CS 2033

Multimedia & Communications II

LECTURE 10 – CMS AND E-COMMERCE WEBSITES

What is a CMS?

- Content Management Systems (CMS) are useful website platforms.
- They make it easy to create and maintain websites without having to know any code.
- The content is separated from the code so website content can be updated in a visual interface.

What is a CMS?

- ▶ Consider a large website like Wikipedia.org or msn.com.

- ▶ Imagine how time consuming and complicated it would be to update content if it was within the code.

- ▶ Instead, the code and content are split up into separate components.

What is a CMS?

- Main advantages of using a CMS:
  - Split content from code
  - Keep job roles separate
  - Keep the site more organized
  - Pre-made themes
  - Many easy-to-add modules
  - Built-in SEO

What is a CMS?

- How does this work?
  - Content is typically saved into a database or external files.
  - The code is used for the website layout and template.
  - The code also loads the content from the database.
  - Note that HTML cannot load from a file or database; use PHP or ASP.

What is a CMS?

Content within code

```
<!doctype html>

<html>

  <head>
    <title>Courses</title>
    <link rel="stylesheet" href="css/styles.css">
  </head>

  <body>

    <h1>CS 1033</h1>
    <p class="description">This course is an introduction to multimedia and
    communications. Topics include Photoshop basics, design principles,
    creating a website with a WYSIWYG program, animations, video, and audio.
    </p>

    <h1>CS 2033</h1>
    <p class="description">Following the multimedia topics introduced in CS
    1033, this course offers a more advanced look at Photoshop tools and
    website development. HTML, CSS, JavaScript, and other modern technologies
    are taught.</p>

  </body>

</html>
```

What is a CMS?

Code without content

```
<!doctype html>

<html>

  <head>
    <title>Courses</title>
    <link rel="stylesheet" href="css/styles.css">
  </head>

  <body>

    <h1>
      <!-- load course1 from database -->
    </h1>
    <p class="description">
      <!-- load description1 from database -->
    </p>

    <h1>
      <!-- load course2 from database -->
    </h1>
    <p class="description">
      <!-- load description2 from database -->
    </p>

  </body>

</html>
```

Course	CS 1033
Description	This course is an introduction to multimedia and communications. Topics include Photoshop basics, design principles, creating a website with a WYSIWYG program, animations, video, and audio.

Course	CS2033
Description	Following the multimedia topics introduced in CS 1033, this course offers a more advanced look at Photoshop tools and website development. HTML, CSS, JavaScript, and other modern technologies are taught.

Database

What is a CMS?

- By splitting up the code and content, these websites can have distinct team members.
  - Editors – writing/creating content only.
  - Programmers – making the layout and handling other functional modules.
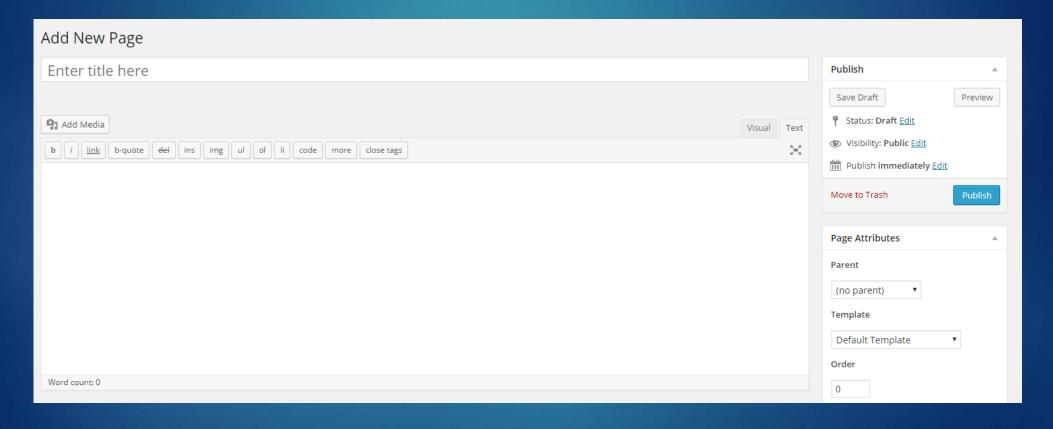 - Neither one has to deal with the other since they are completely separated.

CMS

- ▶ This is not only used for large, complex websites.

- ▶ Many websites now use CMSs.
    - ▶ News sites
    - ▶ Blogs
    - ▶ Sites with articles
    - ▶ Sites with changing content
    - ▶ Wikis (more on wikis shortly…)

CMS

- CMS platforms:
    - WordPress (most popular one)
    - Joomla!
    - Drupal
    - Cascade (UWO uses this one)

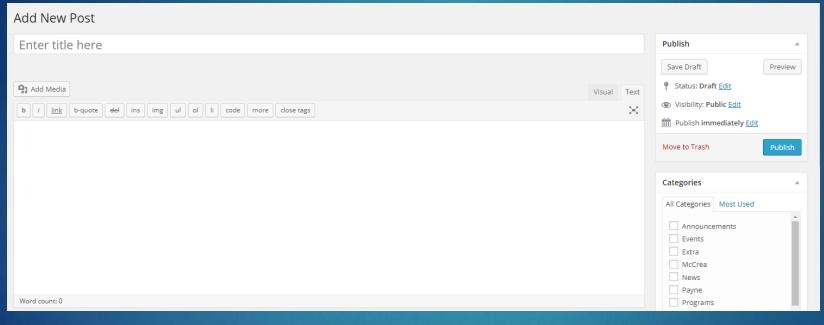- Big companies may create their own CMS instead of using one of these.

