

# Podstawy Informatyki

**PRZEMYSŁAW SOŁTAN**

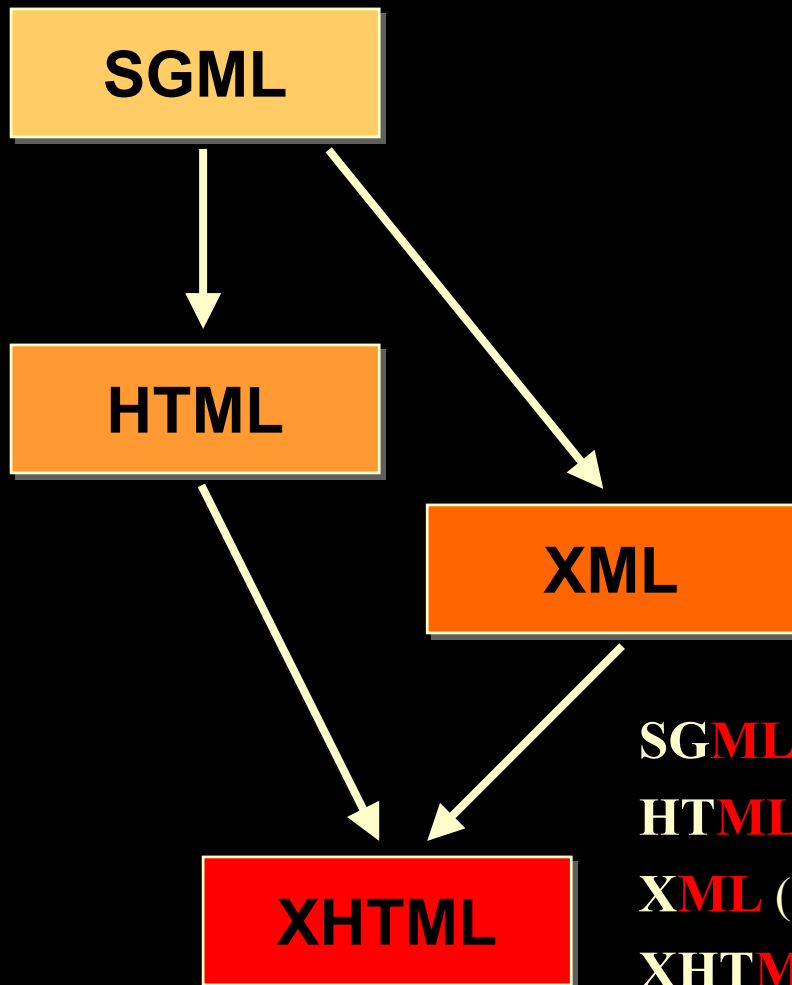
email: [kerk@moskit.ie.tu.koszalin.pl](mailto:kerk@moskit.ie.tu.koszalin.pl)





# HTML

# ..ML - Markup Language



**SGML** (Standard Generalized Markup Language)

**HTML** (HyperText Markup Language)

**XML** (Extensible Markup Language)

**XHTML** (Extensible HTML)

# Budowa znaczników

**<nazwa>** . . . **</nazwa>**

Znacznik początkowy      Treść      Znacznik końcowy

**<nazwa** **atrybut** = **"wartość"** **>**

Nazwa atrybutu      Wartość

. . .  
**</nazwa>**

HTML nie wymusza zamykanie wartości atrybutów w cudzysłowy, czy w apostrofy, ale jest to wskazane.

# Zagnieżdżanie znaczników

`<i><b>...</i></b>`

`<i><b>...</b></i>`

- **Zalecenie:** Nie powinno się zamykać elementu zewnętrznego, dopóki nie zostanie zamknięty element wewnętrzny

# Wielkość liter nazw znaczników

<html> . . . </HTML>

<html> . . . </html>

- **Zalecenie:** Znacznik zamykający powinien mieć taką samą nazwę jak znacznik otwierający (z uwzględnieniem wielkości liter)

# Znacznik otwierający i zamykający

`<znacznik>`

Stosowanie tylko znaczników początkowych jest dopuszczalne, ale zostało zabronione w XML'u

`<znacznik></znacznik>`

`<znacznik/>`

- Walidacja dokumentów
- Wzrost wydajności przetwarzania
- Mniejszy silnik (engine) przeglądarek do obsługi XML (w porównaniu z HTML)

