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Notes

Getting Started

* What is an AMP stack?
  + Web applications are built with multi-tier architecture: Client (web browser), Web (HTTP server), Business (application server), Data (database server)
  + The Client Tier: the web browser sends requests to the servers and receives HTML, images, and CSS. Executes client-side code (JavaScript, plug-ins, etc.).
  + The Server Stack (the other three tiers): server-based software that works together. The HTTP server (Apache – for AMP stack, IIS – for Windows) receives requests from client and returns responses. Requests can be sent to the business tier, an application server (PHP – for Apache, ASP.NET – for IIS). Database server (MYSQL, SQL Server, Oracle)
  + “AMP Stack”: Apache, MySQL, PHP.
  + Handling a web request: browser sends request to the Apache HTTP server. Requests for simple static file can be handled by Apache HTTP server on its own. But if PHP file is needed, it forwards the request to PHP server. It interprets the script and executes. It might need to communicate with MySQL and sends request as a query statement, and MySQL returns response for PHP, which sends response back to Apache, which sends response for browser.
  + Most of the components don’t know about each other’s existence. (It only knows about the component next in line.) Thus, if you replace one component, it only directly affects the component before it.
  + In a production environment, the database server is often installed on a different computer than the one that hosts Apache and PHP, but if you are developing locally, all components are installed on your own machine.
* Choosing an AMP Stack
  + If you want the most control over your environment, you should use individual components. (Download individual components from each vendor.)
  + Pre-packaged bundles: get started more quickly and ease of use. Some bundles include WampServer, MAMP, XAMPP, Bitnami. Fastest installation: Wampserver or MAMP for Windows, or MAMP for OS X. More complete bundles: XAMPP (FTP server and email server), Bitnami (optional MVC frameworks).
  + Standard Apache and MySQL Ports: each port can only be used by one software component at a time. MAMP can help manage this (supports both standard and non-standard ports).
  + Before you install a new bundle, you should uninstall or deactivate all other AMP stacks because of the Port Management rule. Make sure nothing is listening on Port 80 or 3306.

Installing XAMPP on Windows

* Getting started: install XAMPP by googling it online.
  + Open the XAMPP control panel.
  + Start Apache and MySQL by clicking the start buttons. Test the servers by typing in <http://localhost>. From there, can click PHPInfo and phpMyAdmin
  + Some unique features: Run NetStat utility: find out which applications are using which ports.
  + Configuration files can be found when you click the config button.
  + Explorer will open up the XAMPP installation directory. The document root folder, where you place your HTML files and other web sites, is under htdocs.
  + Servers will continue running even after you close the control panel.
  + To shut down XAMPP, open the control panel, and click stop.
* Managing XAMPP Security
  + (Information from this video appears outdated. It appears there is no security link anymore, as it has caused problems and everything by default was secure enough.)