



College of Information Studies

University of Maryland Hornbake Library Building College Park, MD 20742-4345

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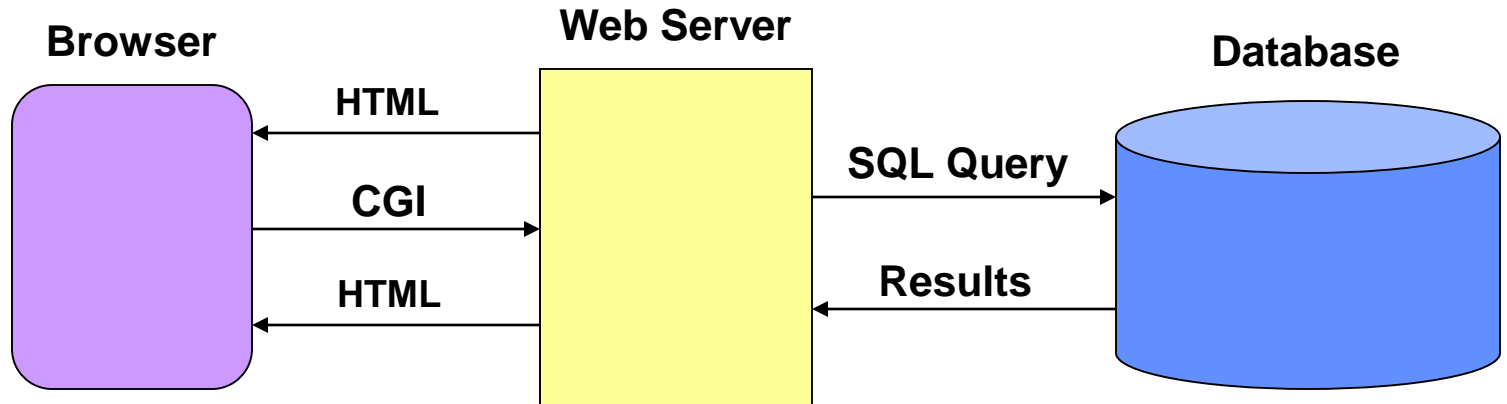
# Content Management Systems

Week 14

LBSC 671

Creating Information Infrastructures

# Putting the Pieces Together



# Why Database-Generated Pages?

- Remote access to a database
  - Client does not need the database software
- Serve rapidly changing information
  - e.g., Airline reservation systems
- Provide multiple “access points”
  - By subject, by date, by author, ...
- Record user responses in the database

# Why Content Management Systems?

- Separation of content and appearance
- Separation of roles
- Standardization of common “design patterns”
  - Login and password recovery
  - Headlines and drill-down
  - Site map
  - Search
  - Shopping cart

# Content Management Systems

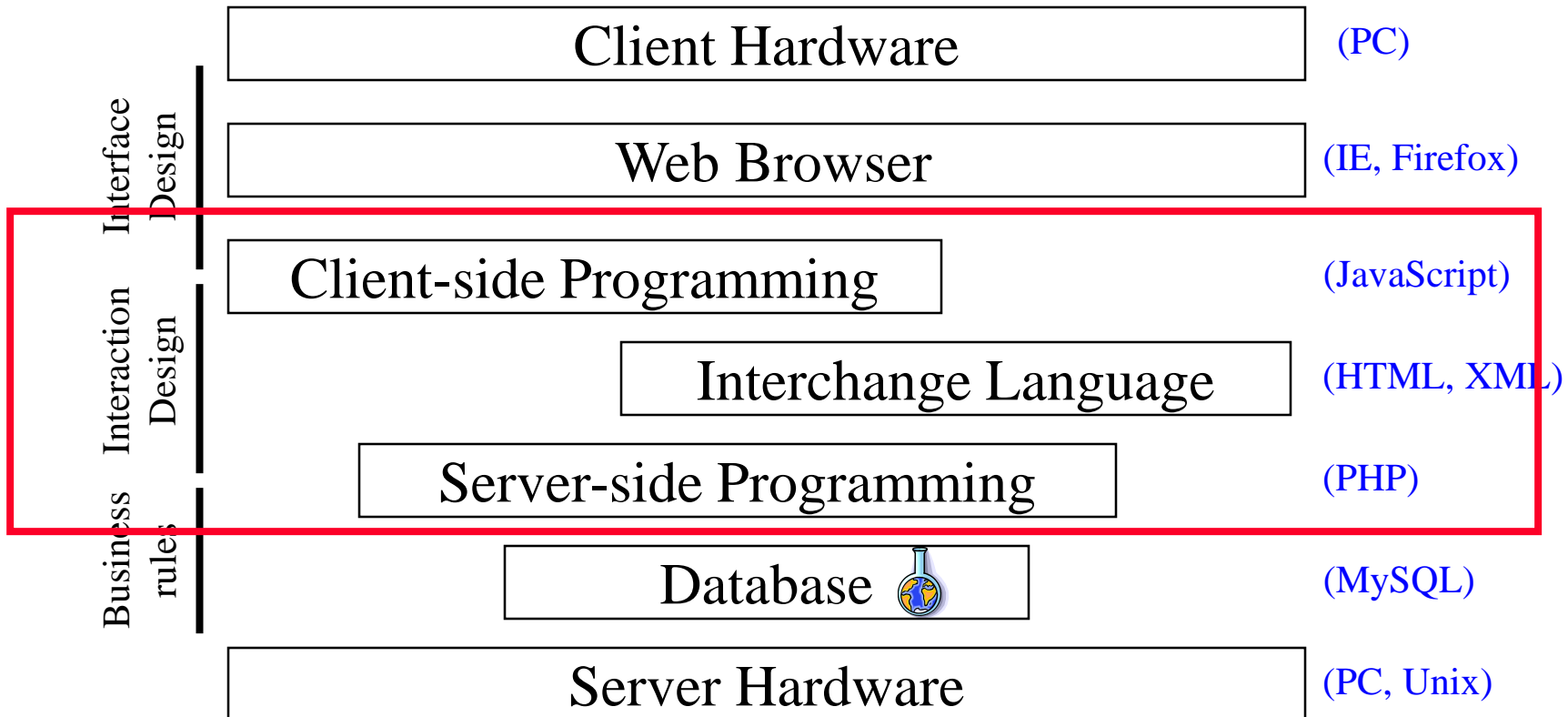
- WordPress
  - <http://wordpress.org>
- Joomla
  - <http://www.joomla.org>
- Drupal
  - <https://drupal.org>