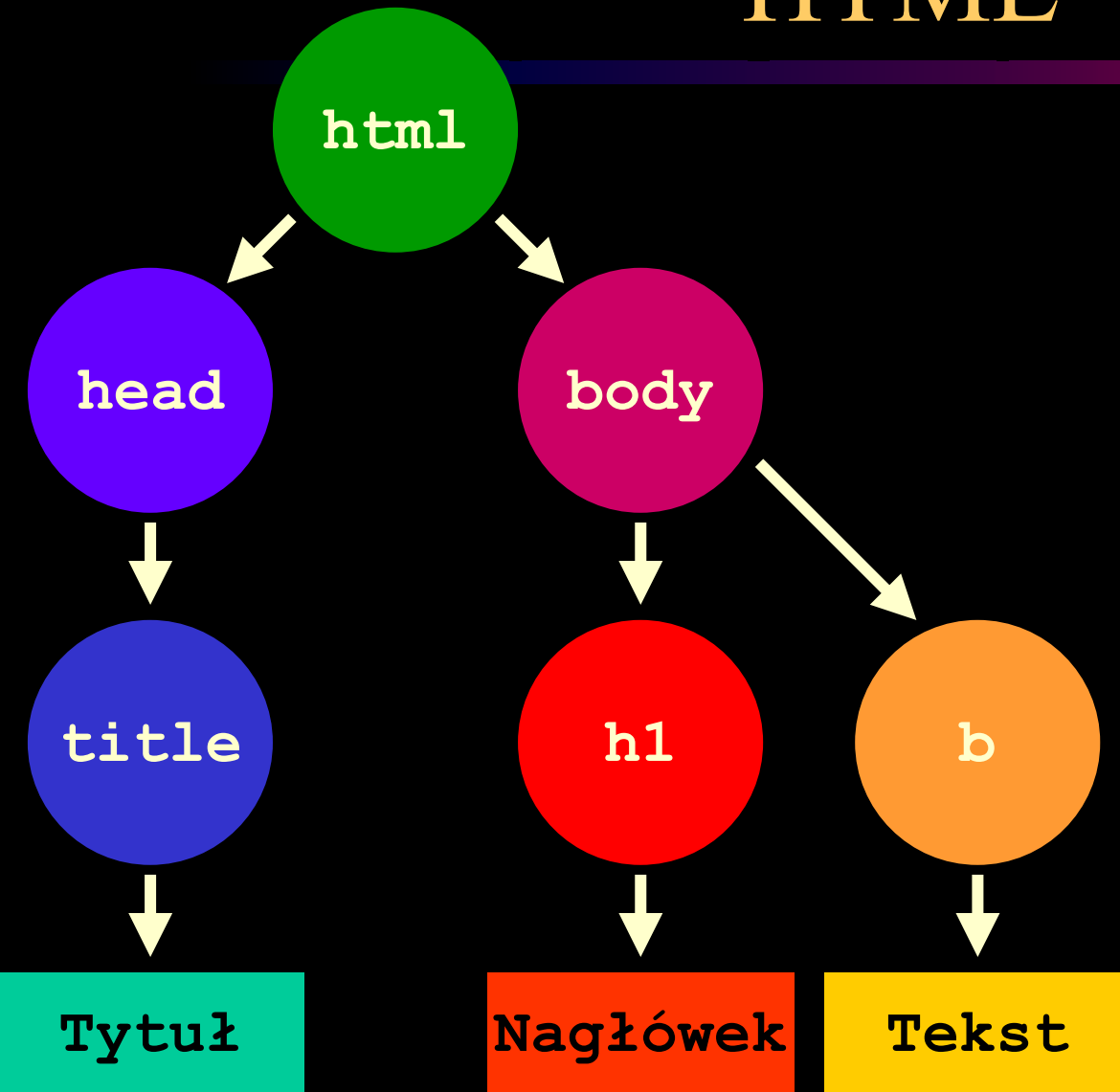
# Dodawanie komentarzy

`<!--tekst komentarza-->`

- Brak możliwości zagnieżdżania komentarzy

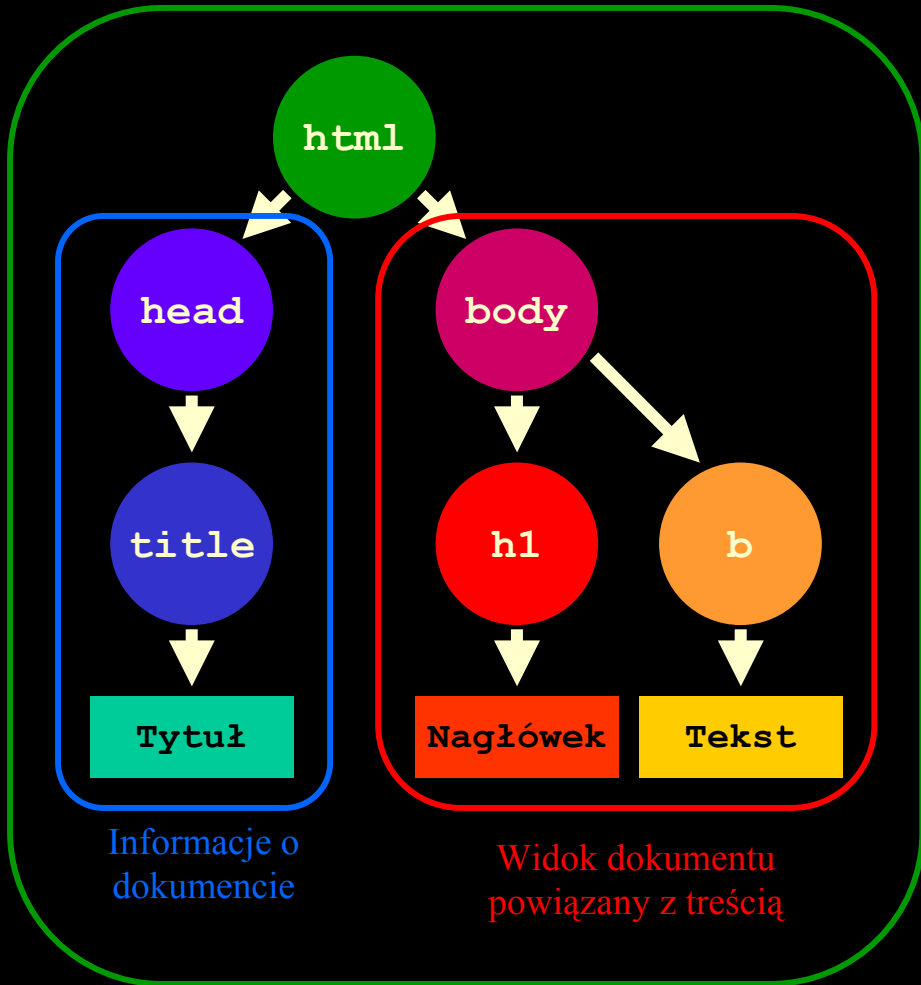


# HTML

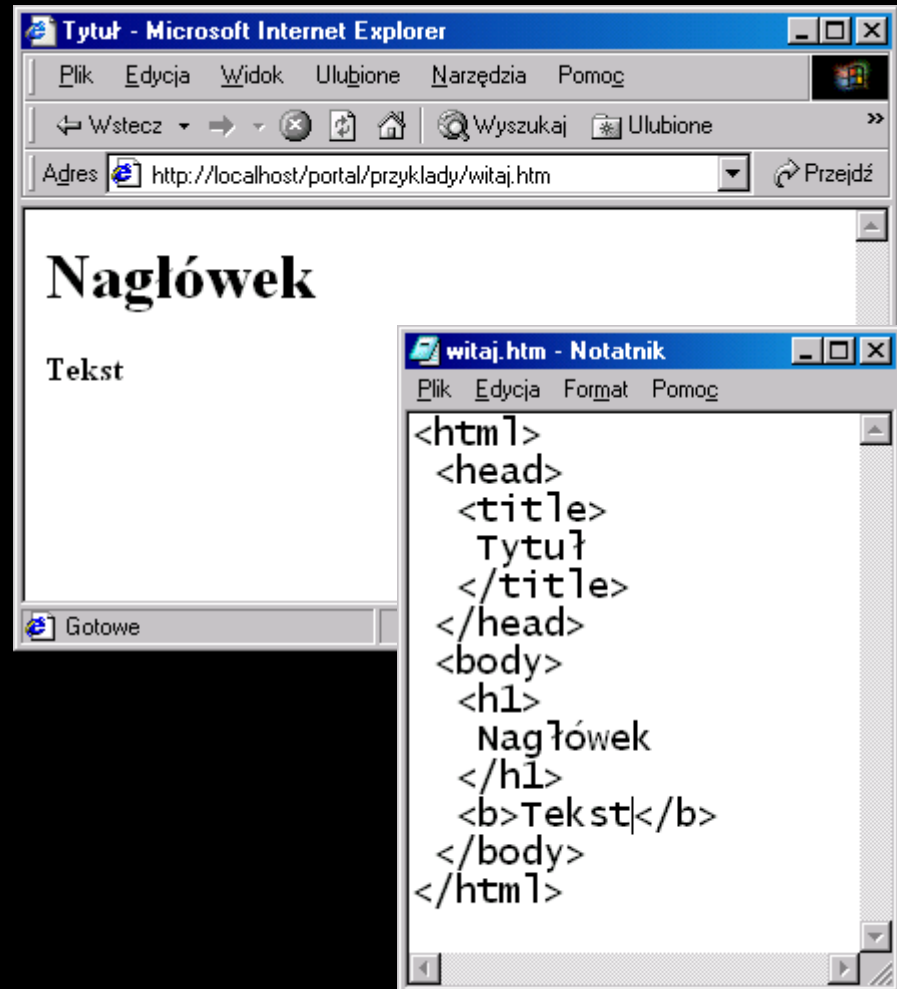


```
<html>  
  <head>  
    <title>  
      Tytuł  
    </title>  
  </head>  
  <body>  
    <h1>  
      Nagłówek  
    </h1>  
    <b>Tekst</b>  
  </body>  
</html>
```

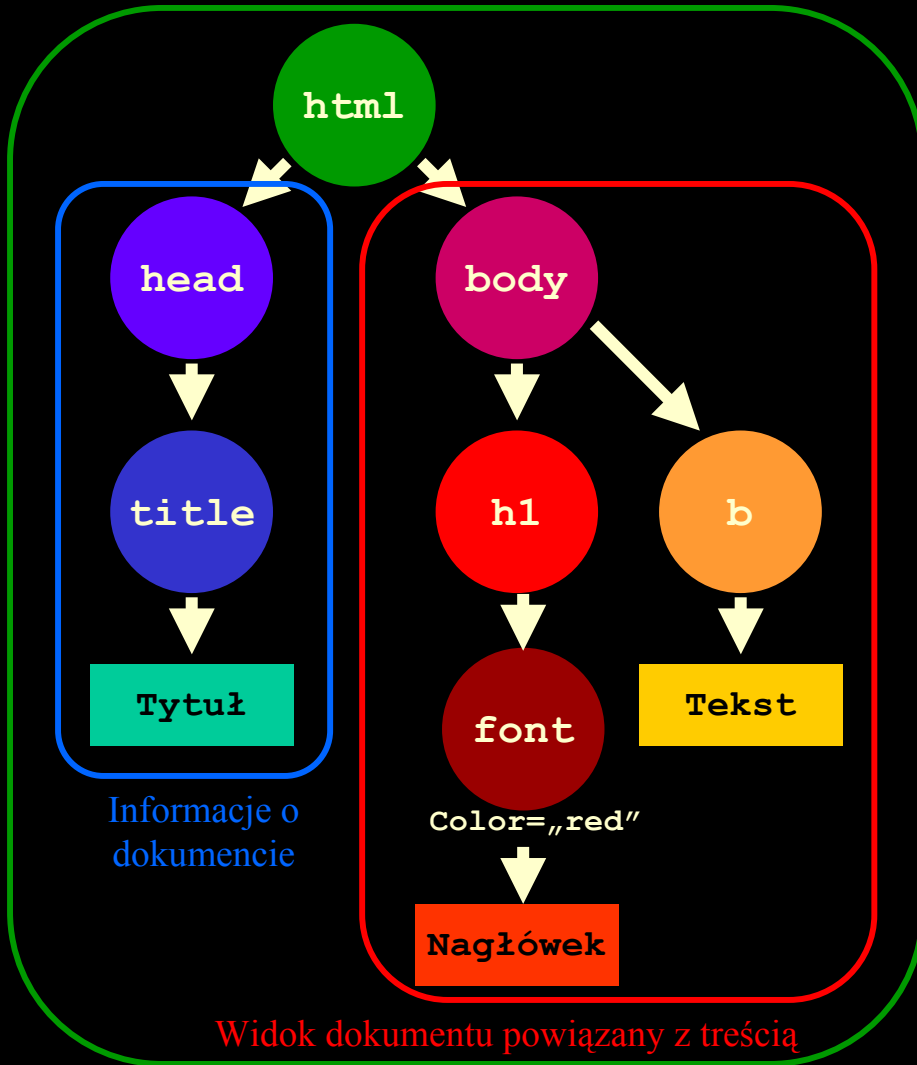
# HTML



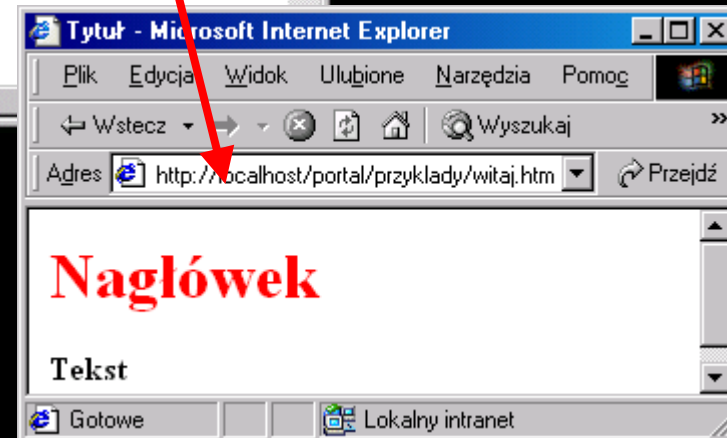
Dokument HTML



# HTML - znacznik <font>



```
witaj.htm - Notatnik
Plik Edycja Format Pomoc
<html>
<head>
  <title>
    Tytuł
  </title>
</head>
<body>
  <h1>
    <font color="red">
      Nagłówek
    </font>
  </h1>
  <b>Tekst</b>
</body>
</html>
```



