Information Technology Department - State Polytechnic of Malang
Jobsheet-1: Web Server Installation and Basic HTML
Course: Web Programming / Web Design and Programming
Instructor: Web Design and Programming Teaching Team
August 2024

Topic
- Introduction to Basic Concepts of the Internet and Web
- Laragon Installation
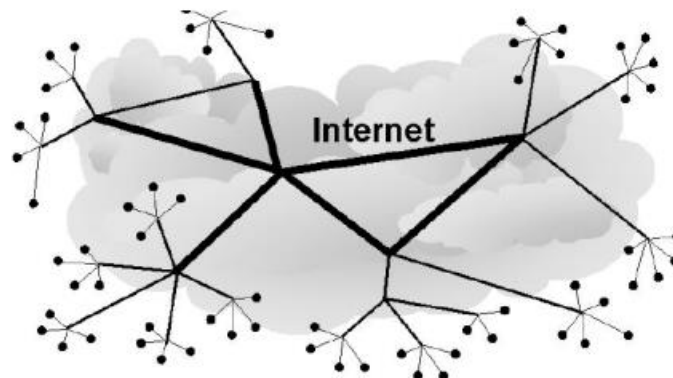- Introduction to HTML Fundamentals

Objectives

Students are expected to:
1. Understand the basic concepts of the Internet and the web
2. Install Laragon as web server
3. Be able to create static websites using HTML

Introduction

What is the Internet ?
- A large network of computers.
- Network of networks
- Operates based on the TCP/IP protocol

Picture 1. Internet Network

What are the services provided by the Internet ?
- *World Wide Web* (WWW): operates with the HTTP protocol
- E-mail: operates with *Post Office Protocol* (POP), *Simple Mail Transfer Protocol* (SMTP), *Internet Message Access Protocol* (IMAP)
- Chat : *Internet Relay Chat* (IRC)
- File Transfer: *File Transfer Protocol* (FTP)
- *Remote Access*: *telnet, Shell Secure* (SSH)
- VoIP (Voice over Internet Protocol)
- etc

Website and Web Applications
- Website (WWW)
  A website is a collection of interlinked web pages that can be accessed through a homepage using a browser.

For example, when accessing the website at www.polinema.ac.id, the homepage will appear as follows.

Picture 2. Homepage

Meanwhile, a web page is a part of the homepage that appears as a menu or link where, when clicked, will open a new page with information different from the homepage.

- *Static Web Statis vs Dynamic Web*

  Static Web is a website where users cannot directly change the content of the web using a browser. The interaction between the user and the server is limited to processing links. These web pages do not have a database. The data and information on a static website do not change unless its syntax is altered. The web document sent to the client will be the same as what is on the web server.

  Dynamic Web is a website where the interaction between the user and the server is very complex. A person can change the content of certain pages using a browser. Requests from users can be processed by the server and then displayed with different contents according to its program flow. These web pages are connected to a database, so a dynamic website will have different information and data depending on the input provided by the client. The document received by the client will be different from the document on the server.

How does a website work ?

1. When user enters the URL in the browser
   https://www.google.com
2. The browser will translate the URL into an IP address and connect to the server via TCP on port 80 (HTTP service).
   - In this case, we use the 'ping' command in CMD as an example.
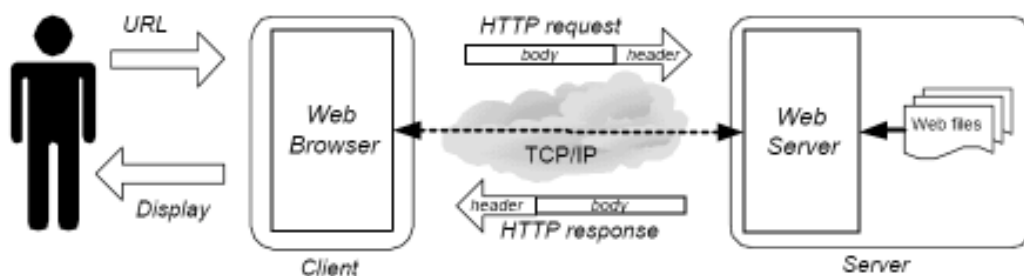

   -

3. Through the established connection, the browser sends a GET request (HTTP request)
   - GET/HTTP/1.1
4. The server responds with an HTTP response (including the header and the requested file in the body). The MIME type is also included to inform the browser about the file type (HTML, text, image, etc.)

```
Content-type: text/html
<html>
<head><title> Google </title></head>
<body>Welcome to google <img src='logo.gif'></body>
</html>
```

Picture 3. MIME Type

5. Files within the webpage, such as images, are not sent with the main file, so the browser must make additional requests to retrieve all the files on the webpage..
   - GET /logo.gif HTTP/1.0
6. The browser will render the content to be displayed to the user in the browser..
7. HTTP connections do not remain continuous; once a file is downloaded, the connection is terminated.
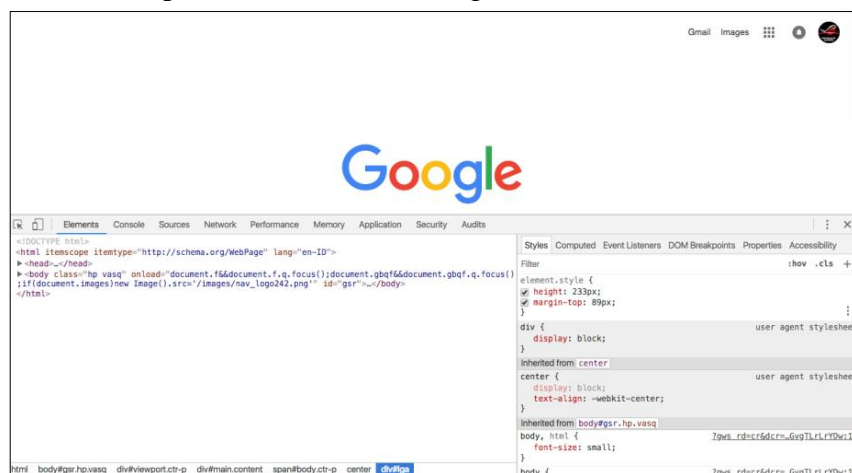

Picture 4. HTTP Request and Response

Hypertext Markup Language (HTML)

HyperText Markup Language (HTML) is a language used to create web pages, where formatting is done using simple hypertext written in ASCII format to produce an integrated visual display. HTML is an internet standard defined and regulated by the World Wide Web Consortium (W3C). HTML was created through a collaboration between Tim Berners-Lee and Robert Cailliau while they were working at CERN in 1989 (CERN is a high-energy physics research organization in Geneva).