# Roles

- Information architecture design
- Task assignment
- Content generation and modification
- Approval for “publication”
- Publication
- Error correction
- Tracking task progress

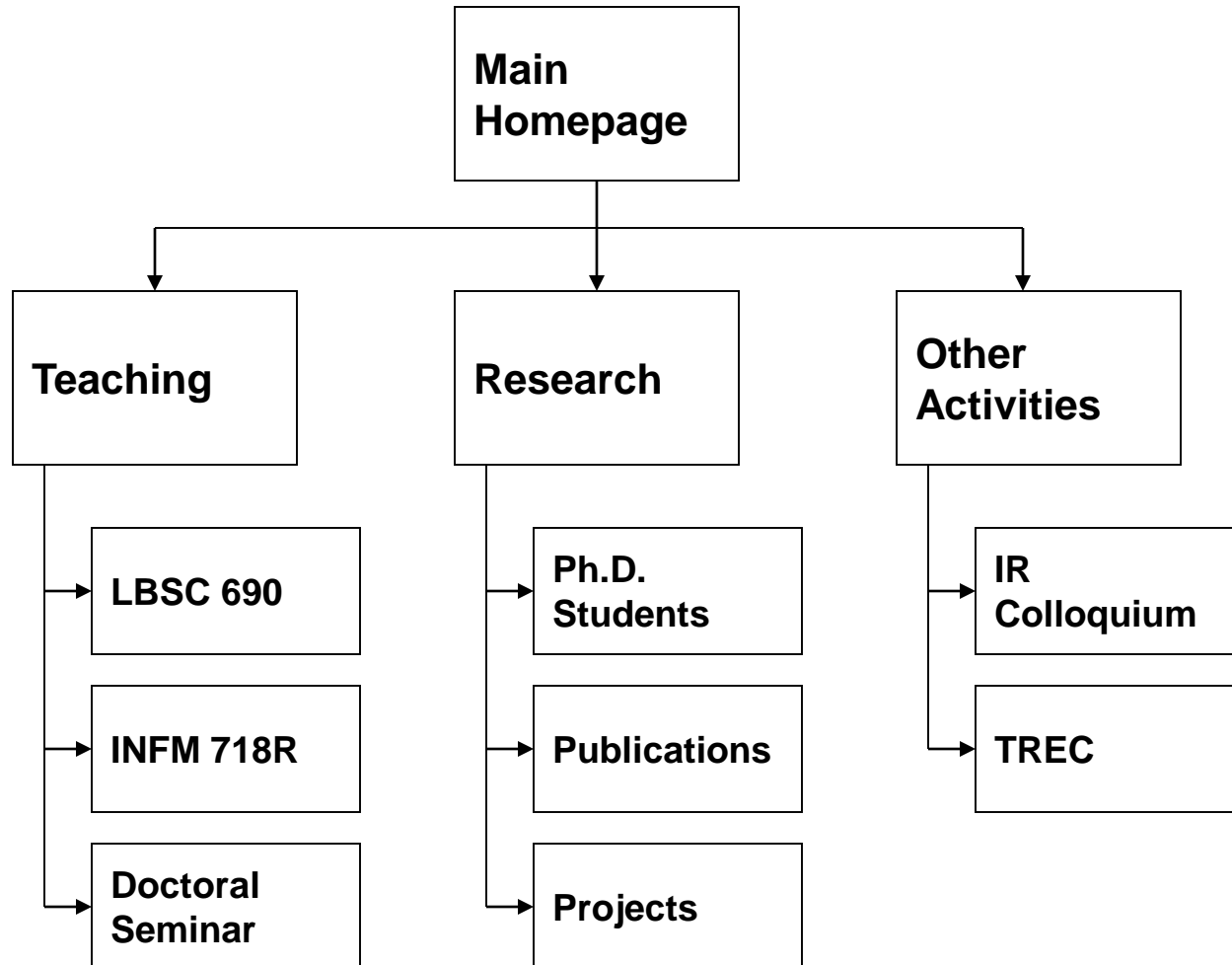
# Content Management System Structure

- Database stores the content
  - And access control data and parameters
- Server scripting controls the user experience
  - PHP reads database, generates HTML
- (X)HTML conveys the user experience
- User-side scripting enhances interactivity
  - JavaScript may be used for form validation