# HTML - znacznik `<br>` `<nobr>`

The image shows two windows from a Windows operating system. The window on the left is titled "br - Notatnik" and contains the following HTML code:

```
<html>
<head>

</head>

<body>

<h1>Witaj</h1>
Ten tekst
<br>zostanie łamany po dojściu do końca wiersza...
<nobr>A ten tekst nie będzie łamany ...

</body>
</html>
```

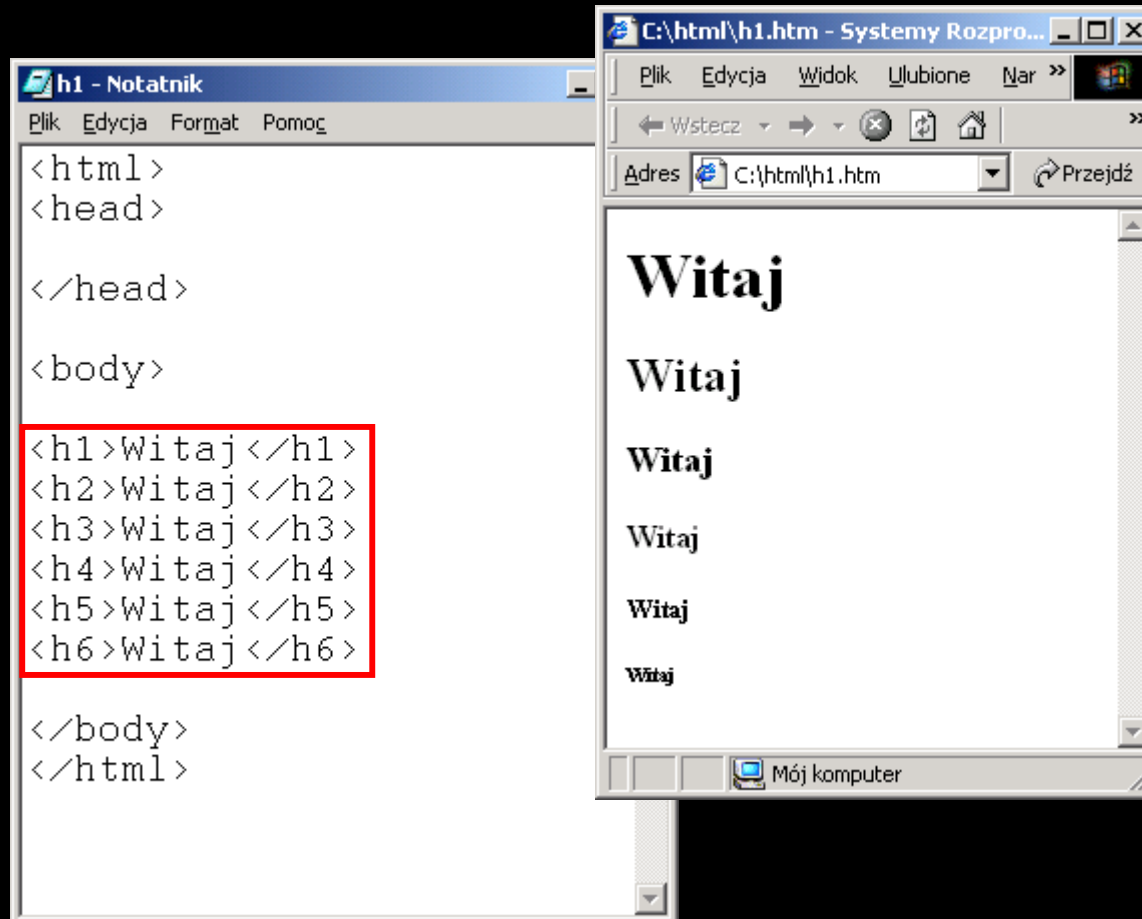
The last two lines of code are highlighted with a red rectangle. The window on the right is a web browser titled "C:\html\br.htm - System...". It displays the rendered HTML content:

**Witaj**

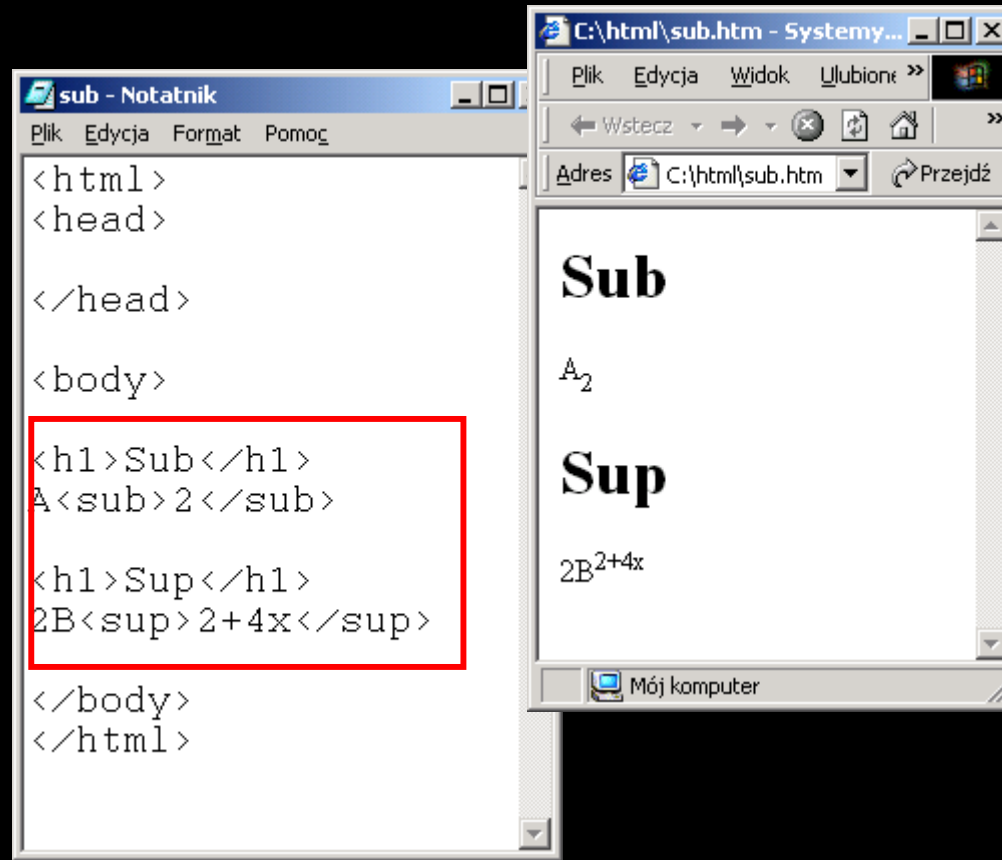
Ten tekst  
zostanie łamany po dojściu  
do końca wiersza...

A ten tekst nie będzie łamany ..

# HTML - znacznik <h1..h6>



# HTML - znacznik `<sub>` `<sup>`



# HTML - znacznik <pre>

The image shows a Windows XP desktop with two windows. The main window is a Notepad application titled "code - Notatnik". It contains the following HTML code:

```
<html>
<head>

</head>

<body>

<h1>Code</h1>
<hr>
<pre>
//przyklad pętli ...
for(int i=0; i<size; i++)
{
    fun(i);
}
</pre>
<hr>

</body>
</html>
```

The code block between `<pre>` and `</pre>` is highlighted with a red rectangle. The browser window, titled "C:\html\code.htm - Systemy Rozproszone", displays the rendered HTML. It shows the word "Code" in a large font, followed by a horizontal line, and then the code block with its original formatting (line numbers, indentation, and comments) preserved.