WordPress

- WordPress is free and easy to use.
- After registering, they provide you with an online control panel, shortened to cPanel.
  - cPanel is used by other platforms as well as WordPress.
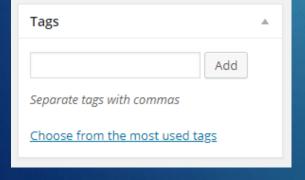- cPanel is the main hub for editing the site without touching code.

WordPress

- Posts vs. Pages
  - Posts are for articles, news items, products, etc.
  - Pages are whole webpages
  - Posts generally don't have a fixed web location, which is unlike webpages
  - Blog pages usually contain one or more posts
  - WordPress allows you to create both

WordPress

Adding a page in the WordPress cPanel

WordPress

Adding a post in the WordPress cPanel

WordPress

- WordPress themes:
  - Pre-made templates that are customizable
  - Comes as a folder of many code files (PHP, CSS, etc.)
  - Free or purchasable
  - Great examples:
    - https://athemes.com/airi-demos/

WordPress

▶ Who actually uses WordPress?
  ▶ The Walt Disney Company
  ▶ Walking Dead
  ▶ Snoop Dogg
  ▶ Palasad
  ▶ Many many others

Wiki

- What is a wiki?
  - To help answer this, think about Wikipedia.

- What is a unique feature of Wikipedia?

Wiki

- Wikis are special kinds of CMSs.
- Collaboration is key with wikis.
- Many users contribute to the website's content.
- Wiki means "quick" in Hawaiian.
- They are seen as quick and simple because the content is added by a community rather than one person.

Wiki

- Wikipedia is the most popular wiki.

- This is a public wiki, meaning anyone can edit it.

- Some wikis are private so only select communities or user groups have access to view or edit them.

- OWL is an example of a special, private wiki!

e-commerce

- e-commerce (also written as eCommerce) is online vending.

- Selling or purchasing anything online counts as e-commerce.

- This includes ordering a pizza from the Pizza Pizza website/app or a meal through Uber Eats or Skip The Dishes.

e-commerce

- Shopping for clothes, electronics, books, games, food, and virtually all other products.

- Examples of e-commerce websites:
    - Amazon
    - Walmart
    - Best Buy
    - Uber Eats

e-commerce

- eBay and Amazon were the main pioneers for e-commerce, and now many businesses use it in some way.

- Amazon began with Jeff Bezos selling a book from his garage over the Internet. That started a revolutionary company that now generates hundreds of billions of dollars through global purchases.

e-commerce

- ▶ Advantages for the consumer:
  - ▶ No need to go out of the house
  - ▶ Quick and easy to do
  - ▶ Comparison shopping
  - ▶ Look at reviews before buying
  - ▶ No time or geographical restrictions
  - ▶ No waiting in line

e-commerce

- Advantages for the business:
    - No/less geographic limitations
    - No need for retail space
    - Lower number of employees
    - Easy to track inventory, payments, demographics, user trends, etc.
    - Easy to use such information to create targeted specials, recommended products, etc.

e-commerce

- Market basket analysis
  - Find items that are purchased together
  - i.e. many people who buy peanut butter also buy jam at the same time
  - Businesses can then sell these items together or make recommendations
  - i.e. when you are buying a PC on an e-commerce site, they recommend buying a printer with it

e-commerce

e-commerce

- There are e-commerce CMSs:
  - Shopify (Canadian ☺)
  - Volusion
  - Magento
- There are also ways to incorporate payments directly into your site:
  - PayPal
  - Stripe

e-commerce

- Cart abandonment is an issue that e-commerce vendors hate!

- This is when users begin adding items to their cart and then leave the site without placing an order.

- There are marketing articles written about how to avoid the dreaded "abandoned cart" dilemma.

e-commerce

- ▶ An option for incorporating commerce into a website is PayPal.

- ▶ Set up an account that links to your bank account.

- ▶ Insert "Add to cart" buttons in the site and PayPal manages the cart.

- ▶ Checkout will also use a PayPal module to handle the payment.

e-commerce

▶ PayPal was a popular method before because they handle and process the payments.

▶ They also take a cut of the transactions though.

▶ The processing of a transaction is called a payment gateway. This is not specific to PayPal.

e-commerce

- e-commerce platforms like Shopify also include payment gateways.

- Another option is to use a third-party platform like Stripe which allows you to embed a payment system in your own site.

    - However, they also take a cut from the transactions. ☹