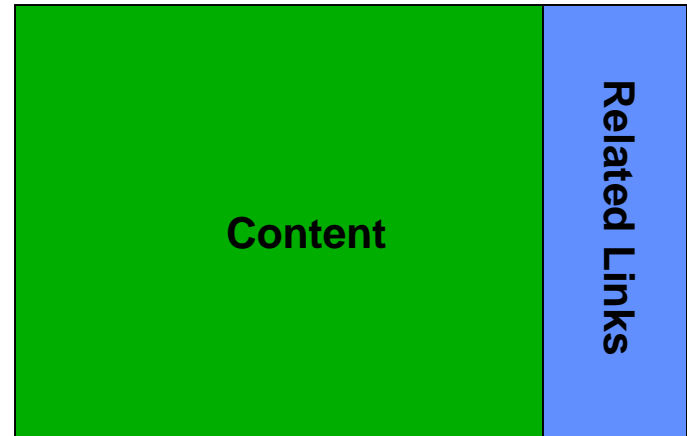
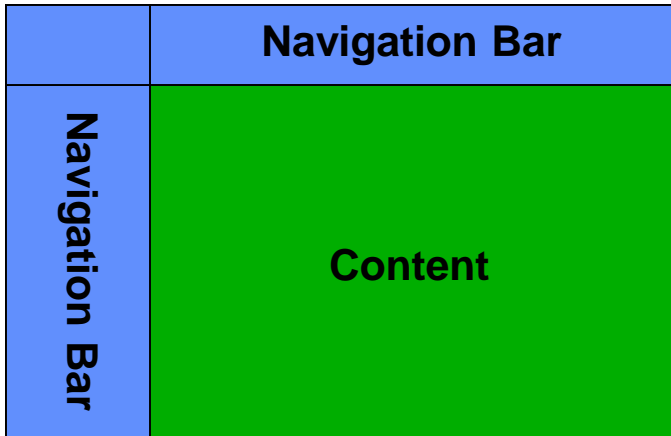
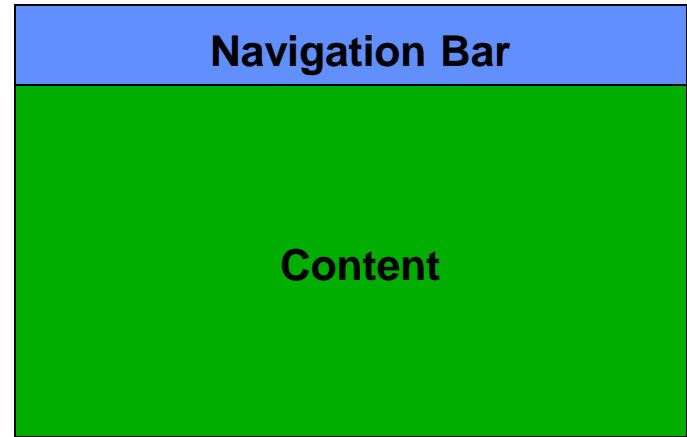
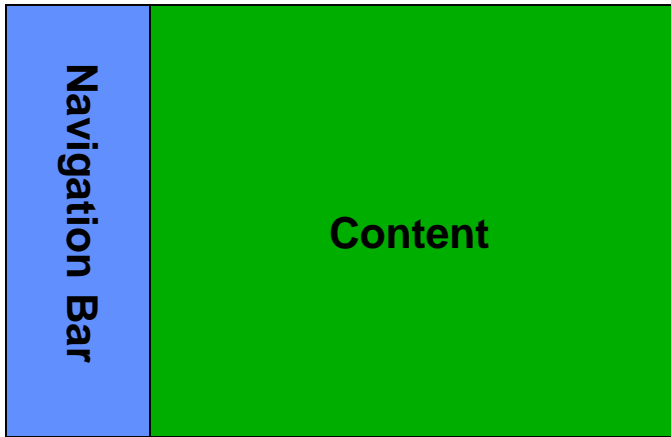




# “Site Blueprint”



# Grid Layouts



# Grid Layout: NY Times

The screenshot shows the New York Times Business page in a Mozilla Firefox browser window. The browser title is "Ayn Rand's Literature of Capitalism - New York Times - Mozilla Firefox". The browser's address bar and menu are visible at the top. The page layout is a grid with a main content area on the left and sidebars on the right. The main content area features the article "Ayn Rand's Literature of Capitalism" by Harriet Rubin, published on September 15, 2007. The article text is arranged in columns, with a large image of Ayn Rand on the left. The right sidebar contains a "More Articles in Business" section, an "Afternoon Update" section with a sign-up form, and a "MOST POPULAR - BUSINESS" section with a list of seven articles. There are also several advertisements, including a "SWAP YOUR RIDE" Ford advertisement at the top, a "JUNO" article tools advertisement, and a "BASF" advertisement at the bottom right. The page footer includes a "Done" status bar.

