

# **WEB SOLUTION STACKS**

**WEB SERVER SOFTWARE: LAMP, WAMP, MAMP**

# BEYOND FRONT-END: WEB STACKS

## Stack

- A set of software subsystems or components to build and/or run an application
- For web applications typical server stacks: LAMP; WAMP; MAMP; ...and others

## Web Applications

- More than just HTTP
- Databases and scripting languages

## Most Common Stack: LAMP (or WAMP or MAMP)

- Linux, Windows, Mac OS – the operating system
- Apache – the web server software (responds to HTTP requests)
- MySQL – the database (for structured data)
- PHP – programming (actually, scripting) language

# THE WEB SERVER SOFTWARE



## **First: HTTPd (Hypertext Transfer Protocol daemon)**

Designates a local folder "web root"

Responds and replies to Hypertext Transfer Protocol (HTTP) requests



## **Popular...**

Apache ([www.apache.org](http://www.apache.org))

Microsoft's Internet Information Services (IIS)

Nginx (pronounced engine-x)

# DATABASES AND SCRIPTING

## Typical software for web applications:

- Open source scripting language: PHP
- Open source database software: MySQL

### PHP

- A scripting language that can be embedded in HTML documents
- Executes code after an HTTP request is received and *before* the response is sent to the client
- Works well with MySQL

### MySQL

- Relational Database Management System (RDBMS)
- Uses Structured Query Language (SQL)
- E.g. `UPDATE users SET name = 'Robert' WHERE id = 1`

- File system protocol:  
`file:///C:/Users/rober/www/index.php` (doesn't work!)
- Hypertext Transfer Protocol (HTTP):  
`http://localhost/index.php`
- Server-side capabilities: PHP; MySQL
- Keep files in the "web root" (or "document root")
- Where is the “web root”?

**USING “LOCALHOST” INSTEAD OF THE FILE SYSTEM**