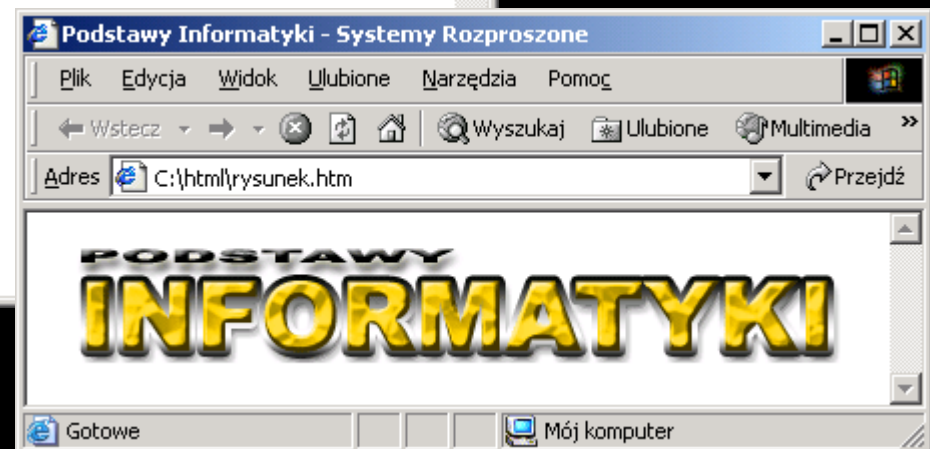
# HTML - znacznik <img>

```
rysunek - Notatnik
Plik Edycja Format Pomoc
<!doctype html public "-//w3c//dtd html 4.0
transitional//en">
<html>
<head>
  <meta http-equiv="Content-Type" content=
    "text/html; charset=windows-1250">
  <meta name="Author" content="KERK of COLOR7">
  <title>Podstawy Informatyki</title>
</head>

<body bgcolor="#FFFFFF" textcolor="#303030">

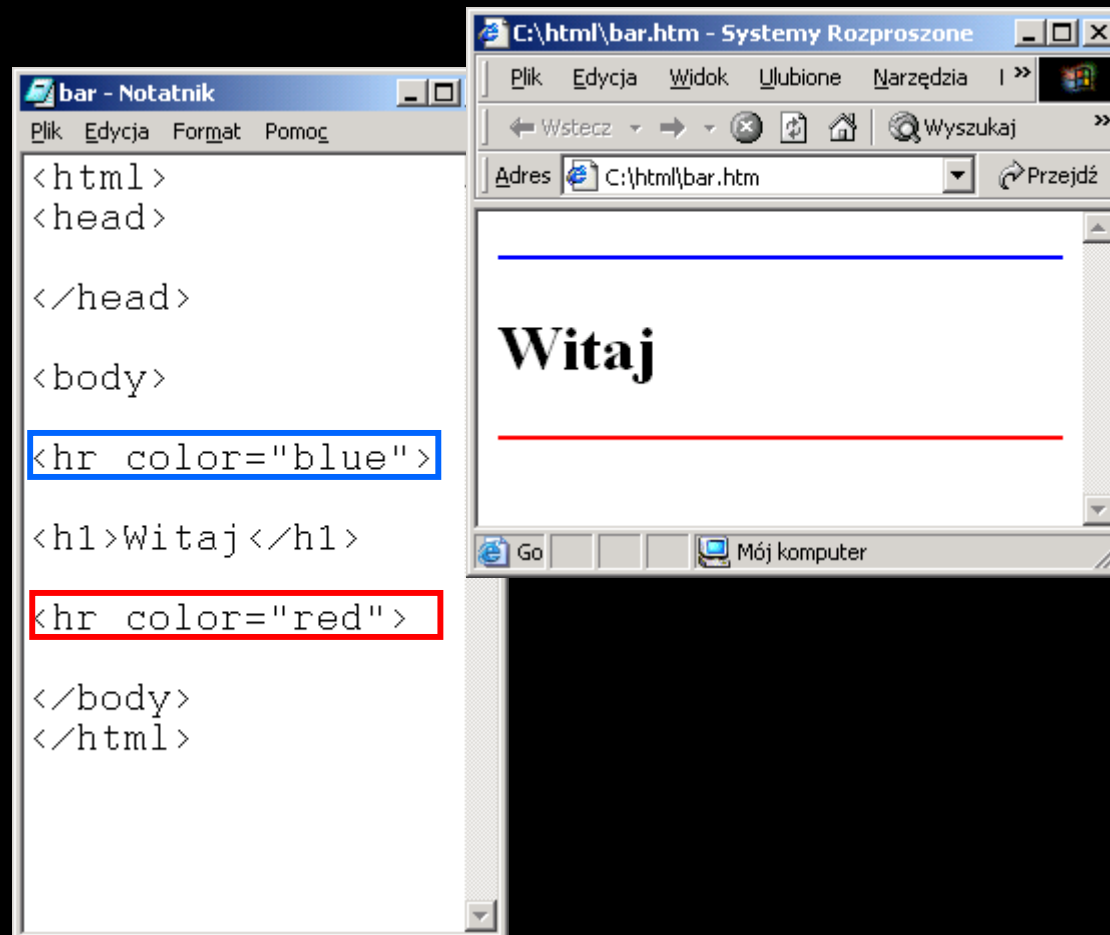
<center>
  
</center>

</body>
</html>
```





# HTML - znacznik <hr>



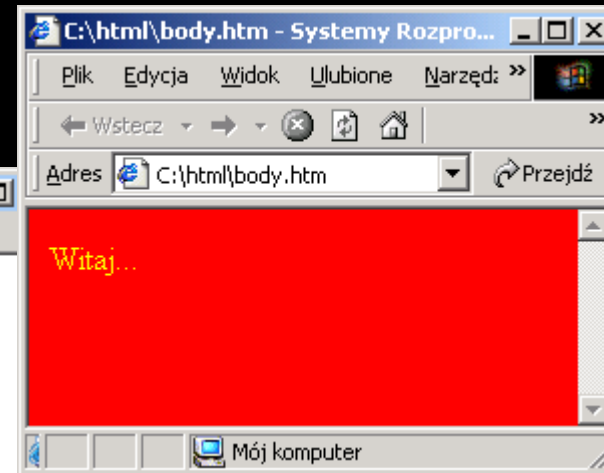
# HTML - znacznik <body>

```
body - Notatnik
Plik Edycja Format Pomoc
<html >
<head >

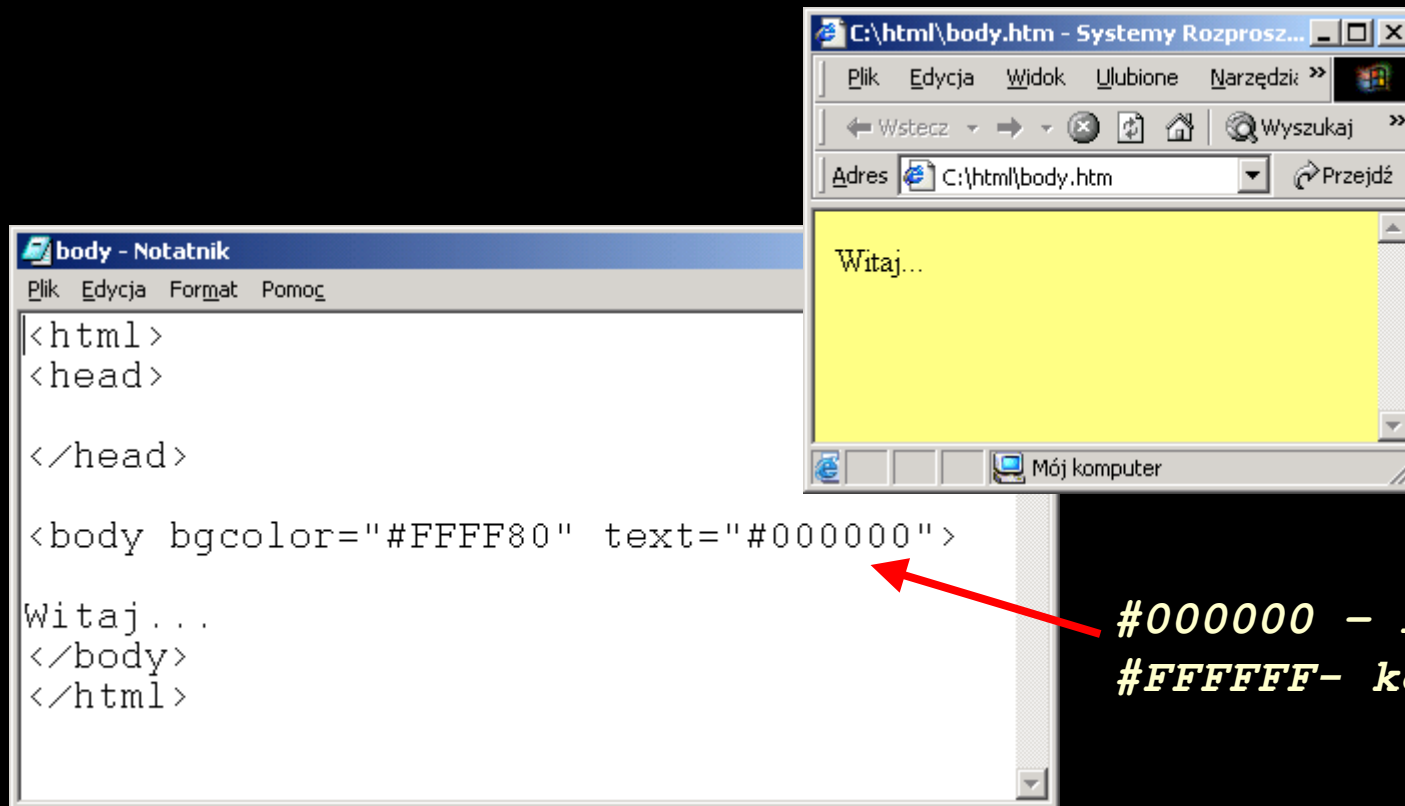
</head >

<body bgcolor="red" text="yellow">

Witaj...
</body >
</html >
```