**Browser:** Mozilla Firefox  
**Page Title:** Ayn Rand's Literature of Capitalism - New York Times

**Navigation:** HOME PAGE | MY TIMES | TODAY'S PAPER | VIDEO | MOST POPULAR | TIMES TOPICS | TimesSelect | Free 14-Day Trial | Welcome, jimmy\_jimmy | Member Center | Log Out

**Section:** Business

**Sub-sections:** WORLD | U.S. | N.Y. / REGION | BUSINESS | TECHNOLOGY | SCIENCE | HEALTH | SPORTS | OPINION | ARTS | STYLE | TRAVEL | JOBS | REAL ESTATE | AUTOS

**Advertisements:**  
- SWAP YOUR RIDE: HEAR WHAT PEOPLE LIKE YOU HAD TO SAY AFTER DRIVING A FORD FOR ONE WEEK.  
- Ford CHALLENGE: CLICK HERE TO EXPAND

### Ayn Rand's Literature of Capitalism

By HARRIET RUBIN  
Published: September 15, 2007

One of the most influential business books ever written is a 1,200-page novel published 50 years ago, on Oct. 12, 1957. It is still drawing readers; it ranks 388th on [Amazon.com's](#) best-seller list. ("Winning," by [John F. Welch Jr.](#), at a breezy 384 pages, is No. 1,431.)

The book is "Atlas Shrugged," Ayn Rand's glorification of the right of individuals to live entirely for their own interest.

For years, Rand's message was attacked by intellectuals whom her circle labeled "do-gooders," who argued that individuals should also work in the service of others. Her book was dismissed as an homage to greed. [Gore Vidal](#) described its philosophy as "nearly perfect in its immorality."

But the book attracted a coterie of fans, some of them top corporate executives, who dared not speak of its impact except in private. When they read the book, often as college students, they now say, it gave form and substance to their inchoate thoughts, showing there is no conflict between private ambition and public benefit.

"I know from talking to a lot of Fortune 500 C.E.O.'s that 'Atlas Shrugged' has had a significant effect on their business decisions, even if they don't agree with all of Ayn Rand's ideas," said John A. Allison, the chief executive of BB&T, one of the largest banks in the United States.

**More Articles in Business »**

#### Afternoon Update

Sign up for a recap of the day's top stories and business headlines, sent weekday afternoons. [See Sample](#)  
[abc@defc.com](#) [Sign Up](#)  
[Change E-mail Address](#) | [Privacy Policy](#)

**ARTICLE TOOLS**  
SPONSORED BY  
**JUNO**

**MOST POPULAR - BUSINESS**

E-MAILED | BLOGGED

1. Age of Riches: Hedge Funds and Private Equity Alter Career Calculus
2. Ayn Rand's Literature of Capitalism
3. Japanese Housewives Sweat in Secret as Markets Reel
4. A 'Disappointed' Greenspan Lashes Out at Bush's Economic Policies
5. Tell-All PCs and Phones Transforming Divorce
6. Spending: This Glass Is for the Cabernet, That One the Pinot Noir
7. At 25, 'McPaper' is All Grown Up

# Grid Layout: NY Times

The screenshot shows a browser window displaying the New York Times website. The page is divided into several sections:

- Navigation:** The top section includes the New York Times logo, a search bar, and a horizontal menu with categories like Business, Technology, Arts, and Travel.
- Banner Ad:** A large advertisement for Ford's "Swap Your Ride" challenge is positioned below the navigation.
- Content:** The main article, "Ayn Rand's Literature of Capitalism," is the central focus. It includes a sub-headline, author information (HARRIET RUBIN), publication date (September 15, 2007), and a detailed introduction. A sidebar on the right offers options to email, print, or share the article. A "JUNO" logo is also visible.
- Another Ad:** A BASF advertisement is located on the right side of the page, featuring the text "With BASF innovations in agriculture, get ready to pull up to the future."
- Popular Articles:** A section titled "MOST POPULAR - BUSINESS" lists several articles, with "Ayn Rand's Literature of Capitalism" as the top item.

# Grid Layout: ebay

autograph Tom Brady, Autographs-Original, Autographs-Reprints items on eBay.com - Mozilla Firefox

File Edit View History Bookmarks Tools Help

[Shop VICTORIOUSLY](#)
 Welcome! [Sign in](#) or [register](#)

[Buy](#) [Sell](#) [My eBay](#) [Community](#) [Help](#)

[Categories](#) [Motors](#) [Express](#) [Stores](#)

Sneak Peek of what's changing on eBay!

