

HTML - Introduction

Week I

Pemrograman Web Statis - Static Web Programming

Semester 1

Outline

1. Definition of the static web
2. Principle of client server communication
3. Basic web based programming
4. HTML (Hypertext Markup Language) structure and basic tags



1. Definition of the static web

The concept of web

- ▶ How does the web system work?
- ▶ How to find and retrieve web pages from the internet?
- ▶ How is data (web pages) sent over the internet?

What is Static Web?

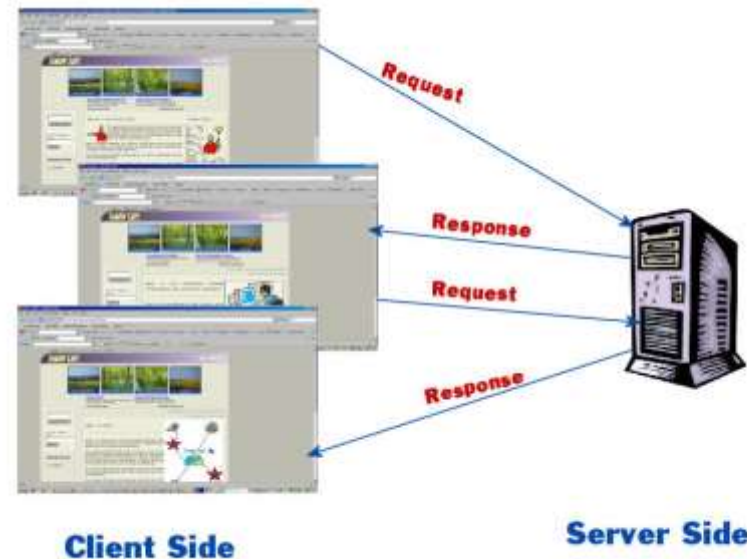
- ▶ Content **does not change**
- ▶ Setting or updating the contents is done **manually**
- ▶ Users **cannot** change content
- ▶ The interaction between client and server is only related to **processing link**.
- ▶ **Tool** for setting / changing web uses Editor (text [notepad, Textedit], WYSIWYG [macromedia dreamweaver, frontpage, etc.])

2. Principle of client server communication

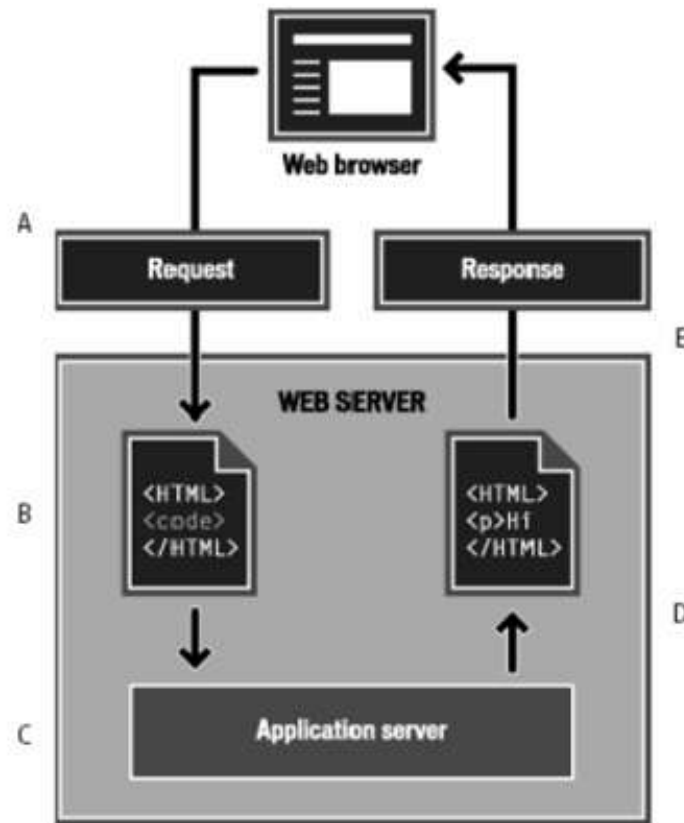
Client dan Server

Web is an application client / server ->

Web browser is a client that sends requests to the web server, then the web server sends responses to be sent back to the client



Skema Aplikasi WEB



Explanation:

- ▶ A. Step 1 - The web browser requests a page.
- ▶ B. Step 2 - The web server looks for the requested page, and after it is found, gives the page to the application server.
- ▶ C. Step 3 - The application server parses (reads) the page to process a php program.
- ▶ D. Step 4 - The application server sends the processed page back to the web server
- ▶ E. Step 5 - The web server sends the processed page to the requesting browser.