HTML can be read on various platforms and is a flexible programming language that can be combined with other programming languages such as PHP, ASP, JSP, and JavaScript. Certain tags in HTML documents define how text is formatted, and there are also other tags that specify how to respond to user actions. For example, open the page www.google.com, right-click in the browser (Chrome), and select "inspect," which will display the browser's developer tools as shown in Figure 5.
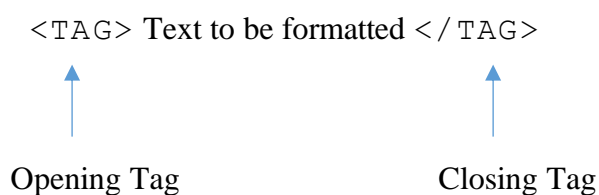

Picture 5. *Inspect Element*

In the first line, there is the text `<!DOCTYPE HTML>`, which indicates that the document you are viewing is an HTML document. On the second line, there is also the `<HTML>` tag, which further signifies that the code written within it is HTML code.

Practical Section 1. Laragon Installation

Steps	Description
1	Download Laragon that matches your operating system from the link https://laragon.org/download/.
2	Install the Laragon that you downloaded in step 1.
3	Open your browser, type `localhost`, and run it. Record the results (question No. 1). Include a screenshot of the display and provide an explanation. Please provide your answer below.
4	After completing the Laragon installation, proceed to Practical Section 2: Starting HTML.

HTML is the standard format used to create web page documents. An HTML document has paired syntax called TAGs that are used to apply the desired effects. Generally, the format of a TAG is as follows:

<TAG> Text to be formatted </TAG>

Opening Tag   Closing Tag

Basic Structure of an HTML Page

Every HTML document must start with the `<html>` tag and end with its complement, the `</html>` tag. An HTML document also includes three pairs of tags:

- `<head>` and `</head>`: Used to declare information about the HTML document.
- `<title>` and `</title>`: Used to add the title in the browser's title bar.
- `<body>` and `</body>`: Used to enclose all the text on the HTML page.

In HTML5, the structure is more concise, as shown below:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <!-- This is a comment line, it is not processed. -->
    <title>Document Title in HTML5</title>
```

```
    </head>
    <body>
      This is body content
    </body>
</html>
```

Practical Section 2: Starting HTML

Steps	Description
1	Open the Laragon folder in the directory where you installed Laragon. Navigate to the directory `C:\laragon\www`, and then create a new folder named `dasarWeb`.
2	Next, open your text editor, create a new file named `hello.html`, and save it in the `dasarWeb` directory that you just created.
|  | ```
<> hello.html  ✕
 1    <html>
 2        <head>
 3            <title>
 4                My First HTML Document
 5            </title>
 6        </head>
 7        <body>
 8            <p>
 9                Hello World! <br>Welcome to my <b>first</b>HTML Page.
10            </p>
11        </body>
12    </html>
``` |
3	Open your browser and type the following address: `localhost/dasarWeb/hello.html`.
4	Observe what appears in the browser.
5	Record your observations (question No. 2) and write your answer below.
6	Remove the ` ` tag from the code, observe the difference, and describe below what the function of the ` ` tag is. (question No. 3) Write your answer below.

Practical Section 3: Text Formatting

HTML provides a variety of elements that can be used for text formatting.

- ❖ *Heading*

  A heading is one of the essential elements in an HTML document. A heading is defined using the `<hn>` tag and is closed with the `</hn>` tag, where *n* represents the type, with values ranging from 1 to 6.

5

Steps	Description
1	Create a file named `heading.html` and save it in the `dasarWeb` folder that you created in Practical Section 2.
2	Type the following code into `heading.html`
| | ```
heading.html  ✕
1      <html>
2          <body>
3              <h1>Heading 1</h1>
4              <h2>Heading 2</h2>
5              <h3>Heading 3</h3>
6              <h4>Heading 4</h4>
7              <h5>Heading 5</h5>
8              <h6>Heading 6</h6>
9          </body>>
10     </html>
``` |
3	Open your browser and type the following address: `localhost/dasarWeb/heading.html`.
4	Observe what appears in the browser.
5	Record your observations (question No. 4) and write your answer below.
6	Add the align attribute within the heading tag as shown below and save the file as `headingAlign.html`.
| 7 | ```
<html>
    <body>
        <h1 align="right">Heading 1</h1>
        <h2 align="left">Heading 2</h2>
        <h3 align="center">Heading 3</h3>
        <h4>Heading 4</h4>
        <h5>Heading 5</h5>
        <h6>Heading 6</h6>
    </body>
</html>
``` |
8	Open your browser and type the following address: `localhost/dasarWeb/headingAlign.html`.
9	Observe what appears in the browser.
10	Record your observations (question No. 5) and write your answer below.

❖ Paragraph

Like regular text, an HTML document can consist of a collection of paragraphs. In the context of HTML, a paragraph is represented by the `<p>` tag. The `<p>` tag is actually a paired tag, although in practice, the closing tag is often omitted.