# HTML - znacznik <body>

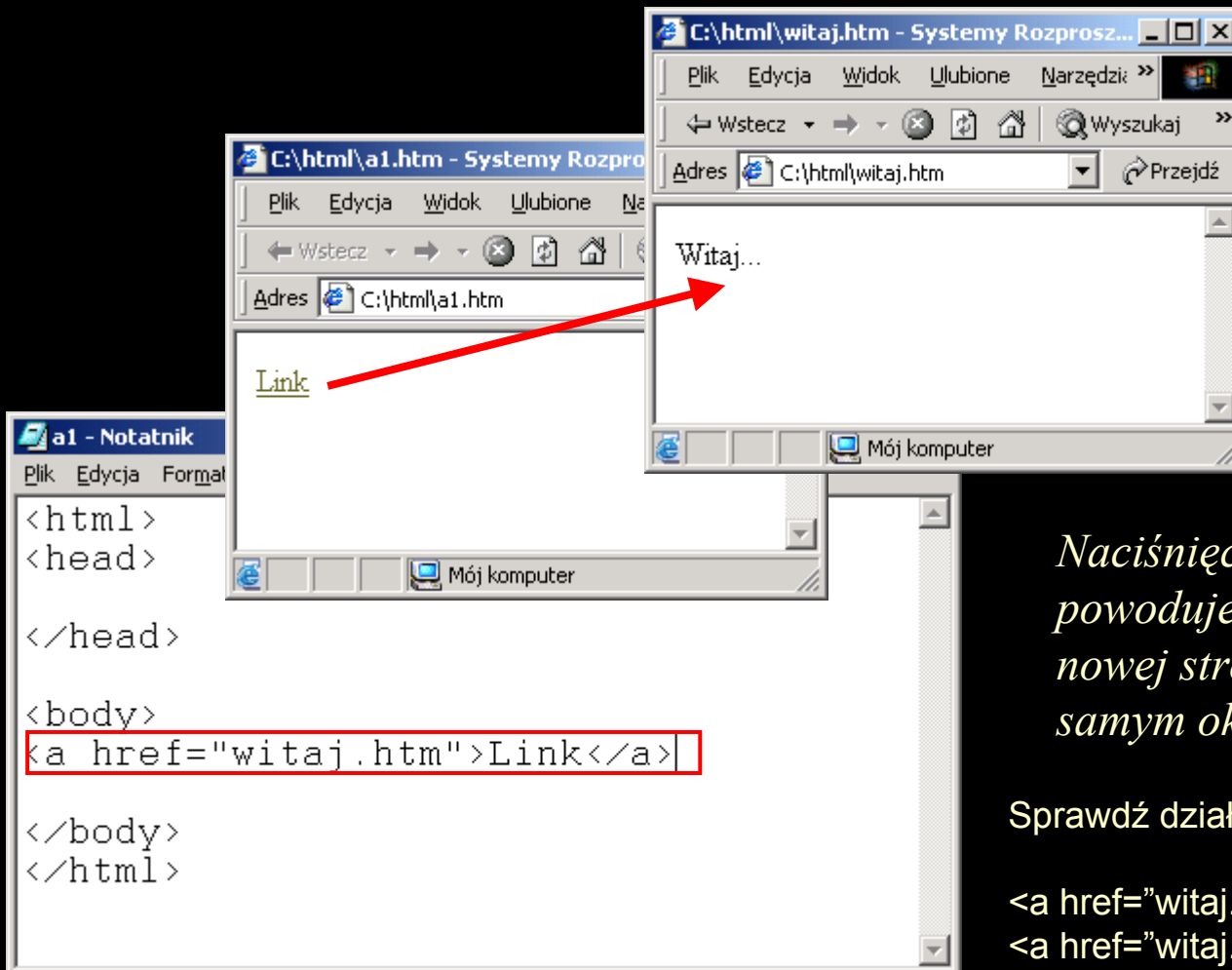


*#000000 - kolor czarny*  
*#FFFFFF - kolor biały*

*Nasycenie poszczególnych  
składowych kolorów RGB  
(zakres 0-255) (\$00-\$FF)*

→ **#FFFFFF80**

# HTML - znacznik <a>



The image shows a Notepad window with the following HTML code:

```
<html>  
<head>  
  
</head>  
  
<body>  
<a href="witaj.htm">Link</a>  
  
</body>  
</html>
```

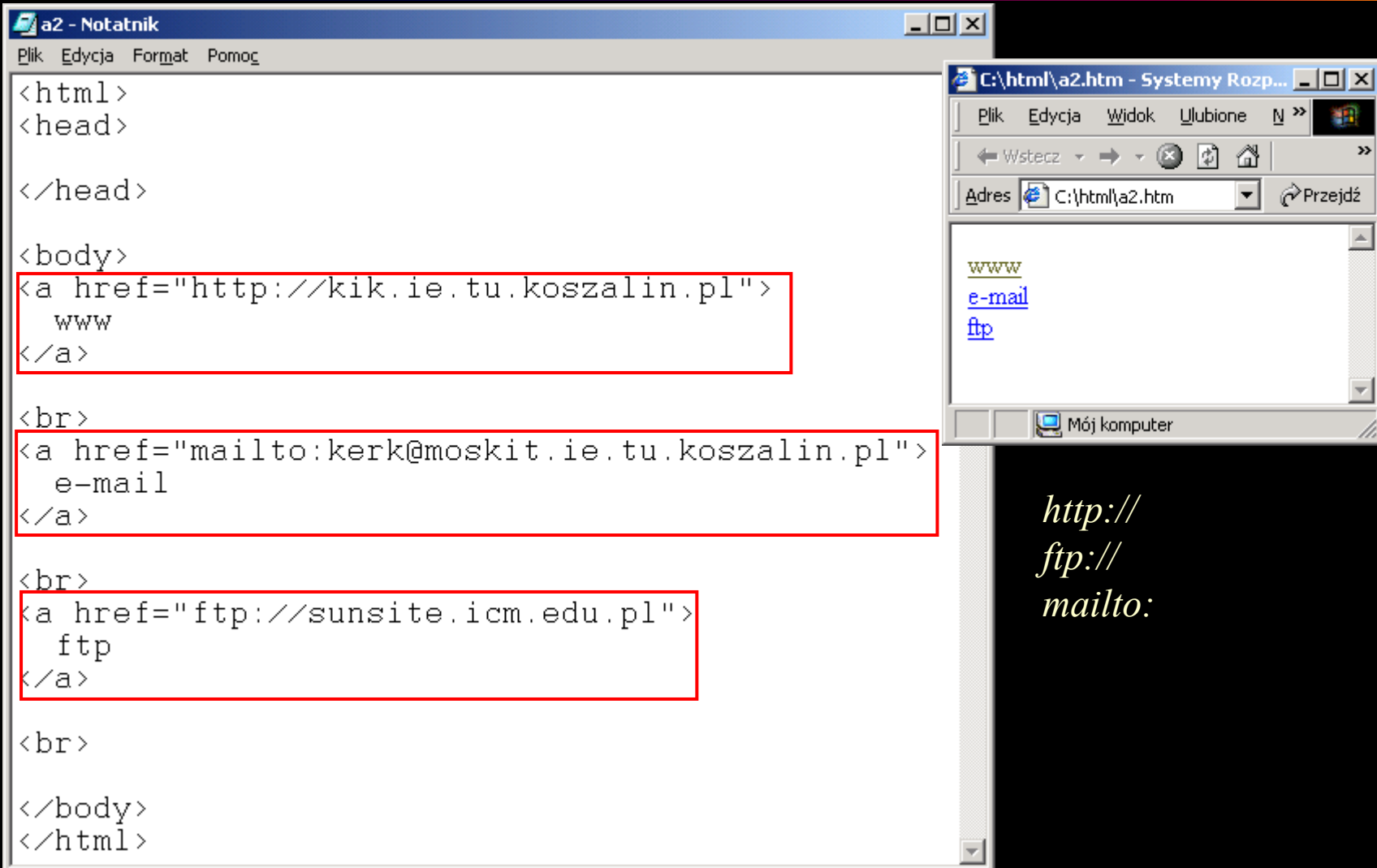
The code is partially highlighted with a red box. A red arrow points from the underlined text "Link" in the Notepad window to a browser window showing "Witaj...". Another browser window shows the address bar with "C:\html\witaj.htm" and a "Przejdź" button.

