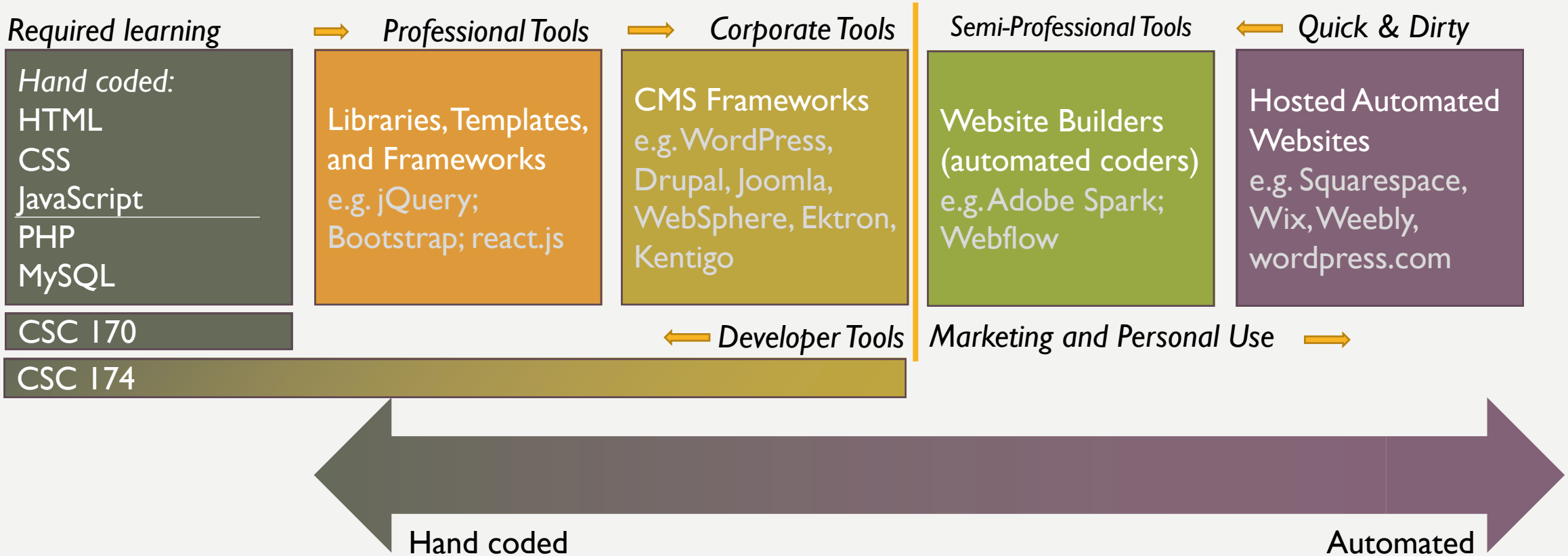
CONTENT MANAGEMENT SYSTEMS

CMS

FRONT-END WEBSITE-TECHNOLOGIES CONTINUUM



THE PROMISE VS. REALITY

- "Anyone can do it"
  - "Fire the web developers!", "People on the dock will be able to update the website."
    - Ektron Salesman at Kodak, 2012
- Trade-off: flexibility vs. ease of use

	Less Flexibility	Easy to Use
Functionality	PHP and MySQL *...no touchy!*	Easy to install plug-ins, add-ons, extensions
Style & Interaction changes	CSS and JavaScript *...no touchy!*	Easy to install "skins" / "themes"
Content Updates	HTML *...no touchy!*	Back-end interface for non-technical content contributors

...and: "enough rope to hang yourself"

CONTENT MANAGEMENT SYSTEM (CMS)

- A website application that allows:
  - Publishing to the web
  - Editing the content
  - Modifying the website
  - Organizing the content
  - Deleting the content

  ...basically, C.R.U.D. functionality without the need to know dev skills

- User (website visitor) interface (front-end)
- Content Maintenance interface ("backend")
- Also: collaborative environment
  - Multi-user (contributors)
  - Multi-role (privileges)

THE INDUSTRY

- EVERY large website → CMS
  - Required: distributed content management
  - UR, URMC, Xerox, Kodak, Excellus BCBS …proprietary CMSs (Cascade, Kentico, Ektron, IBM Websphere)
  - Cornell University, The Whitehouse …open source (Drupal)
- Small company/organization requirement: less dependency
  - Autonomy from web developers for the small stuff
  - WordPress = most popular; plugin & theme development community

