http://smtom.lecture.ub.ac.id/
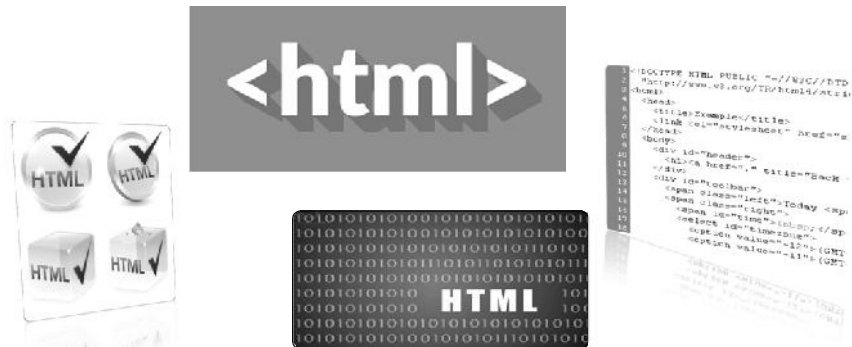Password:

https://syukur16tom.wordpress.com/
Password:

LECTURE 08:
INTRODUCTION TO HTML

We make a living by what we get,…but we make a life by what we give. Winston Churchill

GRADING POLICY

Grading Point	Grade	Weight	Final Grade
Task 1	N1	5%	0.05N1
Quiz 1	N2	5%	0.05N2
Mid Term Exam	**N3**	**25%**	**0.25N3**
Task 1	N4	5%	0.05N4
Quiz 1	N5	5%	0.05N5
Final Term Exam	**N6**	**25%**	**0.25N6**
Lab. Exercise	N7	30%	0.30N7
TOTAL			

WELCOME TO THE COURSE OF PLANT BIOCHEMISTRY

Who am I?: Prof. Dr. S.M. Sitompul

These are my rules
- Come on time ($\pm$ 10') with a proper dress
- Get into the lecture room, don't hang around
- Use English in my lecture and exam (75-99%)

- These are my philosophies
  - Turn your enemies to be your friends
  - Turn your useless time to be useful time
  - Make big problems to be small problems
  - Simplify the systems or problems

STRUCTURED TASK

1. English Presentation
   - Every student has to make English Presentation
2. Dictionary
   - Take your English dictionary every time I give my lecture
3. My Dictionary
   - Buy a writing book (100-pages) and name it MY DICTIONARY
   - Write down all English words with Indonesian meanings that you do not know yet

4. Literature Study
- Every student has to undertake literature study to obtain more and detail information as to the lecture materials

5. Study Groups
- Organize your study group, 5 member each to discuss the lecture materials

6. Paper (NO COVER, NO COVER, NO COVER,)
- *Write a paper about Plant Biochemistry or an extended summary of a published papers in international Journal (internet)*
- *One (1) page only, (single space) arranged in several paragraphs (4-5 sentences/ paragraph), font (Times New Roman 12)*

LEARNING OUTCOMES

Students, after mastering materials of the present lecture, should be able

1. to explain how the Web works.
2. to explain what a Web Page is.
3. to explain what HTML is.
4. to apply HTML to create basic pages.

LECTURE OUTLINE

I. INTRODUCTION
1. How the Web Works?
2. What are Web Pages?

II. HTML BASICS
1. Definition
2. How Does It Works
3. Basic Concept
4. HTML Structure
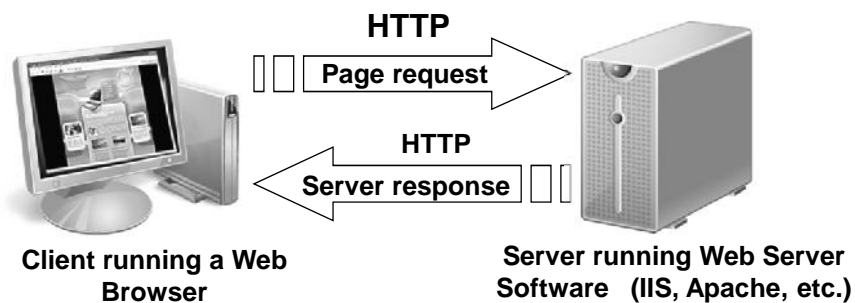
III. HTML APPLICATION
1. Text Editor
2. Exercise I
3. Basic Text Formatting
4. Exercise II
5. Exercise III
6. Text Styling

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I. INTRODUCTION

1. How The Web Works
1. WWW uses classical client/server architecture that is **HTTP** (HyperText Transfer Protocol), a text-based request-response **protocol**.