*Naciśnięcie odnośnika  
powoduje otwarcie  
nowej strony w tym  
samym oknie*

Sprawdź działanie odnośników:

```
<a href="witaj.htm" target="_blank">Link</a>  
<a href="witaj.htm" target="_top">Link</a>
```

# HTML - znacznik <a>



The image shows a Notepad window titled "a2 - Notatnik" containing HTML code for an anchor tag. The code is as follows:

```
<html>
<head>

</head>

<body>
<a href="http://kik.ie.tu.koszalin.pl">
  www
</a>

<br>
<a href="mailto:kerk@moskit.ie.tu.koszalin.pl">
  e-mail
</a>

<br>
<a href="ftp://sunsite.icm.edu.pl">
  ftp
</a>

<br>

</body>
</html>
```

The code is rendered in a browser window titled "C:\html\a2.htm - Systemy Rozp...". The browser shows the following output:

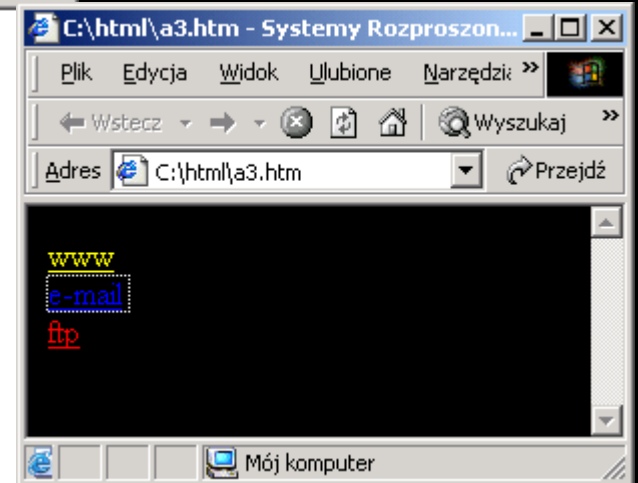
[www](http://kik.ie.tu.koszalin.pl)  
[e-mail](mailto:kerk@moskit.ie.tu.koszalin.pl)  
[ftp](ftp://sunsite.icm.edu.pl)

The browser window also shows the address bar with "C:\html\a2.htm" and the status bar with "Mój komputer".

*http://*  
*ftp://*  
*mailto:*

# HTML - znacznik <body>

```
a3 - Notatnik
Plik Edycja Format Pomoc
<html>
<head>
</head>
<body text="#FFFFFF" link="#FF0000"
vlink="yellow" alink="blue" bgcolor="black" >
<a href="http://kik.ie.tu.koszalin.pl">
  www
</a>
<br>
<a href="mailto:kerk@moskit.ie.tu.koszalin.pl">
  e-mail
</a>
<br>
<a href="ftp://sunsite.icm.edu.pl">
  ftp
</a>
<br>
</body>
</html>
```



*Klawisz TAB można  
umożliwia  
przemieszczanie się  
pomiędzy  
poszczególnymi  
odnośnikami*

# HTML - znacznik <ol> <ul>

The screenshot shows a Notepad window titled "spis - Notatnik" with the following HTML code:

```
<html>
<head>

</head>

<body>
<h1>Spis</h1>

<ul>
  <li>Warzywa</li>
  <li>Owoce</li>
</ul>

<br>

</body>
</html>
```

The code is rendered in a browser window titled "C:\html\spis.htm - Systemy Rozpr...". The browser shows the title "Spis" and an unordered list:

- Warzywa
- Owoce

The screenshot shows a Notepad window titled "spis - Notatnik" with the following HTML code:

```
<html>
<head>

</head>

<body>
<h1>Spis</h1>

<ol>
  <li>Warzywa</li>
  <li>Owoce</li>
</ol>

<br>

</body>
</html>
```

The code is rendered in a browser window titled "C:\html\spis.htm - Systemy Rozpr...". The browser shows the title "Spis" and an ordered list:

1. Warzywa
2. Owoce

# HTML - znacznik <ol> <ul>

The image shows a Notepad window titled "spis2 - Notatnik" containing HTML code. A red box highlights a specific section of the code. To the right, a preview window titled "C:\html\spis2.htm - Systemy Rozpros..." displays the rendered HTML content.

```
<html>
<head>

</head>

<body>
<h1>Spis</h1>

<ol start="5">
  <li>Warzywa</li>
  <ul>
    <li>marchew</li>
    <li>kapusta</li>
  </ul>
  <li>Owoce</li>
  <ol start="10" type="I">
    <li>truskawki</li>
    <li>jagody</li>
  </ol>
</ol>

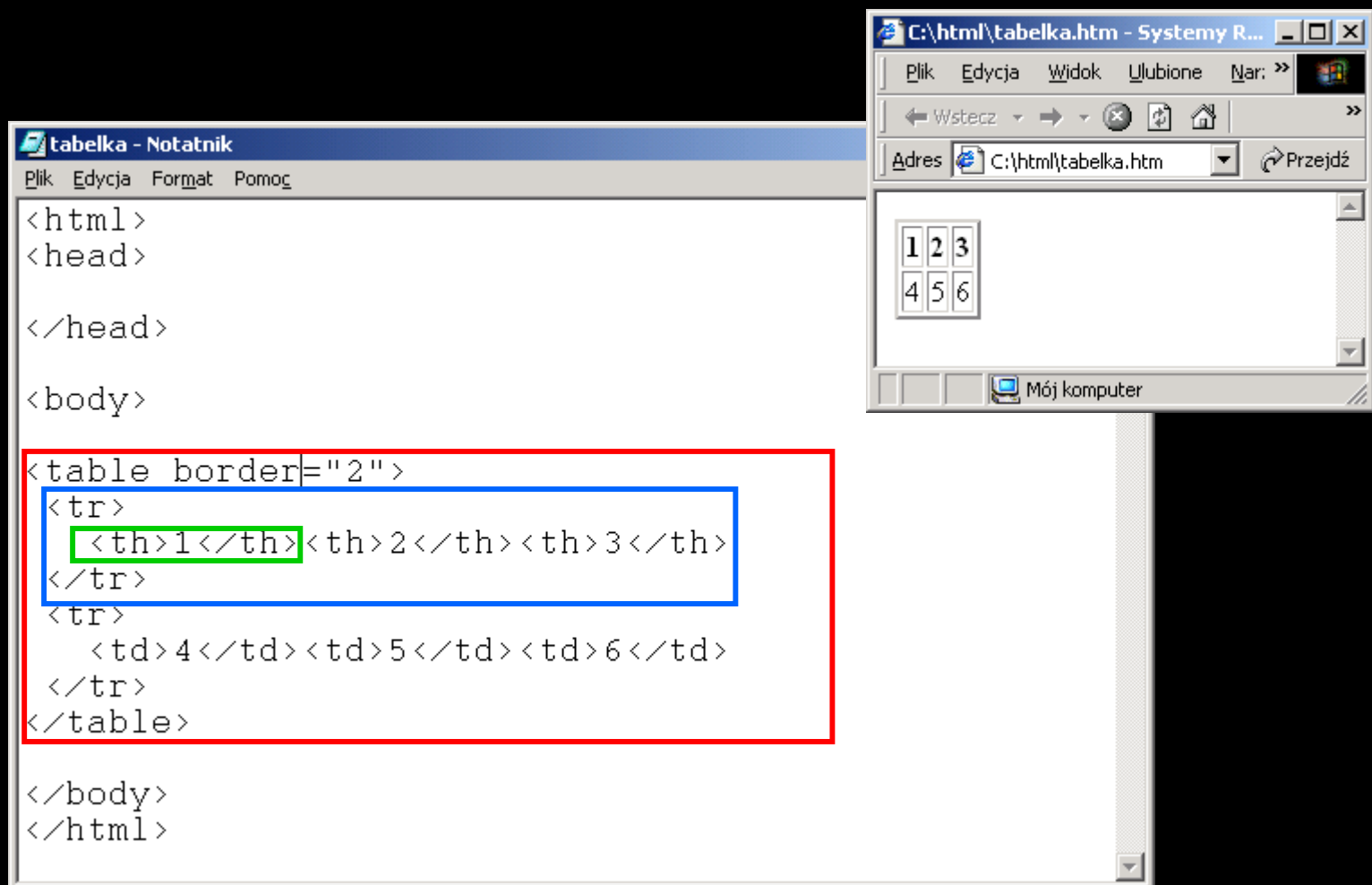
<br>
</body>
</html>
```

The rendered output in the preview window shows the following structure:

- 5. Warzywa
  - o marchew
  - o kapusta
- 6. Owoce
  - X truskawki
  - XI jagody