Prepare for learning web static programming

- ▶ Computer / Laptop
 - ▶ Browser (Mozilla / Chrome / Safari / etc)
 - ▶ Editor (notepad++ / sublime / gEdit / Visual Studio Code / etc)

3. Basic web based programming

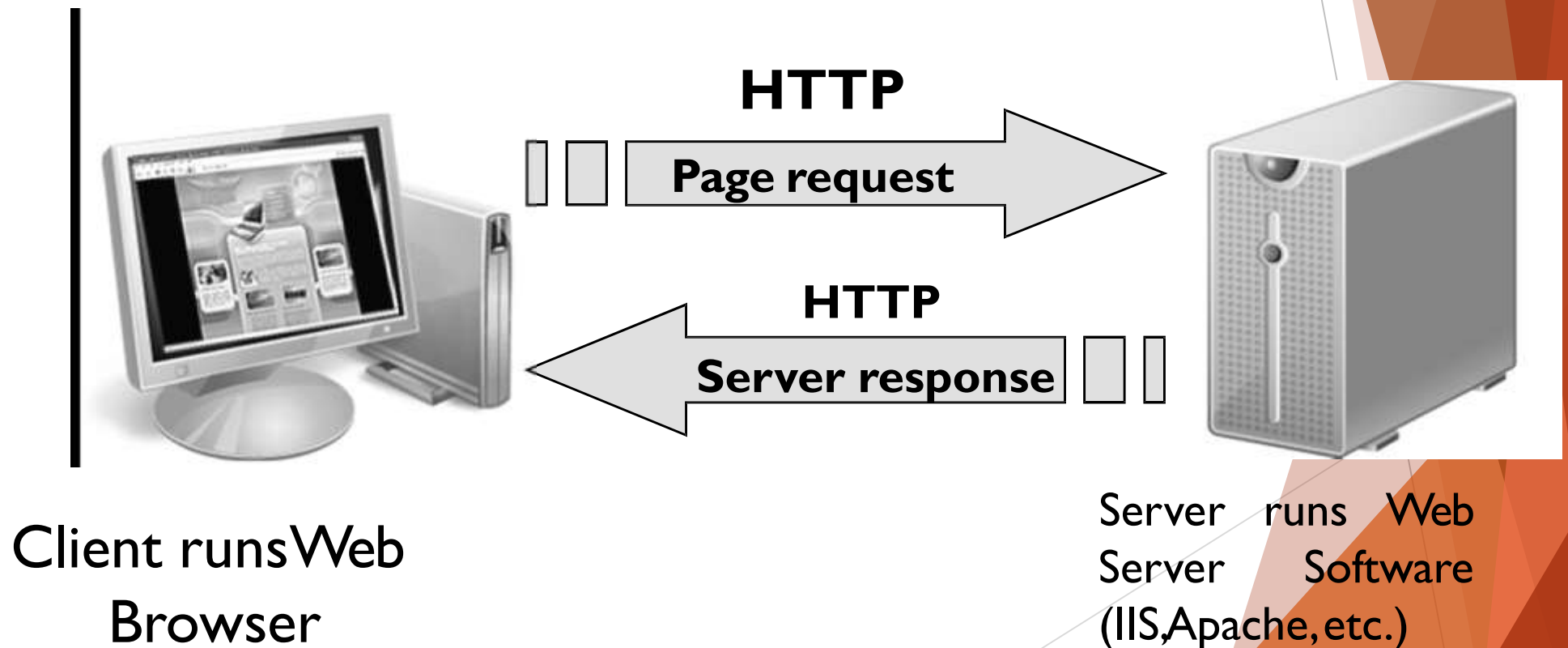
Let's get started

- Suppose in this first meeting, you didn't know everything about HTML.
- What you need:
 1. A computer
 2. Web browser (IE, Firefox, Chrome, etc)
 3. Word processor / text editor (notepad, wordpad, etc)

Its better to use *syntax highlighter*
(Notepad++, Sublime Text, Gedit, Kate, dll)

How Web Works ?

- WWW use client / server architecture
- HTTP is text-based request-response protocol



Fundamental of Web-based Programming

- Communication between web browser and web server based on HTTP.
- Document and all resources in a desired network will be identified using *Universal Resource Locator* (URL).
- Web document is created using standard HTML.
- client-side scripting and Java applet.
- server-side scripting / programming.

► (Hariyanto, 2004)

Client Side Programming

- A programming language which doesn't need a web server to apply, or a client side running language.
- Example:
 - HTML
 - JavaScript

Server Side Programming

- Needs a web server to run this programming language, or a server side programming language.
- Example:
 - ASP,needs IIS web server .
 - PHP,needs Apache web server.