HTTP
Page request

HTTP
Server response

Client running a Web Browser

Server running Web Server Software   (IIS, Apache, etc.)

2. Nowadays, WWW is based on **HTTPS** (Hyper Text Transfer Protocol Secure) which is the secure version of **HTTP.**

2. What Web Pages

1. Web pages are text files containing HTML (<u>H</u>yper <u>T</u>ext <u>M</u>arkup <u>L</u>anguage)
   - A notation for describing
     - document structure (semantic markup)
     - formatting (presentation markup)
   - Looks (looked?) like:
     - A Microsoft Word document

2. The markup tags provide information about the page content structure

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II. HTML BASICS

1. Definition

- **HTML**, first developed by Tim Berners-Lee in 1990, is the standard markup language used to create **electronic documents** (web pages) that are displayed on the **WWW**.
- HTML, the most basic building block of the Web, describes and defines the *content* of a webpage.
- Other technologies besides HTML are generally used to describe a webpage's appearance/presentation (CSS) or functionality (<u>JavaScript</u>).
  - *Hypertext*, the term coined by Ted Nelson around 1965, is text which contains links to other texts (webpages), either within a single website or between websites.
  - This is the method used to move around on the web — by clicking on special text called **<u>hyperlinks</u>**, and *hyper* means it is not linear — i.e. you can go to any place on the Internet whenever you want by clicking on links — there is no set order to do things in.

- *Markup* is what **HTML tags** do to the text inside them. They mark it as a certain type of text (*italicised* text, for example).
- HTML is a *Language*, as it has code-words and syntax like any other language.

2. How does it work?

- HTML consists of a series of short **codes** typed into a text-file by the site author — **these are the tags**.
- The text is then **saved as a html file**, and **viewed through a browser** (program you use to view webpages), like *Internet Explorer* or *Netscape Navigator*.
- This browser reads the file and translates the text into a visible form, hopefully rendering the page as the author had intended.

- Writing HTML entails using tags correctly to create vision, and anything can be used from a rudimentary text-editor to a powerful graphical editor to create HTML pages.
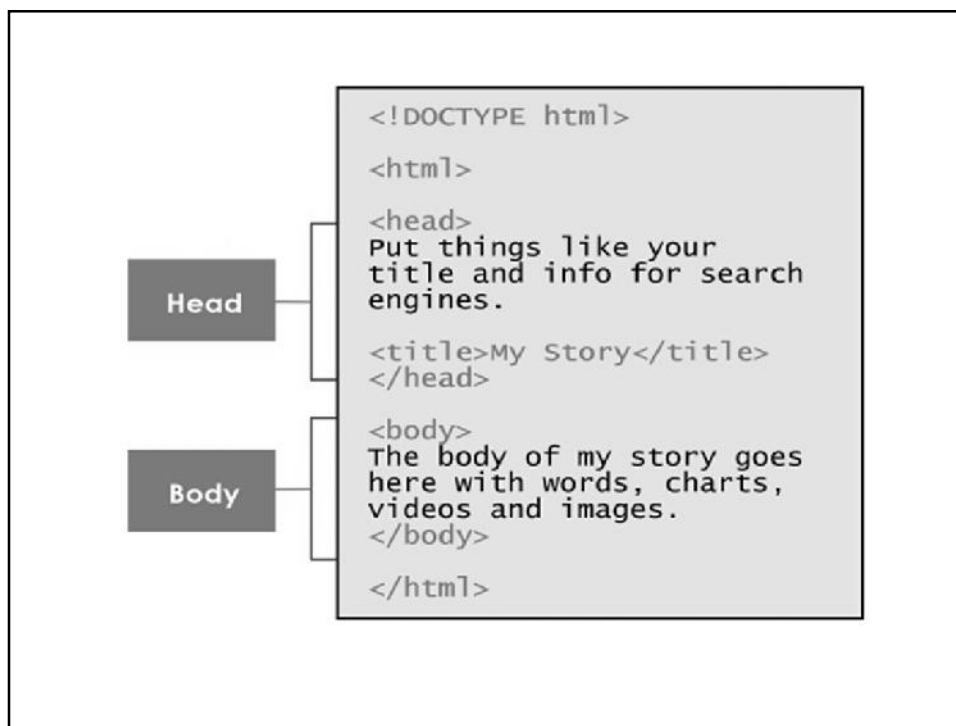
3. Basic Concept