Home > Buy > Search Results for 'autograph Tom Brady'

[All Items](#) [Auctions](#) [Buy It Now](#)

[All Categories](#)

[Advanced Search](#)

Search title and description

Related Searches: [tom brady auto](#), [tom brady](#), [reggie bush auto](#), [tom brady sp](#), [tom brady contenders](#)

**Narrow Your Results**

[Sports Mem, Cards & Fan Shop \(31\)](#)  
[Autographs-Original \(13\)](#)  
[Autographs-Reprints \(11\)](#)  
[Cards \(5\)](#)  
[more ...](#)

**Related Guides**

[Sports Collectibles](#)  
[Graded Sports Cards](#)  
[Sports Autographs](#)  
[Fan Apparel & Souvenirs](#)  
[Sports Cards](#)  
[See all related guides ...](#)

**Search Options**

[Location](#)

31 items found for: autograph Tom Brady ([save this search](#))

[List View](#) | [Picture Gallery](#)

Sort by: [Time: ending soonest](#) [Customize Display](#)

<input type="checkbox"/>	<a href="#">Compare</a>	Item Title	Bids	Price*	Shipping to USA	Time Left ▲
<input type="checkbox"/>		<b>2007 TOPPS TX TOM BRADY AUTOGRAPH &amp; GAME JERSEY 02/15</b> Brady's regular card #3 in the set is included	14	\$125.00	Not specified	1h 56m
<input type="checkbox"/>		<b>TOM BRADY 8X10 PHOTO AUTOGRAPH AUTO COA</b> GAI CERTIFIED BY THE BEST IN THE BUSINESS !!!	11	\$50.76	\$2.50	3h 27m
<input type="checkbox"/>		<b>Tom Brady New England Patriots Signed Autograph Visor</b>	1	\$9.99	Calculate	4h 34m
<input type="checkbox"/>		<b>TOM BRADY AUTOGRAPH SIGNED 8 X 10 MVP PHOTO COA PATRIOT</b>	-	\$9.99	\$6.50	1d 03h 36m

# Grid Layout: ebay

The screenshot displays the eBay website interface, highlighting several key components in a grid layout:

- Navigation:** Located at the top, it includes the eBay logo, a search bar, and links for "Buy", "Sell", "My eBay", and "Community".
- Banner Ad:** A promotional banner for a Ford challenge, featuring images of cars and the text "SWAP YOUR RIDE" and "HEAR WHAT PEOPLE LIKE YOU HAD TO SAY AFTER DRIVING A FORD FOR ONE WEEK".
- Navigation:** A secondary navigation bar below the banner, showing search filters like "All Items", "Auctions", and "Buy It Now", along with a search input field and "Advanced Search" options.
- Search Results:** A table listing 31 items found for the search "autograph Tom Brady". The table includes columns for "Item Title", "Bids", "Price\*", "Shipping to USA", and "Time Left".
- Related:** A sidebar on the left titled "Narrow Your Results" and "Related" items, listing categories like "Sports Mem, Cards & Fan Shop" and "Autographs-Original".

Item Title	Bids	Price*	Shipping to USA	Time Left
2007 TOPPS TX TOM BRADY AUTOGRAPH & GAME JERSEY 02/15 Brady's regular card #3 in the set is included	14	\$125.00	Not specified	1h 56m
TOM BRADY 8X10 PHOTO AUTOGRAPH GAT CERTIFIED BY THE BEST IN THE BUSINESS III	11	\$50.76	\$2.50	3h 27m
Tom Brady New England Patriots Signed Autograph Visor	1	\$9.99	Calculate	4h 34m
TOM BRADY AUTOGRAPH SIGNED 8 X 10 MVP PHOTO COA PATRIOT	-	\$9.99	\$6.50	1d 03h 36m

# Grid Layout: Amazon

Amazon.com: tiger - Mozilla Firefox

File Edit View History Bookmarks Tools Help

amazon.com Jimmy's Amazon.com See all 41 Product Categories Your Account | Cart | Your Lists | Help |


Gift Certificates | International | Hot New Releases | Bestsellers | Today's Deals | Sell Your Stuff

Search Amazon.com tiger GO Gift Certificates Web Search GO

**Category**

- Any Category
- Books (124,039)
- Sports & Outdoors (31,206)
- Home & Garden (15,975)
- Toys & Games (10,716)
- Apparel (7,925)
- Everything Else (7,221)
- Jewelry & Watches (3,608)
- Automotive (1,126)
- Music (917)
- Home Improvement (769)
- Office Products (725)
- Health & Personal Care (714)
- DVD (453)
- Electronics (396)
- VHS (355)
- Baby (294)
- Video Games (163)
- Software (114)
- Gourmet Food (106)
- Musical Instruments (63)
- Unbox Video Downloads (47)
- Beauty (39)
- Wireless Accessories (37)
- Industrial & Scientific (15)
- Magazine Subscriptions (5)
- Grocery (5)

**Listmania!**




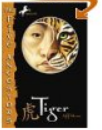
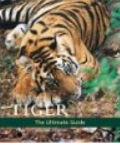

Somatic Psychology Necessities: A list by jess

**"tiger"**

Did you mean [tigger?](#)

Related Searches: [leopard](#), [tiger woods](#).