Steps	Description
1	Buat sebuah file bernama paragraf.html dan simpan file tersebut di dalam folder dasarWeb yang telah dibuat pada Praktikum 2.
2	Ketikkan kode di bawah ini dalam `paragraf.html`

3	```html
	<!DOCTYPE html>
	<html lang="en">
	  <body>
	
	      First paragraph
	
	      This is the second paragraph
	
	      And this is the third paragraph
	
	  </body>
	</html>
	``

4	Open your browser and type the following address: `localhost/dasarWeb/paragraf.html`.
5	Observe what appears in the browser.
6	Record your observations (question No. 6) and write your answer below.
7	To adjust the paragraph alignment, use the align attribute within the paragraph tag.
8	Add the align attribute in the paragraph tag as shown below and save the file as `paragrafAlign.html`.

9	```html
	<!DOCTYPE html>
	<html lang="en">
	  <head>
	    <title>
	      Manage Paragraph
	    </title>
	  </head>
	  <body>
	
	      First Paragraph
	
	      This is the second paragraph
	
	      And this is the third paragraph
	
	  </body>
	</html>
	``

10	Open your browser and type the following address: `localhost/dasarWeb/paragrafAlign.html`.
11	Observe what appears in the browser.
12	Record your observations (question No. 7) and write your answer below.

❖ Font

HTML provides several elements that can be used to manage fonts, such as **bold**, *italic*, underline, and many more. Additionally, this section will explain how to print tags. As you may know, the `<p>` tag in a document is automatically interpreted as a paragraph. However, to display the `<p>` character on the screen, we need to use entity names.

For example, the `<` character is represented by the entity name `&lt`, and the `>` character is represented by `&gt`.

Practical Section 4 : Font

Steps	Description
1	Create a file named `font.html` and save it in the `dasarWeb` folder that you created in Practical Section 2.
2	Type the following code into `font.html`:
3	
4	Open your browser and type the following address: `localhost/dasarWeb/font.html`.
5	Observe what appears in the browser.
6	Record your observations (question No. 8) and write your answer below.

```html
<html>
    <head>
        <title>Pengaturan Font</title>
    </head>
    <body>
        <b>Menggunakan tag &lt;b&gt;</b><br>
        <strong>Menggunakan tag &lt;strong&gt;</strong><br>
        <i>Menggunakan tag &lt;i&gt;</i><br>
        <em>Menggunakan tag &lt;em&gt;</em><br>
        <u>Menggunakan tag &lt;u&gt;</u><br>
        <strike>Menggunakan tag &lt;strike&gt;</strike>
    </body>
</html>
```

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❖ Special Characters
In HTML, we can also display special characters by using entity names. The table below shows some types of special characters that can be used along with their entity names.

Character	Description	Special Characters
¢	Cent	¢
£	Pound	£
¥	Yen	¥
€	Euro	€
©	Copyright	©
®	Registered	®
™	Trademark	™

Practical Section 5: Special Characters

Steps	Description
1	Create a file named `karakter.html` and save it in the `dasarWeb` folder that you created in Practical Section 2.
2	Type the following code into `karakter.html`:

3	
	``html
	<> karakter.html ✕
	1 <html>
	2 <head>
	3 <title>Karakter Khusus</title>
	4 </head>
	5 <body>
	6 £ Pound
	
	7 € Euro
	
	8 © Copyright
	
	9 ® Registered
	
	10 ™ Trademark
	
	11 </body>
	12 </html>
	``

4	Open your browser and type the following address: `localhost/dasarWeb/karakter.html`.
5	Observe what appears in the browser.
6	Record your observations (question No. 9) and write your answer below.

Practical Section 6: Horizontal Line

In HTML, a horizontal line is represented by the `<hr>` tag. Although most browsers render this element with slightly different visualizations, it essentially represents a horizontal line.

Steps	Description
1	Buat sebuah file bernama `garishorizontal.html` dan simpan file tersebut di dalam folder dasarWeb yang telah dibuat pada Praktikum 2.
2	Ketikkan kode di bawah ini dalam `garishorizontal.html`

3	<pre><!DOCTYPE html>
	<html lang="en">
	  <head>
	    <title>
	      Create Horizontal Line
	    </title>
	  </head>
	  <body>
	    UNDANG-UNDANG DASAR NEGARA REPUBLIK INDONESIA TAHUN 1945 <hr>
	    PEMBUKAAN
	    Bahwa sesungguhnya kemerdekaan itu ialah hak segala bangsa dan oleh sebab itu,
	    maka penjajahan di atas dunia harus dihapuskan, karena tidak sesuai dengan peri-kemanusiaan dan peri-keadilan. <hr>
	    Dan perjuangan pergerakan kemerdekaan Indonesia
	    telah sampailah kepada saat yang membahagiakan dengan selamat sentausa
	    mengantarkan rakyat Indonesia ke depan pintu gerbang kemerdekaan Negara Indonesia
	    yang merdeka, bersatu, berdaulat, adil dan makmur. <hr>
	    Atas berkat rakhmat Allah yang maha kuasa dan dengan didorongkan oleh keinginan luhur
	    supaya berkehidupan kebangsaan yang bebas,
	    maka rakyat Indonesai menyatakan dengan ini kemerdekaannya. <hr>
	    Kemudian dari pada itu
	    untuk membentuk suatu Pemerintah Negara Indonesia
	    yang melindungi segenap bangsa Indonesia dan seluruh tumpah darah Indonesia
	    dan untuk memajukan kesejahteraan umum, mencerdaskan kehidupan bangsa
	    dan ikut melaksanakan ketertiban dunia yang berdasarkan kemerdekaan, perdamaian abadi dan keadilan sosial,
	    maka disusunlah Kemerdekaan Kebangsaan Indonesia itu dalam suatu susunan Negara Republik Indonesia,
	    yang berkedaulatan rakyat dengan berdasar kepada:
	    Ketuhanan Yang Maha Esa,
	    Kemanusiaan yang adil dan beradab,
	    persatuan Indonesia
	    dan kerakyatan yang dipimpin oleh hikmat kebijaksanaan dalam permusyawaratan/perwakilan,
	    serta dengan mewujudkan suatu keadilan sosial bagi seluruh rakyat Indonesia.
	  </body>
	</html></pre>

4	Open your browser and type the following address: `localhost/dasarWeb/garishorizontal.html`.
5	Observe what appears in the browser.
6	Record your observations (question No. 10) and write your answer below.

