**WEB DEVELOPMENT**

1. Web development

* Web development refers to the **work achieved in developing a Web Site or a Web-based Internet application** (web app).
* Tasks related to web development are: web engineering, web design, web content development, web programming, scripting, web server and network security configuration, and e-commerce.

1. Client – server Web Model:

* As PHP is mainly a hypertext preprocessor and web-oriented programming language, it is a good idea to at least understand the context in which it is mostly used, that being the **client-server model**.
* **A** **web server** is a **computer system** that **process requests received from web clients** via the network protocol HTTP/HTTPS (Hypertext Transfer Protocol) used to distribute information on the Web
* The role of a web server is **to store, process and deliver web pages** to web clients
* **A web client** is a client-side application used for connecting to a web server over HTTP. It is typically a web browser or web app which displays web pages received from the server and allows users to interact with the web server.
* In the client-server model, a client (like a web browser on your computer) sends a request for some specific resource (web page, content...) to a server (like, in our case, the Apache web server also on your computer). The server receives and analyzes the request, and returns a response to the client that will then handle the response. This model is used everywhere across the internet. Because requests are sent via URIs that contain a domain name (addresses), the client and server do not have to be on the same computer, and as long as the software acting as client and server have the ability to do so, they can communicate over networks or interconnected networks like the internet.
* PHP inserts itself on the server side of things. If it is determined that the request received by the server is to be handled by PHP (like a request for a .php file), PHP will be started and will execute any directives and instructions contained in that targeted file.

1. Web Application:

* A Web-based application web app is a web client–server **software application (desktopormobile) that are loaded as web pages but can store data locally and continue to function while offline** (ex:Evernote and Toggl).
* Developing a web application is simplified web application frameworks (các khung ứng dụng web được đơn giản hóa) such as the following open source ones: Django, Ruby on Rails or Symfony.
* The functionalities of a web application:
  + A web server to handle requests from the client
  + An application server to execute the tasks requested
  + A database to store the information
* The difference between a web app and a dynamic website:

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1. Client-server Scripting Language
   * A web page can provide a live (realtime), dynamic, or interactive user experience. Its content, such as text, images, formfields can change in response to different contexts or conditions. There are two ways to create this kind of effect that are **the client-side and the server side scripting**.
   * A client-side dynamic web page processes the web page using HTML scripting running in the browser as it loads. While a server-side dynamic web page is a web page whose construction is controlled by an application server processing server-side scripts
     + Client-side scripting: to change interface behaviors for example in response to mouse or keyboard actions or at specified timing events (ex:JavaScript)
     + Server-side scripting: to change the supplied page source between pages, adjust the sequence or the content for example in response to the data in a posted HTML form, parameters in the URL, the type of browser being used, the passage of time, or a database or server state (ex:PHP).

Diagram

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1. Web Components:

* Client: Web Browser installed, FireFo, Google Chrome
* Network:
  + LAN (Local Area Network): Computers in the same building
  + WAN (Wide Area Networks)
* Web Server
  + Windows: IIS (Internet Information Services)

A diagram of a web server

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