

# Web Programming with The Laravel Framework

## #1 - Introduction to Web Application

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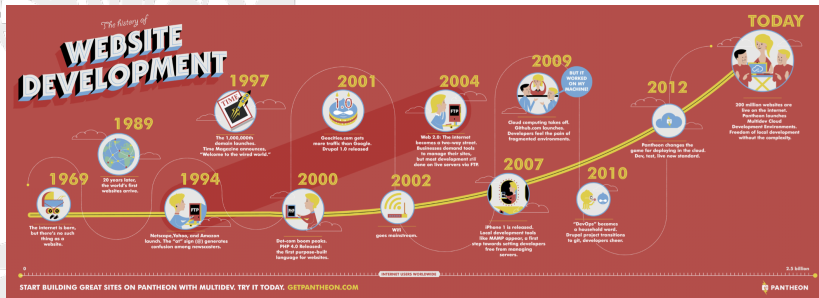
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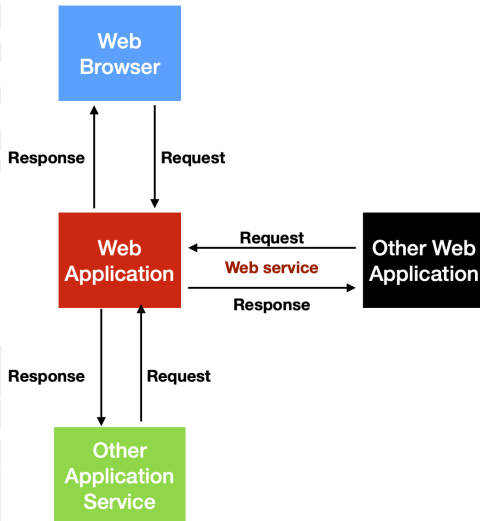


# History of Web Development

Figure: A brief history of Web Development (<https://visual.ly/community/Infographics/technology/history-website-development-0>)



# Web Application



# Web Application

## ■ Client-Server

- Server: Web server (Apache, Nginx, ISS (Microsoft), GWS (Google), etc.). Usually runs on port no: 80.
- Client: / other web application / other application
  - Web browser (Google Chrome, Firefox, etc.). Communicate using random port.
  - Other web application
  - Other application.

## ■ Application runs on web server as:

- Compiled. Ex. Java .class, Java .war, Java .ear, Windows .dll, and other executable binary
- Scripting. Ex. PHP, Python, C# (.NET), Pearl, Haskell\*, etc.



# Request(s) and Response(s)

Request to web server: sending pure text (http) or encrypted text (https) or binary file to server.

Response from web server: server sends text file (html, js, json, css, etc.), picture, sound, video, or other binary file.

# Web Browser

- Application that make request to web server.
- Application that receive and process response from web server.
- GUI-based: Chrome, Firefox, Safari (Mac), IE (Windows), Brave, Opera, etc.
- Text-based: Lynx, Emacs/W3, Links, etc.



# Web Browser (cont.)

## Accessing from Web Browser (GUI-based):

- using URL (Uniform Resource Locator).
- **protocol**://**socket**/**filename**?**getdata**
  - Protocol: http, https, ftp, file, etc.
  - Socket: Address + Port. ex. 134.2.12.128:80
    - Address: using IP (Internet Protocol) format such as 134.2.12.128
    - Port: usually in GUI, we don't need to put 80 because default port in GUI is 80 but if we need to access other port then we must write it after address.
  - Filename: file or folder name
  - getdata: if we want to send data to web server using get method



# Web Browser (cont.)

Accessing using IP address:

<http://134.2.12.128/teaching/ss22/wptlf/>

⚠ Not Secure | 134.2.12.128/teaching/ss22/wptlf/

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## Web Programming with The Lavarel Framework

Changing from desktop applications to web applications encourages software-  
to provide high-quality web applications in a short period of time. Web framev

Accessing using DNS address:

<http://ps.informatik.uni-tuebingen.de/teaching/ss22/wptlf/>

⚠ Not Secure | ps.informatik.uni-tuebingen.de/teaching/ss22/wptlf/

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Kategorientheorie und  
Programmieren

## Web Programming with The Lavarel Framework

Changing from desktop applications to web applications encourages software-  
to provide high-quality web applications in a short period of time. Web framev  
ment of web applications more quickly than from scratch.





# Scripting in Web Application

## Front-end:

- Run script at client-side (web browser)
- Programming language that support by web browser is vary depend on the web browser it self
- Ex.: Javascript, and VBScript.

## Back-end:

- Run script at server side (Apache, Nginx, IIS, etc.)
- Programming language file, an interpreter is required to process it.
- Ex.: PHP, Java, C#, Python, Haskell, Javascript, Pearl, etc.



# HTML & CSS

## HyperText Markup Language (HTML)

HTML is the code that is used to structure web page and its content [1].

## Cascading Style Sheets (CSS)

CSS is a stylesheet language used to describe the presentation of a document written in HTML or XML [2].



*Ask me something!*



# Homework

*Don't forget to install PHP, Apache, MySQL. To make it easy, you can install MAMP (Mac), XAMPP (Window/Linux).*



# Reference

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- [1] **HTML basics**. Apr. 2022. URL: [https://developer.mozilla.org/en-US/docs/Learn/Getting\\_started\\_with\\_the\\_web/HTML\\_basics](https://developer.mozilla.org/en-US/docs/Learn/Getting_started_with_the_web/HTML_basics).
- [2] **CSS: Cascading Style Sheets**. Apr. 2022. URL: <https://developer.mozilla.org/en-US/docs/Web/CSS>.