Practical Section 7: Using List

HTML supports lists in the form of ordered, unordered, and definition lists. For each of these types, there are list items represented by the `<li>` and `</li>` tags, which indicate the individual items within the list.

Steps	Description
1	Create a file named `list.html` and save it in the `dasarWeb` folder that you created in Practical Section 2.
2	Type the following code into `list.html`:
3	
4	Open your browser and type the following address: `localhost/dasarWeb/list.html`.
5	Observe what appears in the browser.
6	Record your observations (question No. 11) and write your answer below.

Practical Section 8: Coloring

To set a background color, HTML provides the bgcolor attribute in the `<body>` tag. This attribute can be filled with a color name (e.g., red) or a hexadecimal code (e.g., #FFFFFF).

For certain other elements, the `color` attribute is available to apply coloring. Similar to `bgcolor`, the value of this attribute can also be a color name or a hexadecimal code.

Steps	Description
1	Create a file named `warna.html` and save it in the `dasarWeb` folder that you created in Practical Section 2.
2	Type the following code into `warna.html`
3	<code><> warna.html ✕ 1 <html> 2 <!-- Memberi warna aqua di body --> 3 <head> 4 <title> 5 Pewarnaan 6 </title> 7 </head> 8 <body bgcolor="aqua"> 9 <h3 align="center">Heading 3</h3> 10 Font berwarna merah

 11   Font berwarna merah (menggunakan nilai heksa) 12   </body> 13 </html> 14 15</code>
4	Open your browser and type the following address: `localhost/dasarWeb/warna.html`.
5	Observe what appears in the browser.
6	Record your observations (question No. 12) and write your answer below.

Practical Section 9: Working with Images

An HTML document can contain graphics in addition to text. HTML offers the `<img>` tag, which is supported by several attributes, for this purpose.

Steps	Description
1	Place an image in the `dasarWeb` folder with any size and name the image `bunga2`. If the image is in JPG format, the name should be `bunga2.jpg` (the file can be in a format other than JPG).
2	Create a new folder inside the `dasarWeb` folder and name it `img`.
3	Place a different image with any size in the `img` folder and name it `bunga1`. If the file is in JPG format, the name should be `bunga1.jpg` (the file can be in a format other than JPG).

4	Create a file named `gambar.html` and save it in the `dasarWeb` folder that you created in Practical Section 2.
5	Type the following code into `gambar.html`:
| 6 | ```html
<> gambar.html ×
1    <html>
2        <head>
3            <title>
4                Bekerja dengan gambar
5            </title>
6        </head>
7        <body>
8            <p>
9                <!-- Menggunakan Path Relative -->
10               <img src="bunga2.jpg">
11               Vivamus sem nibh, fermentum a dolor maximus, maximus feugiat nibh.
12               Duis vel condimentum lacus. Integer euismod ligula vel turpis auctor,
13               a malesuada diam interdum.
14               <br>
15               <hr>
16           </p>
17           <p>
18               <!-- Menggunakan Path Absolute -->
19               <img src="../dasarWeb/img/bunga1.jpg" align="right">
20               Vivamus sem nibh, fermentum a dolor maximus, maximus feugiat nibh.
21               Duis vel condimentum lacus. Integer euismod ligula vel turpis auctor,
22               a malesuada diam interdum.
23           </p>
24       </body>
25   </html>
``` |
7	Open your browser and type the following address: `localhost/dasarWeb/warna.html`.
8	Observe what appears in the browser.
9	Record your observations on the two methods of displaying images on the webpage (question No. 13) and write your answer below.

Practical Section 10 : Link

- A link in HTML is called a Hyperlink.
- A Hyperlink is an element, text, or an image that can be clicked to navigate to another document.
- The browser will highlight text or images identified as links with a color and/or underline to indicate that it is a hypertext link (hyperlink or link).
- The syntax for a link in HTML:
  The `<a>` (Anchor) tag is used to create a link to another document by adding the `href` attribute, which defines the link's destination.
  `<a href="url">linked text</a>`
  - The `href` attribute provides the link's destination address.
  - The linked `text` is the text that will appear on the webpage containing the link, and when clicked, it will navigate to the address specified in the `href` attribute.
  - Example: `<a href="https://polinema.ac.id">Click to go to Polinema</a>`

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- Types of Links
  a) **Relative Link**
     A local link that points to a location within the same website, specified by a URL (without `https://www`.).
  b) **Absolute Link**
     Used to create a link to a webpage on another website on the internet.
  c) **Link within the Same Document**
     This type of link is used for long documents that, when displayed in a web browser, require the user to scroll repeatedly. Navigation within the document can be simplified by creating links between sections, with each section being marked with a name. This allows a link to be placed elsewhere in the document to jump to that specific section.
     Steps to name a section within a document:
     - Place the cursor at the line or text that will mark the beginning of the section.
     - Insert the name of the section with: `<a name="section name">`.
     - Creating a link to the same document can be done similarly to absolute or relative links, but the document's name in the link is replaced with the section name, prefixed by #. Example: `<a href="#section name">Section about link</a>`.

Practical Steps:

Steps	Description
1	Create a file named `macamLink.html` and save it in the `dasarWeb` folder that you created in Practical Section 2.
2	Type the following code into `macamLink.html`:
3	

code in image:

```html
macamLink.html
1   <html>
2       <title>Membuat Link</title>
3       <head>
4
5       </head>
6       <body>
7           <a name="TOP">
8               <h4>Macam-macam Link</h4>
9               <a href ="#Link Relatif">Link Relatif</a><br>
10              <a href ="#Link Absolut">Link Absolut</a><br>
11              <a href ="#Link with New Window">Link with New Window</a><br>
12              <a href ="#Link ke Email">Link Ke Email</a>
13          </a>
14      <br><br><br><br><br>
15      <br><br><br><br><br>
16      <br><br><br><br><br>
17      <br><br><br><br><br>
18      <br><br><br><br><br>
19      <br><br><br><br><br>
20      <br><br><br><br><br>
21      <br><br><br><br><br>
22      <br><br><br><br><br>
23      <br><br><br><br><br>
24      <br><br><br><br><br>
25      <br><br><br><br><br>
26      <br><br><br><br><br>
27      <br><br><br><br><br>
28
29      <a name="Link Relatif">
30          <h1>Ini adalah contoh Link Relatif</h1>
31          <p>
32              Klik <a href="gambar.html">di sini</a> Jika Anda ingin menuju ke halaman berikutnya.<br><br>
33              Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut
34              labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris
35              nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
```

```html
35                    nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
36                    cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa
37                    qui officia deserunt mollit anim id est laborum.
38                    Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut
39                    labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris
40                    nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
41                    cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa
42                    qui officia deserunt mollit anim id est laborum.<br><br><br><br><br>
43                    <br><br><br><br><br>
44                    <a href="#TOP">Kembali Ke Menu</a>
45                </p>
46        </a><br><br>
47        <a name ="Link Absolut">
48            <h1>Ini adalah contoh Link Absolut</h1>
49            <p>
50                Klik <a href="http://www.google.com">di sini</a> untuk pencarian yang Anda inginkan.<br><br>
51                Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut
52                labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris
53                nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
54                cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa
55                qui officia deserunt mollit anim id est laborum.
56                Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut
57                labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris
58                nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
59                cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa
60                qui officia deserunt mollit anim id est laborum.<br><br><br><br><br>
61                <br><br><br><br><br>
62                <a href="#TOP">Kembali Ke Menu</a>
63            </p>
64        </a>
65        <br><br>
66        <a name="Link with New Window">
67            <h1>Ini adalah contoh Link dengan Window Baru</h1>
68            <p>
69                Buka <a href="http://www.google.com" target="_blank">www.google.com</a> di halaman baru.<br><br>
70                Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut
71                labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris
72                nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
73                cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa
74                qui officia deserunt mollit anim id est laborum.
75                Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut
76                labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris
77                nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
78                cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa
79                qui officia deserunt mollit anim id est laborum.<br><br><br><br><br>
80                <br>
81                <a href="#TOP">Kembali Ke Menu</a><br><br><br><br><br><br><br>
82            </p>
83        </a>
84        <a name="Link ke Email">
85            <h1>Ini adalah contoh link ke email</h1>
86            <p>
87                Anda bisa menghubungi saya di <a href = "mailto:dyah.ayu@polinema.ac.id">email ini</a>
88                untuk pertanyaan lebih lanjut.<br><br>
89                Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut
90                labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris
91                nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
92                cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa
93                qui officia deserunt mollit anim id est laborum.
94                Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut
95                labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris
96                nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
97                cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa
98                qui officia deserunt mollit anim id est laborum.
99            </p>
100       </a>
101       <br><br>
102       <a href="#TOP">Kembali Ke Atas</a>
103   </body>
104  </html>
```

4	Open your browser and type the following address: `localhost/dasarWeb/macamLink.html`.
5	Observe what appears in the browser and how each link functions.
6	Record your observations (question No. 14) and write your answer below.

Create a webpage and name it `tugasLink.html`.
Display an image that contains a link to `https://www.google.com`

Practical Section 11 : Table and Table Formatting

In a webpage, tables serve as a framework for organizing the content components, ensuring that the content is arranged neatly within the webpage.
Here is an example of a table structure design:

Picture 6. Example of a Table in a Web Page

❖ Creating Table
  Creating a table in HTML begins with the `<table>` tag and ends with the `</table>` tag.
  – `<table>`: This tag informs the browser that it is a table.
  – `<tr>`: Table Row tag, used to create a row within the table.
  – `<td>`: Table Data tag, used to place the data that you want to include in the table. The <td> can also be understood as a column.
  The structure of a table is illustrated in Figure 7.

Figure 7. Table Structure

The syntax for creating a table is as follows:

```
<table attribue="value">
<thead>
  <tr>
      <th attribue="value"> Header Content </th>
      <th attribue="value"> Header Content </th>
  </tr>
</thead>
<tbody>
  <tr>
```

```
        <td attribue="value"> Body Content </td>
        <td attribue="value"> Body Content </td>
   </tr>
  </tbody>
  </table>
```

❖ Table Configuration
Here are the attributes that can be used for table and row configuration.
  • Attributes for Tabel

Attribute	Description
align	Used to align the table to the left, center, right, or justify it.
border	Used to set the thickness of the border lines between cells in the table.
width	Used to specify the width of the table; you can set the table width using a percentage (%).
cellspacing	Used to define the space (padding) between cells and between the cells and the border.
cellpadding	Defines the space (padding) between the content of the cell and the cell's border.
bgcolor	Specifies the background color for all cells in the table.
bordercolor	Used to set the color of the border lines.

  • Attributes for Table Row

Attribute	Description
align	Used to align the table to the left, center, right, or justify it.
valign	Used for vertical alignment; valign can be set to values such as top (top of the page), center (middle of the page), bottom (bottom of the page), or baseline (standard).
bgcolor	Indicates the background color for the row.

❖ Merger Cell
Table cell merging can be achieved using the following attributes:
  – Rowspan: Used to merge cells across multiple rows. For example, to merge three rows, you would set rowspan="3".
  – Colspan: Used to merge cells across multiple columns. For example, to merge three columns, you would set colspan="3".

Practical Steps:

Steps	Description
1	Create a file named buatTabel.html and save it in the dasarWeb folder that you created in Practical Section 2.
2	Type the following code into buatTabel.html

| 3 | ```html
<> buatTabel.html ✕

1  <html>
2      <head>
3          <title>
4              Membuat tabel
5          </title>
6      </head>
7      <body>
8          <table>
9              <tr>
10                 <td>ini baris pertama kolom pertama</td>
11                 <td>ini baris pertama kolom kedua</td>
12             </tr>
13         </table>
14     </body>
15 </html>
``` |
4	Open your browser and type the following address: `localhost/dasarWeb/buatTabel.html`.
5	Observe what appears in the browser.
6	*Record your observations (question No. 15) and write your answer below.*
7	Add the attribute `border="1"` to the `<table>` tag. Save the file and run it again in the browser at `localhost/dasarWeb/buatTabel.html`.
8	Observe what changes appear on the screen.
9	*Record your observations (question No. 16) and write your answer below.*
10	Add one row to the table you previously created and add one column within it.
11	*Write down the code for the modified `buatTabel.html`. (question No. 17) and write your answer below.*
12	From the code you modified in question No. 17, add the attributes `height="100%"` and `width="40%"` to the `<table>` tag.
13	Save your work, then run it again in the browser at `localhost/dasarWeb/buatTabel.html`.
14	*Note the changes here (question No. 18) and write your answer below*
15	From the code you modified in step 12, remove the `%` symbol from height and width, so it becomes `height="100"` and `width="40"`.