WEB DEVELOPERS AND CMSS

- Each CMS: very different; a lot in common
  - Concepts - same
  - Terminology - different
- Dynamic Website = Design Complexity x 1,000%
  - Test for each browser
  - Test for each page
  - Test for each condition
- CMS = a lot of constraints!
  - Dozens (hundreds?) of PHP Includes
  - Lots of PHP-wrapped SQL statements
  - Themes/Plugins …buggy and/or not extendable (dead-end)
  - Customizations = risk
- Developers must "Back the Right Horse"
  - Learning curve
    - Frameworks
    - Themes
    - Plugins
  - Remember *Movable Type*? (nobody does)

HTML – virtually unreadable by humans

CMS COMPARISONS

- Content Management System (CMS)
  - Proprietary: Ektron, Kentico, Websphere, …
  - Open Source: **WordPress**, Drupal, Joomla, …
  - See: https://en.wikipedia.org/wiki/List_of_content_management_frameworks
- WordPress: largest base of users and plugin developers
  - …compared to any other open source or proprietary CMS
  - PHP and MySQL (most common web server stack)
  - Plugins extend functionality
  - Front-end developers: relatively short learning curve (for install and setup)
  - End-customers: relatively easy (for content management)
  - Open source means it's free! (also editable)
  - Also: large number of designers creating themes, plug-ins, extensions

WORDPRESS

- First and foremost: a blogging platform
- Often, *not* used for blogging
- Common: the customer (website owner) needs to manage content in their own website
- Extensive collection of plugins
  - Forms (to capture user input)
  - Shopping carts and credit card transactions
  - Interactive calendars
  - Slideshows, photo galleries
- Extensive collection of themes
  - Easy to re-skin a website by simply applying a new theme
  - Themes may be customized relatively easily
  - Free and for-pay

Blog

A blog is a discussion or informational website published on the World Wide Web consisting of discrete, often informal diary-style text entries. Posts are typically displayed in reverse chronological order, so that the most recent post appears first, at the top of the web page. Wikipedia