Showing Top Results < Previous | Page: 1 2 3 | Next >

-  **Apple Mac OS X Tiger 10.4.6 (Mac DVD)** by Apple Computer (DVD-ROM - May 1, 2006) (Mac OS X)  
[Buy new:](#) ~~\$129.00~~ **\$119.99** [26 Used & new](#) from **\$74.99**  
In Stock  
★★★★☆  
**Software:** [See all 114 items](#)
-  **Tiger (5 Ancestors)** by Jeff Stone (Paperback - Mar 14, 2006)  
[Buy new:](#) **\$5.99** [71 Used & new](#) from **\$0.78**  
Get it by **Wednesday, Sep 19** if you order in the next **23 hours** and choose one-day shipping.  
Eligible for **FREE** Super Saver Shipping.  
★★★★☆  
**Books:** [See all 124,039 items](#)
-  **Tiger: The Ultimate Guide** by Valmik Thapar (Hardcover - Jun 2004)  
[Buy new:](#) ~~\$39.95~~ **\$26.37** [25 Used & new](#) from **\$7.00**  
In Stock  
Eligible for **FREE** Super Saver Shipping.  
★★★★☆  
**Books:** [See all 124,039 items](#)
-  **Tiger Woods PGA Tour 08** by Electronic Arts (Aug 28, 2007) (Xbox 360)  
[Buy new:](#) **\$59.99** [37 Used & new](#) from **\$40.00**  
Get it by **Tuesday, Sep 18** if you order in the next **8 minutes** and choose one-day shipping.  
Eligible for **FREE** Super Saver Shipping.  
★★★★☆  
ESRB Rating: Everyone  
**Video Games:** [See all 163 items](#)

Transferring data from ec1.images-amazon.com...

# Grid Layout: Amazon

The screenshot shows the Amazon.com website interface. The browser title is "Amazon.com: tiger - Mozilla Firefox". The navigation bar includes the Amazon logo, "Jimmy's Amazon.com", "See all 41 Product Categories", "Your Account", "Cart", "Your Lists", "Help", "Gift Certificates", "International", "Today's Deals", and "Sell Your Stuff". The search bar contains "tiger" and "GO".

**Navigation** (highlighted in yellow):

- Category
- Any Category
- Books (124,039)
- Sports & Outdoors (31,206)
- Home & Garden (15,972)
- Toys & Games (10,716)
- Apparel (7,925)
- Everything Else (7,221)
- Jewelry & Watches (3,608)
- Automotive (1,126)
- Music (917)
- Home Improvement (769)
- Office Products (725)
- Health & Personal Care (714)

**Related** (highlighted in yellow):

- VHS (355)
- Baby (294)
- Video Games (163)
- Software (114)
- Gourmet Food (104)
- Musical Instruments (63)
- Unbox, Video Downloads (47)
- Beauty (39)
- Wireless Accessories (37)
- Industrial & Scientific (15)
- Magazine Subscriptions (5)
- Grocery (5)

**Listmania!** (highlighted in yellow):

- Somatic Psychology Necessities: A list by jess

**Search Results** (highlighted in yellow):

Showing Top Results

Page: 1 2 3 | Next >

- Apple Mac OS X Tiger 10.4.6 (Mac DVD)** by Apple Computer (DVD-ROM - May 1, 2006) (Mac OS X)  
Buy new: ~~\$129.00~~ **\$119.99** 26 Used & new from \$74.99  
In Stock  
★★★★☆  
Software: See all 114 items
- Tiger (5 Ancestors)** by Jeff Stone (Paperback - Mar 14, 2006)  
Buy new: ~~\$5.99~~ **\$5.99** 71 Used & new from \$0.78  
Get it by **Wednesday, Sep 19** if you order in the next 23 hours and choose one-day shipping.  
Eligible for FREE Super Saver Shipping.  
★★★★☆  
Books: See all 124,039 items
- Tiger: The Ultimate Guide** by Valmik Thapar (Hardcover - Jun 2004)  
Buy new: ~~\$39.95~~ **\$26.37** 25 Used & new from \$7.00  
In Stock  
Eligible for FREE Super Saver Shipping.  
★★★★☆  
Books: See all 124,039 items
- Tiger Woods PGA Tour 08** by Electronic Arts (Aug 28, 2007) (Xbox 360)  
Buy new: ~~\$59.99~~ **\$59.99** 37 Used & new from \$40.00  
Get it by **Tuesday, Sep 18** if you order in the next 8 minutes and choose one-day shipping.  
Eligible for FREE Super Saver Shipping.  
★★★★☆  
ESRB Rating: Everyone  
Video Games: See all 163 items

Transferring data from ec1.images-amazon.com...



