">Feature
 Article</TD> <TD rowspan="2"
 width="25%">Linked Ads</TD></TR>
 <TR><TD width="25%">News Column 1 </TD>
 <TD width="25%"><News Column 2 </TD></TR>
```

</TABLE>

The Output