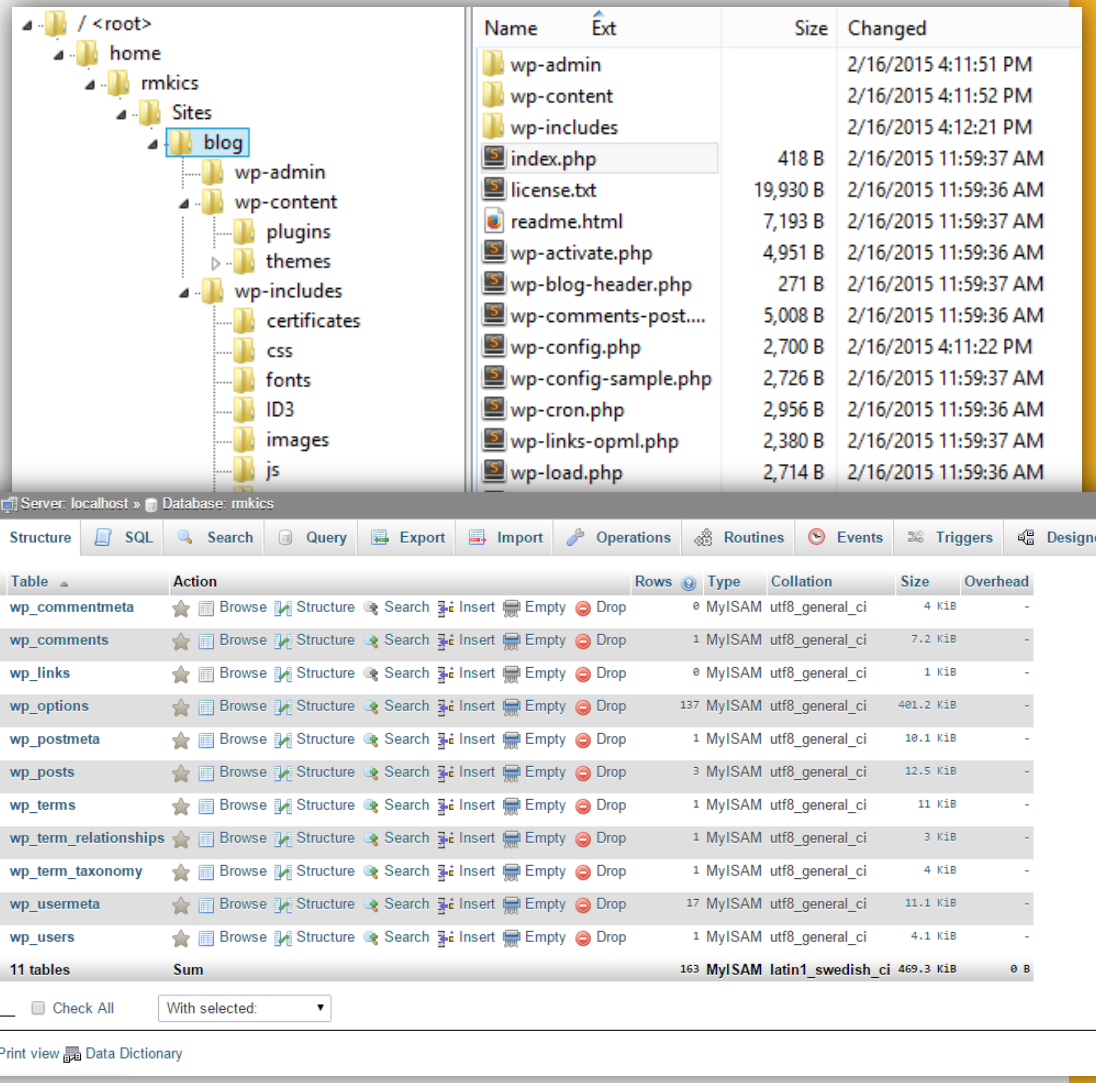
Blog Software

View 15+ more

WordPress | b2evoluti... | Movable Type | Ghost | LiveJournal

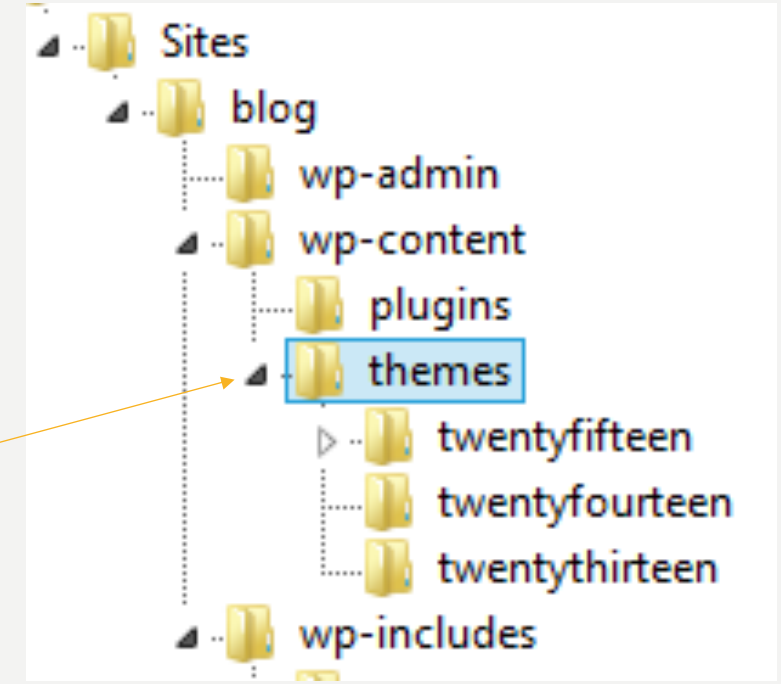
TECHNOLOGIES USED BY WORDPRESS

- HTML in PHP and lots of CSS
- Lots of embedded PHP to get and put data from a MySQL database
- MVC framework (debatable)