# Some Layout Guidelines

- **Contrast**: make different things different
  - to bring out dominant elements
  - to create dynamism
- **Repetition**: reuse design throughout the interface
  - to achieve consistency
- **Alignment**: visually connect elements
  - to create flow
- **Proximity**: make effective use of spacing
  - to group related and separate unrelated elements

# Joomla Structure

- Front end
  - The Web site
- Back end
  - Where the Web site is defined

# Joomla Components

- Web sites are made up of rectangular pieces
  - Called “modules”
- Two basic types of modules:
  - Displaying content (e.g., articles)
  - Interaction (e.g., login)
- Templates define where modules can be put
  - Templates define abstract “positions”
  - Joomla maps positions to layout in ways appropriate to the device

# Joomla Features

- Menus control navigation
  - Menu items control where you can go
- Categories group things (i.e., entities)
  - University courses, Apollo missions, Meetups, ...
- Extensions allow you to add new capabilities
  - JCE Editor, Image rotator, Google maps, ...



left

**Printing & Content**

Printing & Content Management Spaces

Site and Administrator

**content**

Creating an article

left

**right**

# Joomla Hosting

- Your own computer
  - Useful as a way to try things out
  - Not easily accessible to others
- Demo account (for 30 days) at [joomla.org](http://joomla.org)
  - You can pay to keep it past 30 days
- Web hosting service
  - Longer life, more support, or less cost
  - More complex to set up

# Joomla First Steps

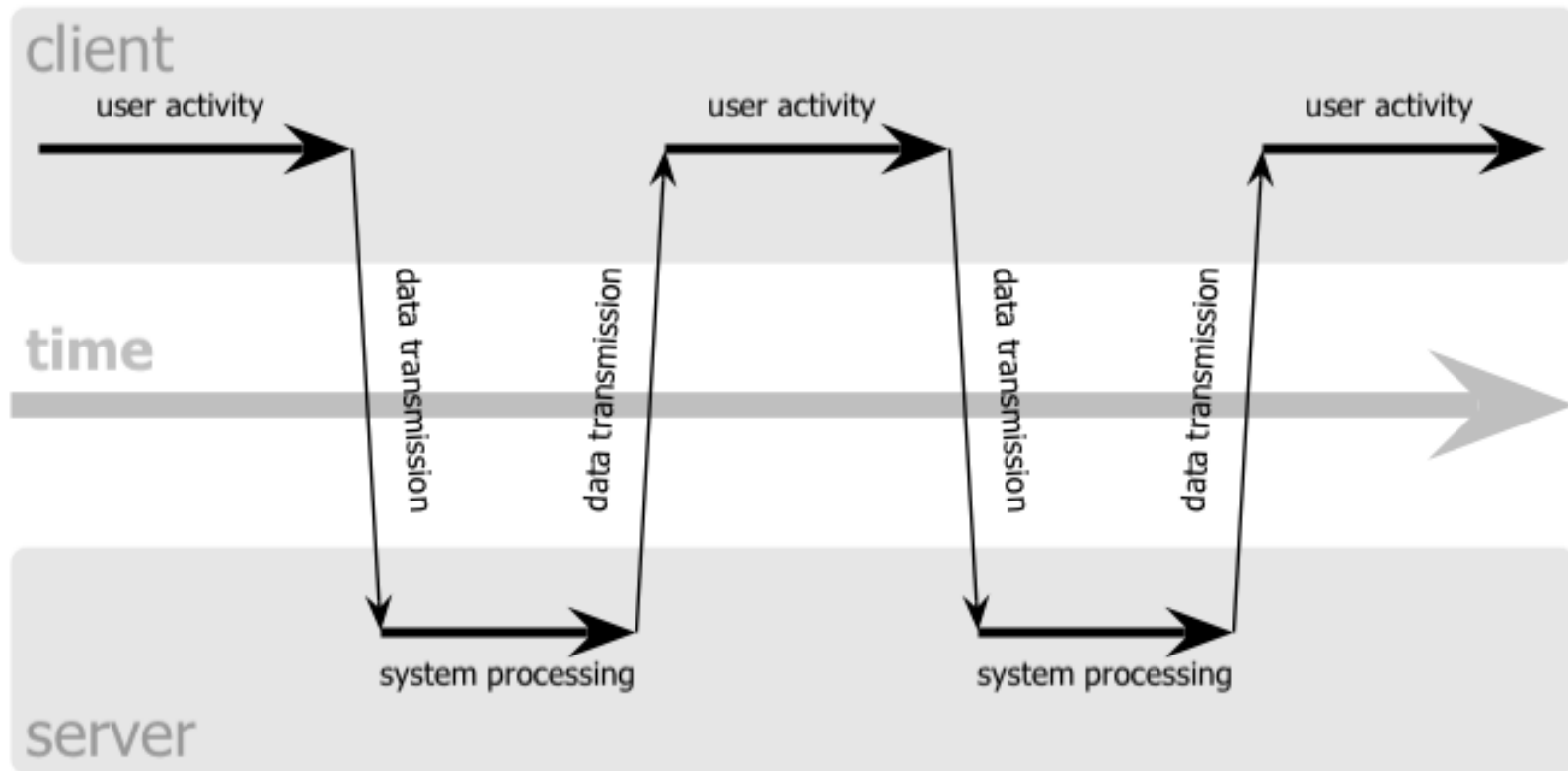
- System->Control Panel
  - Gets to the back-end home
- Install the Joomla Content Editor (JCE)
- Learn how to insert content
  - Images, text without formatting
- Learn how to set up menu items
- Learn how to control layout