- HTML is written in plain text so there is no need for any fancy software programs to write code.
- What is needed is a simple text-editor that's already on most computers (on PCs) such as Notepad or TextEdit on MACs.
- There are fairly simple rules in the application of HTML;
  - Tags/Elements. HTML has what is called **tags** which are angled brackets **<… >**.
  - Inside these tags are words or letters that tell the computer what to do.

- For example **<hr>** tells the browser to display a horizontal line, and these words or letters are called **elements**.
- **Container** and **empty tags**. There are two kinds of tags: container and empty. The container tag always wraps around text or graphics and comes in a set with an opening and a closing.

  <html> opening tag

  </html> closing tag

  Notice the forward slash (**/**) on the closing tag telling the browser that the tag has ended.

  On the other hand, the empty tag stands alone. The tag **
** is one that adds a line break. Empty tags do not have to be wrapped around text and do not require a closing.
- **Case sensitive**. HTML is also not case sensitive so either lowercase or uppercase can be used. <HTML> is the same as <html>, but use either one or the other for consistency. It's best not to mix, and codes in the following exercises have been written in lowercase.

4. HTML Structure

- All HTML documents are divided into two main parts:
  - the head and
  - the body.
- When you begin any new page, it must have a declaration:

  <!DOCTYPE html>
- It's telling or declaring to the browser that the following file is an HTML file.
- To build any webpage you will need four primary tags:

  <html>, <head>, <title> and <body>.

  These are all container tags and **must appear as pairs with a beginning and an ending**.

```
<!DOCTYPE html>

<html>

<head>
Put things like your
title and info for search
engines.

<title>My Story</title>
</head>

<body>
The body of my story goes
here with words, charts,
videos and images.
</body>

</html>
```

<html>…</html>

- Every HTML document begins and ends with the <html> tag. This tells the browser that the following document is an html file. Remember, *tags tell the browsers how to display information*.

<head>…</head>

- The <head> tag contains the title of the document along with general information about the file, like the author, copyright, keywords and/or a description of what appears on the page.

<title>…</title>

- Appears within the <head> tags and gives the title of the page. Try to make your titles descriptive, but not more than 20 words in length. The title appears at the very top of the browser page on the title tab.

<body>…</body>

- The main content of your page is placed within the body tags: your text, images, links, tables and so on.

Nesting

- Part of the web page structure is called nesting. Notice above how the tag <title> is nested inside the <head> tag, while <head> and <body> are nested inside <html>.

<html>
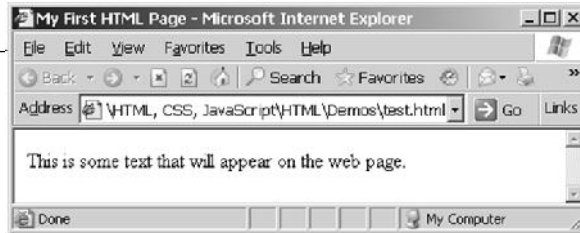 <head>
    <title>   </title>
  </head>
  <body> </body>
</html>

III. HTML APPLICATION

1. Text Editor

- HTML files can be created with text editors: NotePad, NotePad++, TextWrangler, Coda and PSPad,
- There are HTML editors (WYSIWYG Editors):
  1. Microsoft FrontPage
  2. Macromedia Dreamweaver
  3. Netscape Composer
  4. Microsoft Word
  5. Visual Studio
- Using the primary HTML tags (<html>, <head>, <title> and <body>), it is now ready to create the first Web page.
- Open text editor: Start → All Programs → Accessories → Notepad