4. HTML (Hypertext Markup Language) structure and basic tags



HTML

Introduction

```
<html>  
<body>  
  
<h1>This is my first heading</h1>  
  
<p>My first paragraph</p>  
  
</body>  
</html>
```

What is HTML ?

- HTML = HyperText Markup Language
- Hyper = the opposite of linear, to make a computer program written in a linear format.
 - “that before this, this before that,etc.”

What is HTML ?

- HTML is a basic language to display a web page on a web browser.
- HTML have no patterns as any other common programming language, however it is possible for people to explore anywhere at anytime via [WWW](#).
- HTML is written in “Text”
- Markup ? → this is what you have to do. You will write an English text, and you “markup” it.
- Language = a language (in English).

Definition of HTML

- HTML is not a programming language, but a *markup* language.
- *Markup* language contains of a set of markup tags.
- HTML uses markup tags to create a web page.
- HTML is a programming language used to create a web page.
- This web page is then could be seen by people all over the world through internet.

How HTML works?

- Can be seen in *Inspect Element* feature on a Web Browser
- HTML contains short sequence codes written in a text file → this codes called as “tags”
- The text file saved as an html file and it displayed using a web browser.

HTML Tags

- HTML tags are **keywords** (tag names) surrounded by **angle** brackets, such as `<html>`
- HTML tags normally come **in pairs** like `<p>` and `</p>`
- The first tag in a pair is the **start tag**, the second tag is the **end tag**
- The end tag is written like the start tag, but with a **slash** before the tag name.

HTML Documents

- HTML documents describes a web page
- HTML documents contains HTML tags and text
- HTML documents are known as a web page

Web Browser

- The purpose of a web browser (Chrome, IE, Firefox, Safari) is to read HTML documents and display them
- The browser does not display the HTML tags, but uses them to determine how to display the document.

HTML Page Structure

1. `<!DOCTYPE HTML>`
2. `<HTML>`
3. `<head>`
4. `<title>Page title</title>`
5. `</head>`
- 6.
7. `<body>`
8. Web page contents
9. `</body>`
10. `</HTML>`

Description

- `<!DOCTYPE HTML>`

Start tag in each HTML document, this tag is used to inform the browser that the HTML document is being opened. The tag should be written in each HTML document created.

- `<HTML> ... </HTML>`

the beginning of HTML documents, all HTML codes are written between this tags.

Description

`<head> ... </head>`

- Head tag used to save many information about HTML document. This will be explained further in next chapter.
- Something in the head tags will not be displayed in web browser.

Description

`<title> ... </title>`

- One sample of information in the head tag is title. The title will be displayed on the top of your browser or browser tab .

`<body> ... </body>`

- Contents displayed on browser are written in between the tags. Body tag is the start tag of HTML document body.

Example

```
<html>
<head>
  <title>My First Web</title>
</head>
<body>
  <h1>My first heading</h1>
  <p>My first paragraph</p>
</body>
</html>
```

Explanation

Text between :

- `<html>` and `</html>`, describe a web page.
- `<body>` and `</body>`, web page content.
- `<h1>` and `</h1>`, displayed as heading.
- `<p>` and `</p>`, displayed as paragraph.

HTML Editing

- HTML can be written using any editor, for instance Notepad, Dreamweaver and Visual Studio.
- HTML file can be stored with extension .htm or .html

Example of Basic HTML HTML Heading

- Headings are defined with the <h1> to <h6> tags.
- HTML headings for headings only. Don't use headings to make text **BIG** or **bold**.
- Search engines use your headings to index the structure and content of your web pages.

Example:

<h1>This is the first heading</h1>

<h2>This is the second heading</h2>

<h3>This is the third heading</h3>

<h4>This is the fourth heading</h4>

<h5>This is the fifth heading</h5>

<h6>This is the sixth heading</h6>

HTML Paragraph

- Paragraph are defined with the `<p>` to `</p>` tags.
- Browsers automatically add an empty line before and after a paragraph.

Example:

`<p>This is a paragraph</p>`

`<p>This is another paragraph</p>`

HTML Link

Link is defined with the `<a>` tag.

Example:

```
<a href="http://www.google.com">This is a  
link</a>
```

Note: link address is specifically written in “href”. attribute (Attribute will be discussed in the next chapter)

HTML Image

Image is defined with the tag

Example:

```
</img>
```

Note: image file is specifically written in “src”.attribute

It's Easy, RIGHT ???