# HTML – znacznik <table>



The image shows two windows illustrating the use of the HTML <table> tag. The left window is a Notepad application titled "tabelka - Notatnik" containing the following HTML code:

```
<html>
<head>

</head>

<body>

<table border="2">
  <tr>
    <th>1</th><th>2</th><th>3</th>
  </tr>
  <tr>
    <td>4</td><td>5</td><td>6</td>
  </tr>
</table>

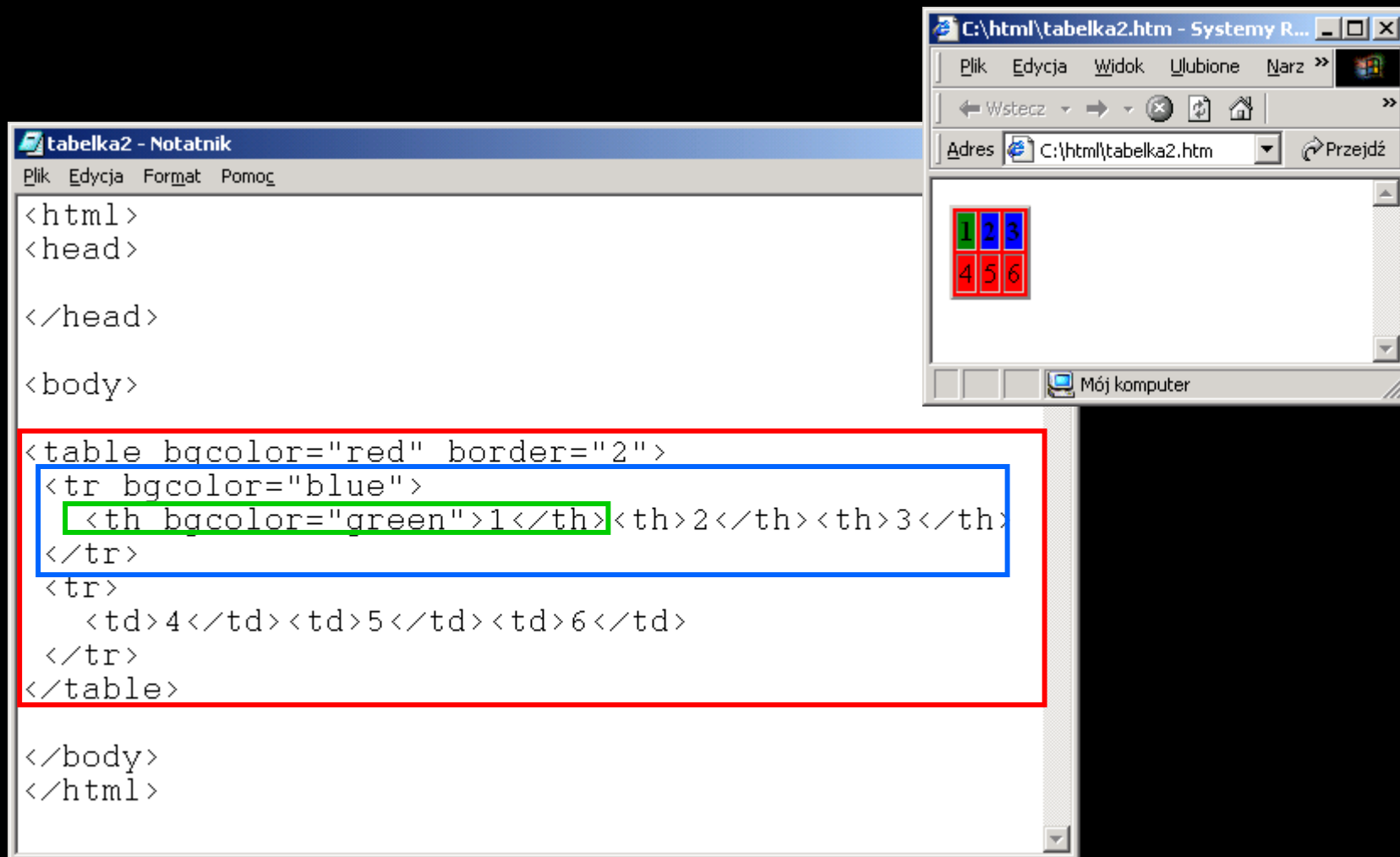
</body>
</html>
```

The code is highlighted with a red box. The <tr> line is highlighted with a blue box, and the <th>1</th> tag is highlighted with a green box.

The right window is a web browser titled "C:\html\tabelka.htm - Systemy R..." displaying the rendered table:

1	2	3
4	5	6

# HTML – znacznik <table>



The image shows two windows illustrating the use of the HTML <table> tag. The Notepad window on the left contains the following HTML code:

```
<html>
<head>

</head>

<body>

<table bgcolor="red" border="2">
  <tr bgcolor="blue">
    <th bgcolor="green">1</th><th>2</th><th>3</th>
  </tr>
  <tr>
    <td>4</td><td>5</td><td>6</td>
  </tr>
</table>

</body>
</html>
```

The browser window on the right displays the rendered table:

1	2	3
4	5	6

The table is rendered with a red background and a border of 2 pixels. The first row has a blue background, and the first cell in that row has a green background. The numbers 1 through 6 are arranged in a 2x3 grid.

# HTML – znacznik <table>

```
tabela3 - Notatnik
Plik Edycja Format Pomoc

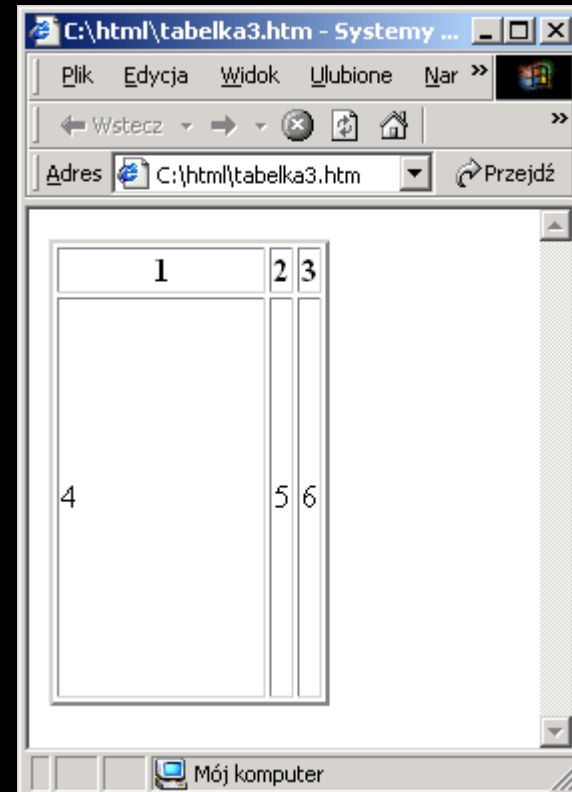
<html>
<head>

</head>

<body>

<table border="2">
  <tr>
    <th>1</th><th>2</th><th>3</th>
  </tr>
  <tr>
    <td width="100">4</td>
    <td height="200">5</td>
    <td>6</td>
  </tr>
</table>

</body>
</html>
```



# HTML – znacznik <table>

The image shows two windows side-by-side. The left window is a Notepad application titled 'tabelka4 - Notatnik'. It contains the following HTML code:

```
<html>
<head>

</head>

<body>

<table border="2">
  <tr>
    <th align="center">1</th><th>2</th><th>3</th>
  </tr>
  <tr>
    <td width="100" align="left">4</td>
    <td height="200" valign="bottom">5</td>
    <td valign="middle">6</td>
  </tr>
  <tr>
    <td align="right">7</td>
    <td valign="top">8</td>
    <td>9</td>
  </tr>
</table>

</body>
```

The right window is a web browser titled 'C:\html\tabelka4.htm - ...'. It displays the rendered table:

1	2	3
4	5	6
7	8	9

A blue double-headed vertical arrow is positioned to the right of the table, spanning the height of the table body. A green double-headed horizontal arrow is positioned below the table, spanning its width.

# HTML – znacznik <table>

The image shows two windows illustrating the HTML <table> tag. The left window is a Notepad application titled "tabelka5 - Notatnik" containing the following HTML code:

```
<html>
<head>

</head>

<body>

<table width="" border="4">
  <tr>
    <th>1</th><th>2</th><th>3</th>
  </tr>

  <tr>
    <th rowspan="2">4</th><th colspan="2">5</th>
  </tr>

  <tr>
    <th>6</th><th>7</th>
  </tr>

</table>

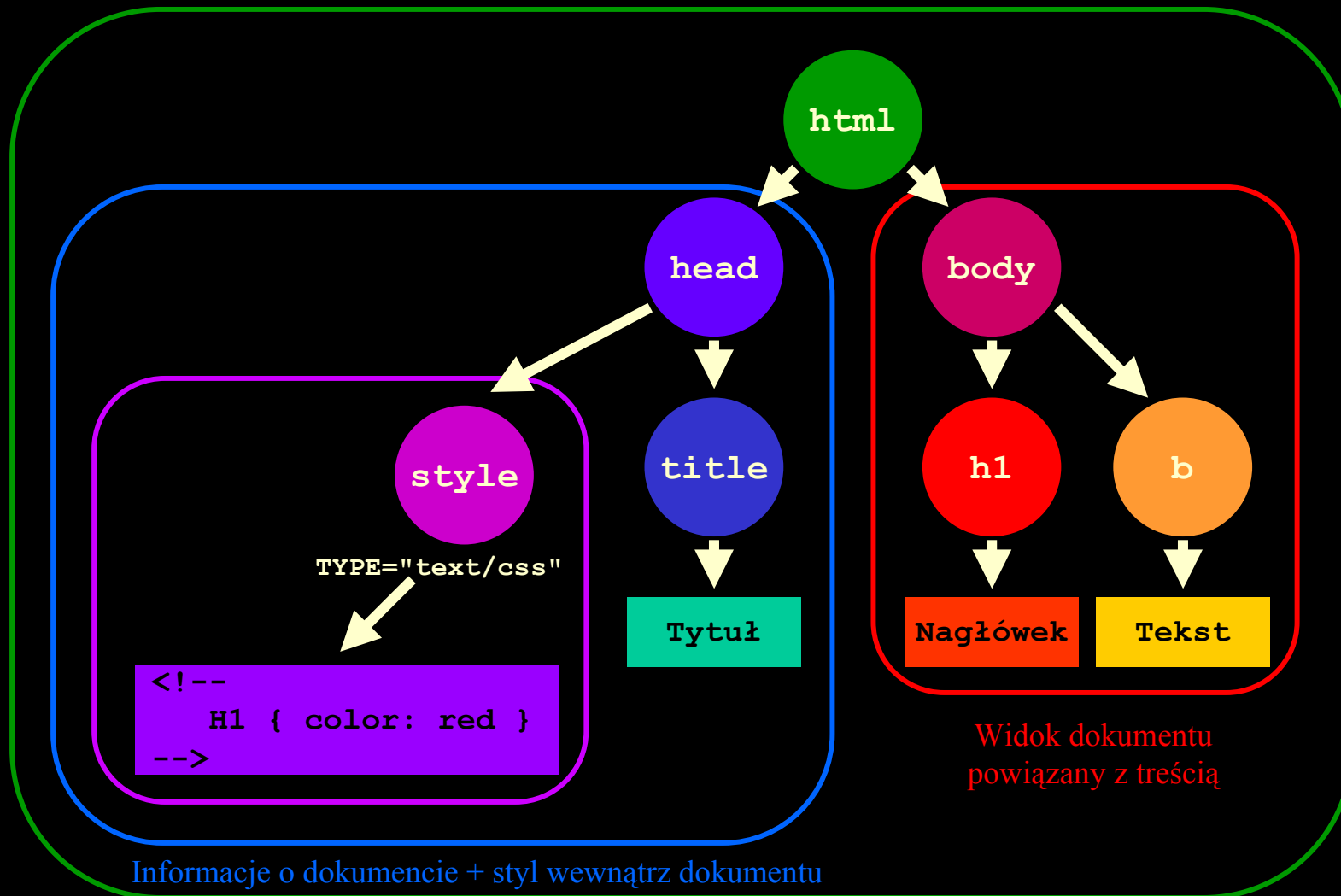
</body>
</html>
```