First HTML Page

Test.html

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>
     <p>This is My First HTML Page</p>
  </body>
</html>
```

My First HTML Page - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

Back   Search   Favorites

Address \HTML, CSS, JavaScript\HTML\Demos\test.html   Go   Links

This is some text that will appear on the web page.

Done   My Computer

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First HTML Page: Tags

```
<!DOCTYPE HTML>
<html>                    Opening tag
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>                  Closing tag
     <p>This is My First HTML Page </p>
  </body>
</html>
```

An HTML element consists of an opening tag, a closing tag and the content inside.

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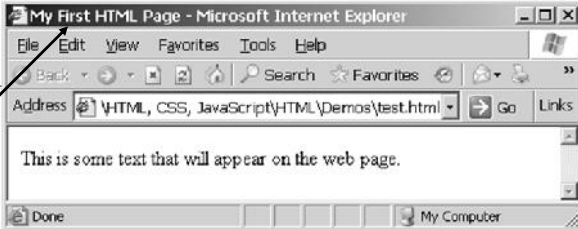
First HTML Page: Header

HTML header

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>
    <p>This is My First HTML Page </p>
  </body>
</html>
```

My First HTML Page - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

Back · · Search Favorites

Address \HTML, CSS, JavaScript\HTML\Demos\test.html   Go   Links

This is some text that will appear on the web page.

Done   My Computer

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First HTML Page: Body

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>My First HTML Page</title>
  </head>
  <body>
    <p>This is My First HTML Page</p>
  </body>
</html>
```

HTML body

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Some Simple Tags

- Hyperlink Tags

```
<a href="http://www.telerik.com/"
  title="Telerik">Link to Telerik Web site</a>
```

- Image Tags

```
<img src="logo.gif" alt="logo" />
```

- Text formatting tags

```
This text is <em>emphasized.</em>
<br />new line<br />
This one is <strong>more emphasized.</strong>
```

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---

2. Exercise I

- **Step 1:** Enter the following codes inside the editor.

  <!DOCTYPE html>
  <html>
   <head>
    <title> Hello World</title>
   </head>
   <body>Hello world. This is my first web page. How do you like it?.
   </body>
  </html>

  Formatting the HTML source code is necessary to increase readability and facilitate debugging as shown above, but can be sacrificed for certain reason.

- **Step 2:** Create a folder on your hard drive called HTML.

It should look like this (in Notepad):

Step 3: Save the document as: helloworld.html in the HTML folder. Your file can be saved as either an htm or html file. Whatever you decide, just remember to be consistent.

When done, go to file and hit Save As. Then enter helloworld.html

Step 4: To preview your new document, go to the HTML folder and open the helloword.html file. Your browser should open up and your page will appear. Like this:

- Congratulations!
- You have successfully completed your first web page. It actually doesn't get any.

3. Basic Text Formatting

- A webpage is made up of more than just plain words on a screen.
- There are headlines, paragraphs, graphics, colors and much more. It's a lively place to be.

<p>…</p>
- This is paragraph tag to be used every time to begin a new paragraph. This is a container one, so you have to remember to have a beginning and an ending : <p>…</p>

- To add a single line of space, you use the break tag. This is an empty tag and stands alone. You can use the <br> tag to insert one or more blank lines.

\<hr\>
- This is an empty tag used to create a horizontal line on your page.
- You use the empty tag. This is a container one, so you have to remember to have a beginning and an ending.

Headline tag
- One way to create bold copy in HTML is by using the headline tag. There are six levels of headlines, ranging from \<h1\>…\</h1\> to \<h6\>…\</h6\>.
- Here is an example of the code for all the headline sizes:

  \<h1\>Level 1 Headline\</h1\>
  \<h2\>Level 2 Headline\</h2\>
  \<h3\>Level 3 Headline\</h3\>
  \<h4\>Level 4 Headline\</h4\>
  \<h5\>Level 5 Headline\</h5\>
  \<h6\>Level 6 Headline\</h6\>

And here is how each level looks in a browser:

4. Exercise II

- To begin using new code, we are going to create a story about Muffins, the cat. Here is the text below, which we will mark-up with HTML code.

  Muffins, the early years

  Hi. My name is Muffins. I am a mighty cat. I was adopted by my family when I was only three weeks old.

  My new mommy is a human. They are funny creatures.

- Notice we have a headline, and two paragraphs. Just for fun, I'm going to include a horizontal rule just under the headline. Now let's put some code around the text.

Step 1

- Load your text editor and enter the following codes:

```
<!DOCTYPE html>
<html>
 <head>
  <title>Muffins</title>
 </head>
 <body>
<h1>Muffins, the early years</h1>
<hr>
<p>Hi. My name is Muffins. I am a mighty
cat. I was adopted by my family when I was
only three weeks old.</p>
<p>My new mommy is a human. They are
funny creatures. </p>
 </body>
</html>
```

It should look like this in Notepad:

Step 2
- Save the document as: muffins.html. Again, remember to save your file in the HTML folder.

Step 3
- Go to the file and open it. What do you see? Is it something like this? If not, go back and check your code.

Congratulations.
You created a page with a headline, a horizontal rule and two paragraphs. Way to Go!!

5. Exercise 5

- Mostly everyone has "unlimited" time access to the Internet, but the behavior hasn't changed much. People are still in a hurry, and they don't like to read a lot of text.
- So putting your information in the form of a list seems to help.
- Lists come in a variety of forms with most either numbered or bulleted. The numbered lists are called **ordered lists** and the bulleted lists are **unordered lists**.
- Lists are nested. There is a tag that identifies the type of list, like numbered or bulleted. Then within that tag there is another tag that itemizes the list. Maybe some definitions would help.

**
…
**

- The ordered list (**ol**) is a container tag and is used for numbered lists.

**
…
**

- The unordered list (**ul**) is a container tag and is used for bulleted lists.

**
…
**

- The listed item (**li**) tag is a container tag and is nested within the ordered or unordered tags.
- Here is an example of the differences between ordered and unordered lists.
- An ordered (numbered) list goes like this:

```
<ol>
<li>My first item on the list.</li>
```

```
    <li>My second item on the list.</li>
    <li>My third item on the list.</li>
    <li>My fourth item on the list.</li>
    </ol>
```

- In the browser it will appear like this:
  1. My first item on the list.
  2. My second item on the list.
  3. My third item on the list.
  4. My fourth item on the list.

- An unordered (bulleted) list goes like this:
  ```
  <ul>
  <li>My first item on the list.</li>
  ```

```
    <li>My second item on the list.</li>
    <li>My third item on the list.</li>
    <li>My fourth item on the list.</li>
    </ul>
```

- In the browser it will appear like this:
  - My first item on the list.
  - My second item on the list.
  - My third item on the list.
  - My fourth item on the list.

- Let's add a list to our story about Muffins. I will be adding:
- I left the pound with my new mommy and new sister, Maria. They took me straight to the pet store to buy:

- A kitty baby bottle and formula
- A small cloth toy
- Litter box with litter
- Food (for later)

- Mom and sis had to feed me by bottle because I was so young.
- Notice we have added two new paragraphs and a list. So let's add that to our code.

Step 1

- Open your text editor and open muffins.html. If you can't see the file, you may have to enter the filename. Add the text and code listed in yellow below.

```
<!DOCTYPE html>
<html>
```

```
<head>
    <title>Muffins</title>
  </head>
  <body>
<h1>Muffins, the early years</h1>
<Hr>
<p>Hi. My name is Muffins. I am a mighty
cat. I was adopted by my family when I was
only three weeks old.</p>
<p>My new mommy is a human. They are funny
creatures. </p>
<p>I left the pound with my new mommy and
new sister, Maria. They took me straight to
the pet store to buy:</p>
 <ul>
  <li>A kitty baby bottle and formula</li>
  <li>A small cloth toy</li>
  <li>Litter box with litter</li>
  <li>Food (for later)</li></ul>
  <p>Mom and sis had to feed me by bottle
because I was so young.</p>
  </body>
</html>
```

It should look like this in your text editor:

Step 2

- Go to the file and open it. What do you see now? Is it something like this? If not, go back and check your code.

HTML
Basics
HTML, Text, Images, Tables

Nikolay Kostov

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