16	Save your work, then run it again in the browser at `localhost/dasarWeb/buatTabel.html`.
17	What do you understand about the difference between using and omitting `%` in the code? Note your understanding here (question No. 19) and write your answer below.
18	From the code you modified in step 15, add the attribute `cellpadding="20"`.
19	Save your work, then run it again in the browser at `localhost/dasarWeb/buatTabel.html`.
20	Note the changes here (question No. 20) and write your answer below.
21	From the code you modified in step 18, add the attribute `cellspacing="5"`.
22	Save your work, then run it again in the browser at `localhost/dasarWeb/buatTabel.html`.
23	Note the changes here (question No. 21) and write your answer below.
24	From the code you modified in step 21, in the code used to set column 1 of row 1, add the attribute `align="right"`, so the code in that section becomes `<td align="right">`.
25	Save your work, then run it again in the browser at `localhost/dasarWeb/buatTabel.html`.
26	Note your observations here (question No. 22) and write your answer below
27	From the code you modified in step 24, add `%` to height and width, so it becomes `height="100%"` and `width="40%"`.
28	Next, in the code used to set column 1 of row 1, add the attribute `valign="bottom"`, so the code in that section becomes `<td align="right" valign="bottom">`.
29	Save your work, then run it again in the browser at localhost/dasarWeb/buatTabel.html.
30	Note your observations here (question No. 23) and write your answer below.

31	From the code in step 28, add font settings to the content of the first row, first column, by adding the `<font>` tag inside the `<td>` tag. You can see this in step 32.

32	```html
	<td align=right valign=bottom>
	    ini baris pertama kolom pertama</td>
	<td>ini baris pertama kolom kedua</td>
	``

33	Save your work, then run it again in the browser at `localhost/dasarWeb/buatTabel.html`.
33	Note your observations here (question No. 24) and write your answer below.
34	Change the text color of "`ini baris pertama kolom pertama`" to red and set the size to 15.
35	Write the modified code from step 34 in the `buatTabel.html` file here (question No. 25). And write your answer below
36	After completing step 35 in the `buatTabel.html` code, add the attribute `colspan="2"` to the second row, first column, so that the `<table>` tag results in a code snippet similar to what is shown in step 37.

37	```html
	<table border=1 height=100% width=40% cellpadding= 20 cellspacing=5>
	    <tr>
	        <td align=right valign=bottom>
	            ini baris pertama kolom pertama</td>
	        <td>ini baris pertama kolom kedua</td>
	    </tr>
	    <tr>
	        <td colspan="2">ini sekarang menjadi gabungan 2 kolom</td>
	    </tr>
	</table>
	``

38	From the code you completed in step 36, add one more column to the first row, so that the display will look like what is shown in step 39.

39	ini baris pertama kolom pertama — ini baris pertama kolom kedua — tambah 1 kolom — ini sekarang menjadi gabungan 2 kolom (question No 26) Write down your code here
40	Next, add one more column to the second row so that the display will look like what is shown in step 41.
41	ini baris pertama kolom pertama — ini baris pertama kolom kedua — tambah 1 kolom — ini juga tambah 1 kolom lagi — ini sekarang menjadi gabungan 2 kolom (question No 27) Write down your code here
42	Add the attribute `rowspan="2"` to the second row, first column. Save your work, run it in the browser, and observe the changes.
43	Note your observations here (question No. 28) and write your answer below.

44	From the code in step 42, remove `rowspan="2"` from the second row, first column.
45	Then add `rowspan="2"` to the first row, first column so that the code will look like what is shown in step 46.
| 46 | ```html
<table border=1 height=100% width=40% cellpadding= 20 cellspacing=5>
    <tr>
        <td  rowspan=2 align=right valign=bottom>
            <font face=courier>ini baris pertama kolom pertama</font></td>
        <td>ini baris pertama kolom kedua</td>
        <td>tambah 1 kolom</td>
    </tr>
    <tr>
        <td>ini juga tambah 1 kolom lagi</td>
        <td colspan="2">ini sekarang menjadi gabungan 2 kolom</td>
    </tr>
</table>
``` |
| 47 | Save your work and run it in your browser. Observe the difference between the code in step 42 and step 45. |
| 48 | Note your observations here (question No. 29) and write your answer below. |

Practical Section 12 : Working with Forms in HTML

A form is a place for data input before being processed by the system. Examples include login forms, comment forms, user data forms, and more. The process of data input from a form will be discussed in PHP, MySQL, and JavaScript materials. The tag used to create a form is the `<form>` tag, which can contain elements like `<input>`, `<textarea>`, `<option>`, and `<select>`.

The form has attributes such as action and method. The action attribute specifies the URL that will be executed and receives all the input from the form. If action is not specified, the form data will be sent to the same URL as the webpage itself, while the method attribute contains the method used by the form to submit the data (GET/POST).
  - **GET**: Information is sent along with the URL.
  - **POST**: Information is sent separately from the URL.

Syntax :