The right window is a browser window titled "C:\html\tabelka5.htm - Systemy Rozpros..." displaying the rendered table:

1	2	3
4	5	
6	7	

Red and blue arrows indicate the mapping between the HTML attributes and the rendered table cells.

# CSS - znacznik <style>



# CSS - znacznik <style>

The image shows two windows illustrating the use of the <style> tag in HTML. The left window, titled "witaj.htm - Notatnik", displays the source code of an HTML document. A red box highlights the following code block:

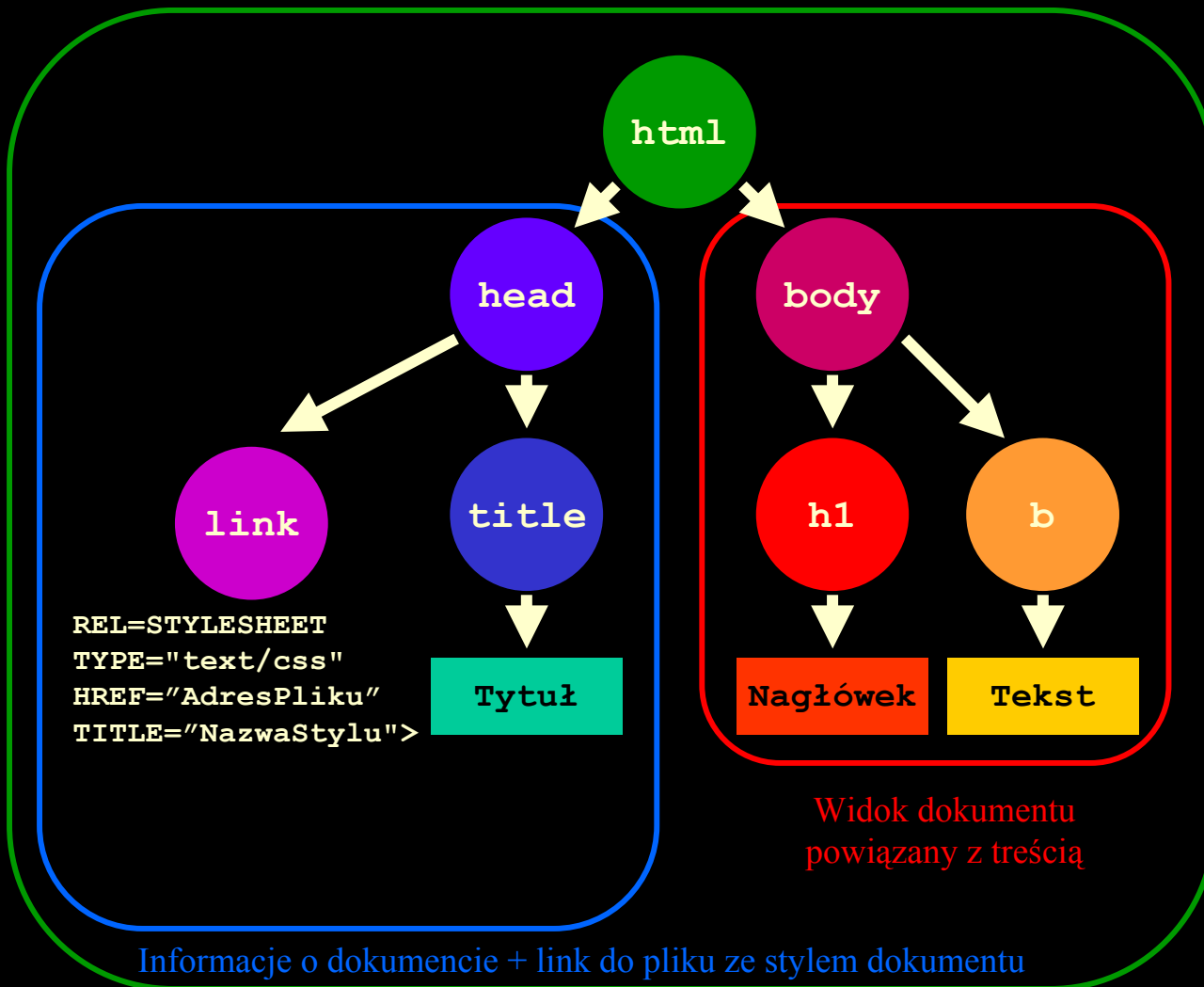
```
<style TYPE="text/css">
<!--
    H1 { color: red }
-->
</style>
```

The rest of the code in the Notepad window is:

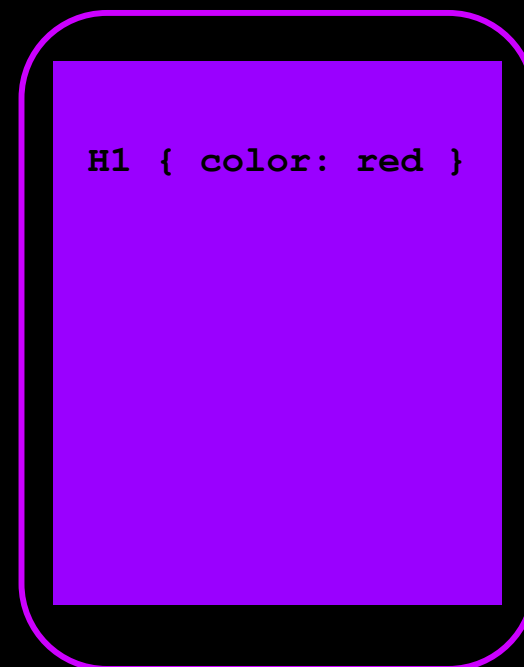
```
</head>
<body>
  <h1>
    Nagłówek
  </h1>
  <b>Tekst</b>
</body>
</html>
```

The right window, titled "Tytuł - Microsoft Internet Explorer", shows the rendered output of the HTML document. The address bar indicates the URL: <http://localhost/portal/przyklady/witaj.htm>. The rendered page displays the text "Nagłówek" in a large, bold, red font, and "Tekst" in a smaller, bold, black font below it. A red arrow points from the highlighted CSS code in the Notepad window to the rendered "Nagłówek" text in the Internet Explorer window.

# CSS - znacznik <link>



Dokument HTML



Dokument CSS



# CSS - znacznik <link>

The image illustrates the use of the <link> tag to connect an HTML document to an external CSS file. It consists of three overlapping windows:

- witaj.htm - Notatnik**: Shows the HTML source code. The <link> tag is highlighted with a red box:

```
<link REL=STYLESHEET  
TYPE="text/css"  
HREF="styl.css"  
TITLE="styl">
```
- styl.css - Notatnik**: Shows the CSS code for the h1 element:

```
H1 { color: red }
```
- Tytuł - Microsoft Internet Explorer**: Shows the rendered page. The title is "Tytuł" and the content consists of a red "Nagłówek" (Header) and the text "Tekst".

Red arrows indicate the flow of information: one arrow points from the <link> tag in the HTML file to the CSS file, and another points from the <link> tag to the rendered header in the browser.