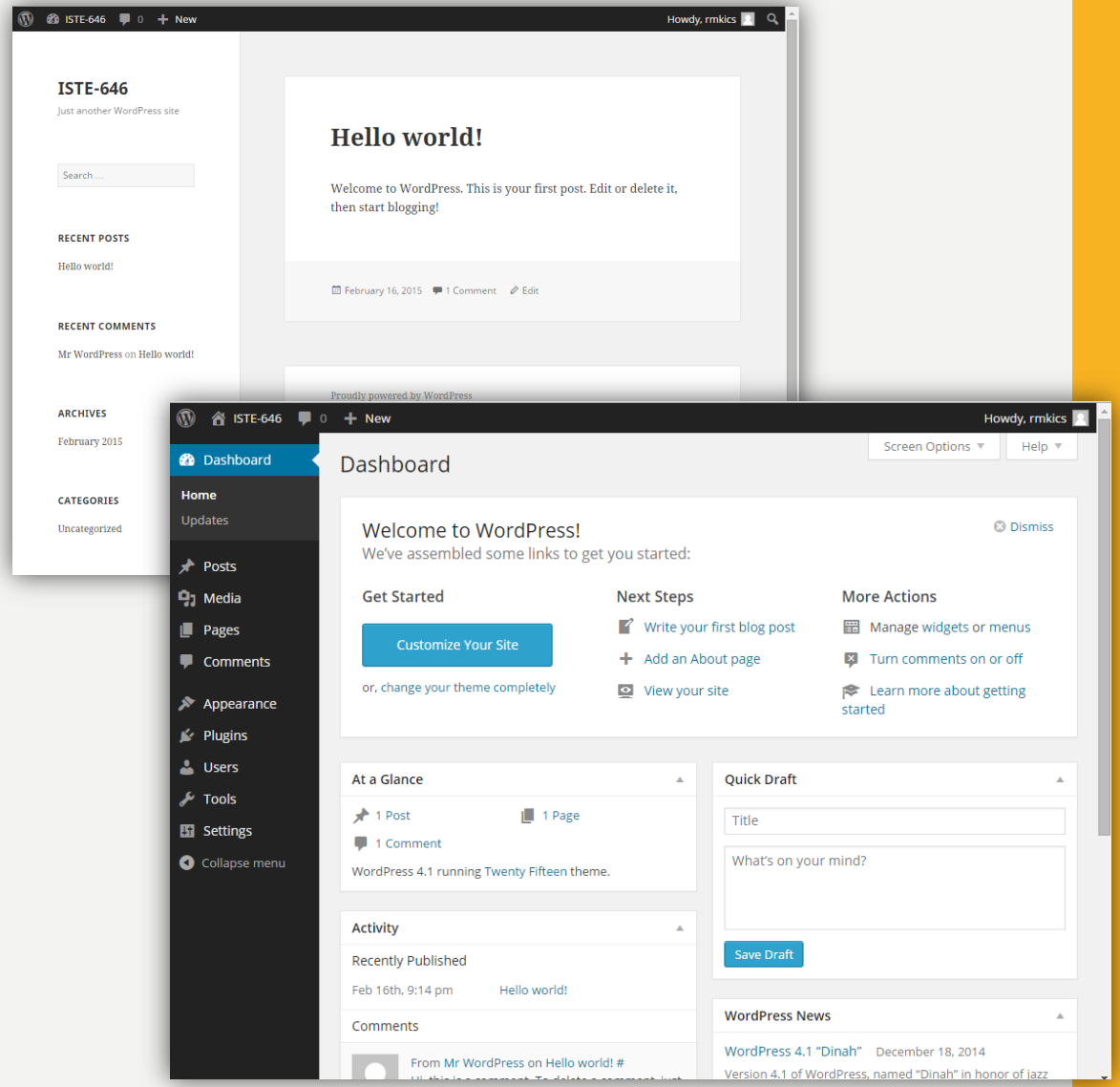
WORDPRESS THEMES

- Tightly developed set of HTML/PHP templates with CSS
- Large community of developers writing themes
- Easy to apply a theme
  - End-customer can change themes via the back-end CMS with a few clicks
- Themes may be customized/modified (not trivial)
- Themes are installed in the **./wp-content/themes** directory as it's own subdirectory



CONTENT MANAGMENT

- Two interfaces
  - Front-end – viewable by the public
  - Back-end – used by the content manager(s) to manage their own content
- The CMS
  - Hidden from the public
  - Password protected user accounts
  - Balance of non-technical tools (for end-customers) and somewhat technical tools (for administrators)



PAGES VS. POSTS

PAGES

- Static – like a "normal" brochure website
- Usually, static formatted text and images
- Able to present installed plugins like calendars, photo galleries, whatever
- End-users may comment on pages

POSTS

- Embedded in a "special" Page
  - The page is really just a normal Page that has the code (like a plugin) to pull posts from the MySQL database.
- Usually, reverse chronological posted content, written by the end-customer
- End-users may comment on posts