```
<form action="url" method="GET|POST">
  ...... form fields
</form>
```

INPUT Element

The `<input>` element is used to define the input that will be provided by the user. This element has attributes such as name, size, type, value, and checked.

- The `name` attribute defines the name of the input control within the form.
- The `size` attribute defines the size of the text within the input control.
- The `type` attribute defines the different types of input controls.
- The `value` attribute defines the initial value, reset, or submit value.
- The `checked` attribute defines the selected option for radio or checkbox types.

This element does not have a closing tag and must be placed within a <form> element.

Syntax :

```
<input name="name" type="text" value="Name of .....">
<input name="name_val" size="number" type="checkbox" value="1" checked>
```

Attributes type:

Type	Description
button	`<input type="button">`: Defines a clickable button (usually used with a JavaScript script).
checkbox	`<input type="checkbox">`: Defines a checkbox.
color (HTML5)	`<input type="color">`: Defines a color picker.
date (HTML5)	`<input type="date">`: Defines a date picker (year, month, day with no time).
datetime-local (HTML5)	`<input type="datetime-local">`: Defines a date and time picker (year, month, day, time with no timezone).
email (HTML5)	`<input type="email">`: Defines an input area for an email address.
file	`<input type="file">`: Defines an area for selecting a file with a "Browse" button (for file uploads).
hidden	`<input type="hidden">`: Defines a hidden input field.
image	`<input type="image">`: Defines an image as a button.
month (HTML5)	`<input type="month">`: Defines a month and year picker (no timezone).
number (HTML5)	`<input type="number">`: Defines an area for entering a number.
password	`<input type="password">`: Defines an area for entering a password.
radio	`<input type="radio">`: Defines a radio button.
range (HTML5)	`<input type="range">`: Defines a range control (like a slider).
reset	`<input type="reset">`: Defines a reset button.
search (HTML5)	`<input type="search">`: Defines a text area for entering a search query.
submit	`<input type="submit">`: Defines a submit button.
tel (HTML5)	`<input type="tel">`: Defines a text area for entering a phone number.
text	`<input type="text">`: Default. Defines a single-line text area.
time (HTML5)	`<input type="time">`: Defines a time picker (no timezone).
url (HTML5)	`<input type="url">`: Defines an area for entering a URL.
week	`<input type="week">`: Defines a week and year picker (no timezone).

SELECT Element

The `<select>` attribute is used to define selectable options in a form control. This element has attributes such as name, size, and multiple (which allows multiple selections). This element must be placed within a `<form>` element.

Syntax :

```
<select name="name" size="number" multiple>
    ......
</select>
```

OPTION Element

The `<option>` element defines the selectable options within a `<select>` menu. This element has attributes such as selected and value. The `selected` attribute indicates the default selected option, and the value attribute holds the value associated with the option element.

Syntax:

```
<select name="name" size="number">
  <option value="value-1">Text 1</option>
  <option value="value-2">Text 2</option>
  <option value="value-3">Text 3</option>
</select>
```

TEXTAREA Element

The `<textarea>` element functions as a form input control for entering multi-line text. This element has attributes such as `name`, `cols`, and `rows`. The `name` attribute defines the name of the input control for the `<textarea>` element, the `cols` attribute defines the number of visible columns in the textarea, and the `rows` attribute defines the number of visible rows in the textarea. This element must be placed within a `<form>` element.

Syntax:

```
<textarea name="name" rows="number" cols="number">
   ...... text
</textarea>
```

Practical Steps:

Steps	Description
1	First, in this practical session, you will create a form with elements as shown in the picture:

2	Create a file named `buatForm.html` and save it in the `dasarWeb` folder that you created in Practical Section 2.
3	Type the following code into `buatForm.html`:
| 4 | ```html
<html>

<head>
    <title>Membuat Form</title>
</head>

<body>
    <form method="POST" action="gambar.html">
        <h4>FORM</h4>
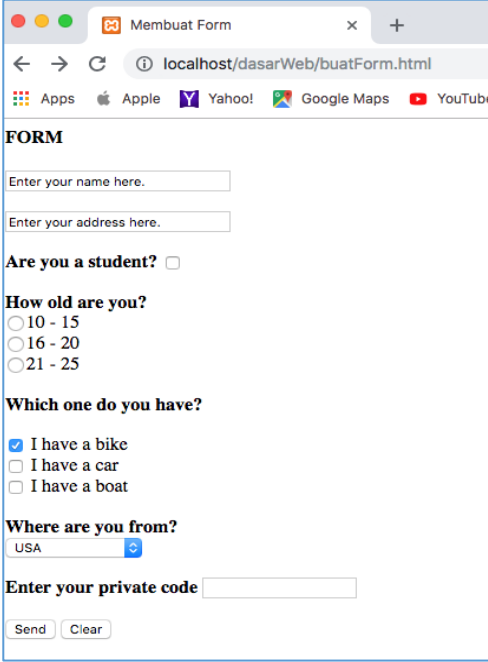        <input type="text" name="var1" SIZE="30" VALUE="Enter your name here.">
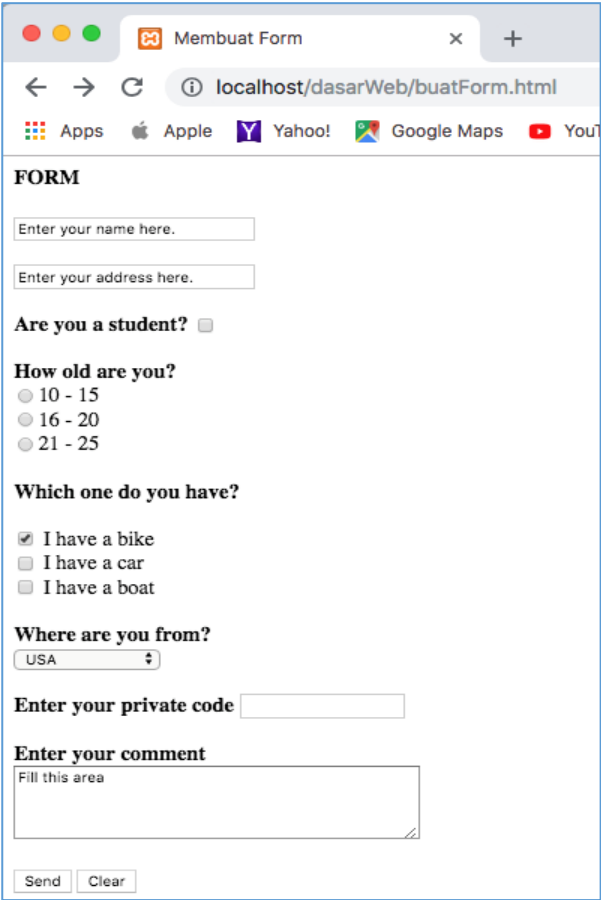        <BR><BR>
        <B>Are you a student?</B>
        <input type="checkbox" name="var3">
        <BR><BR>
        <B>How old are you?</B>
        <BR>
            <input type="radio" name="var4" value="r1">10 - 15 <BR>
            <input type="radio" name="var4" value="r2">16 - 20 <BR>
            <input type="radio" name="var4" value="r3">21 - 25 <BR><BR>
        <input type="submit" name="var5" value="Send">
        <input type="reset" name="var6" value="Clear">
        </form>
</body>

</html>
``` |
5	Save the file, then open your browser and type the following address: `localhost/dasarWeb/buatForm.html`.
6	Observe what appears in the browser.
7	Note your observations and understanding here (question No. 30) and write your answer below.
8	Note your observations and understanding here (question No. 30) and write your answer below. Add a text input field to enter an address, placing it below the text input field for entering a name. Save the file, then run it in the browser at `localhost/dasarWeb/buatForm.html`.
9	Observe what changes in the display.
10	Record the code you added in step 7 here (question No. 31) and write your answer below.
11	Add the following program code below the last radio button, above the submit and clear buttons.