# Ajax Applications

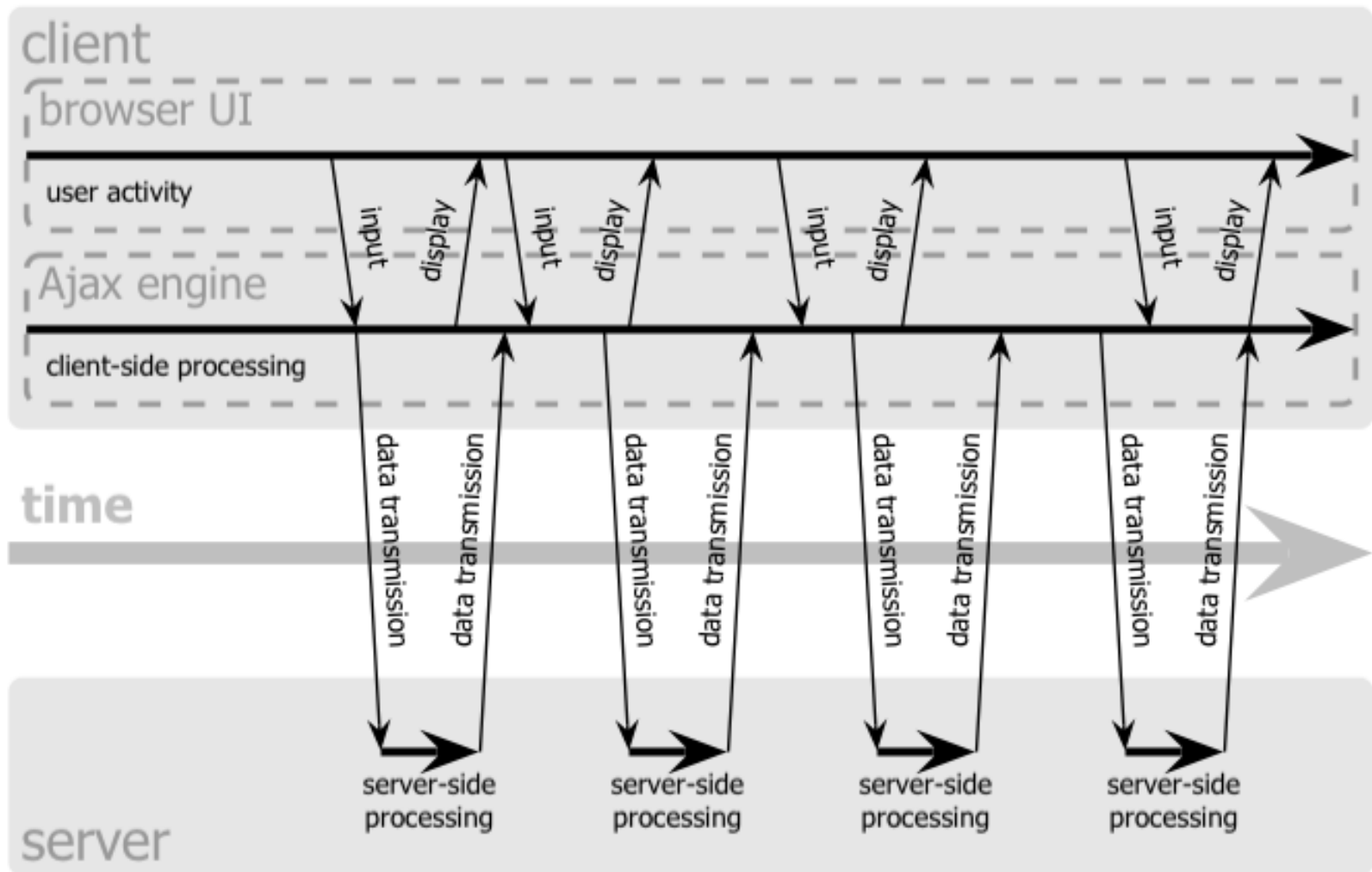
- Google Maps
  - <http://maps.google.com>
- Google Suggest
  - <http://www.google.com/webhp?complete=1&hl=en>
- Sajax Tables
  - <http://labs.revision10.com/?p=5>
- Sajax
  - <http://www.modernmethod.com/sajax/>



## classic web application model (synchronous)



# Ajax web application model (asynchronous)



# Navigation Patterns

- Drive to content
- Drive to advertisement
- Move up a level
- Move to next in sequence
- Jump to related

# Before You Go

On a sheet of paper, answer the following (ungraded) question (no names, please):

What was the muddiest point in this semester?