| | ```
<b>Which one do you have?</b><br><br>
<input type="checkbox" name="vehicle1" value="Bike" checked> I have a bike<br>
<input type="checkbox" name="vehicle2" value="Car"> I have a car<br>
<input type="checkbox" name="vehicle3" value="Boat"> I have a boat<br>
``` |
| 12 | Does the display in the browser look like the one shown below? (question No. 32).

FORM

Enter your name here.

Enter your address here.

Are you a student? ☐

How old are you?
○ 10 - 15
○ 16 - 20
○ 21 - 25

Which one do you have?

☑ I have a bike
☐ I have a car
☐ I have a boat
Send   Clear

Write your answer here : |
13	From the code you modified in question No. 32, add a checkbox input that displays the option "I have a plane" and move the checkmark ✓ from the option "I have a bike" to the checkbox option "I have a plane".
14	Save your work, then run it again in the browser at localhost/dasarWeb/buatForm.html.
15	Write down here the code for the entire checkbox configuration, including the code for the checkbox you just added. (question No. 33). Write your answer below
16	Add the program code from step 17 into the program code you modified in step 13. Place it below the checkbox configuration and above the button configuration.

| 17 | ```html
<br>
<b>Where are you from?</b>
    <br>
        <select name="var6" size="1">
            <option value="BG">Bulgaria
            <option value="UK">United Kingdom
            <option value="USA" selected>USA
        </select>
<br><br>
``` |
18	Save your work, then run it again in the browser at `localhost/dasarWeb/buatForm.html`.
19	
19	From the code you modified in step 17, add one more country option, "Indonesia," and set "Indonesia" as the default selected option.
20	Save your work, then run it again in the browser at `localhost/dasarWeb/buatForm.html`.
20	
21	From the code in step 17, change the value of `size=1` to `size=2`.
22	Save your work, then run it again in the browser at `localhost/dasarWeb/buatForm.html`.
23	
24	From the code you modified in step 21, revert the value of `size` back to `1`.
25	Save your work, then run it again in the browser at `localhost/dasarWeb/buatForm.html`.
26	From the code you modified in step 24, add a single text area to input a password using the `<input>` element with the `type="password"`, so that the display will look like this:

27	Save your work, then run it again in the browser at `localhost/dasarWeb/buatForm.html`.
28	Record the code you added in step 26 here. (question No. 37) and write your answer below.
29	From the code in step 28, add a text area for typing long comments using the `<textarea>` and `</textarea>` tags, so that the display will look like this:

30	Save your work, then run it again in the browser at `localhost/dasarWeb/buatForm.html.`
31	Please record the code you added in step 29 here (question No. 37). Write your answer here
32	Notice that the `<form>` tag includes the attribute `method="POST"`. Run the form again in the browser at `localhost/dasarWeb/buatForm.html`, fill out the form, and then click the "Send" button. Observe the URL in the address bar of the page you are directed to after clicking the `"Send"` button.
33	Open the `buatForm.html` code again and change the method from `POST` to `GET`. Save the file, then run it again in the browser at `localhost/dasarWeb/buatForm.html`. Fill out the form and click the `"Send"` button. Observe the URL in the address bar of the page you are directed to after clicking the "Send" button. Compare and note the differences between the `GET` and `POST` methods based on what you observe.
34	Note your observations here (question No. 38) and write your answer below.

References:
1. Jason Beaird, *The Principles of Beautiful Web Design*
2. Rian Ariona, *Belajar HTML dan CSS (Tutorial Fundamental dalam mempelajari HTML dan CSS)*
3. Adi Hadisaputra, *HTML dan CSS Fundamental dari Akar menuju Daun*
4. John Duckett, *HTML and CSS: Design and Build Websites*