ITEC321 - Administering Web-based Content Management System

Introduction to

Content Management Systems

and

WordPress

OBJECTIVES

- **Definition of Content Management Systems**

- **Features of Content Management Systems**

- **Definition of Web Content Management Systems**

- **Key Difference between WCMS and CMS**

- **Impact and Business Trends with Web Content Management Systems**

- **Common Components of WCMS**

- **Security Concerns and Precautionary Measures**

- **Define WordPress**

- **List Advantages and Disadvantages of WordPress**

- **Dashboard Menu in WordPress**

- **Main Menu in WordPress**

Content Management System (CMS)

- The **Content Management System (CMS)** is a **software** which stores all the data such as text, photos, music, documents, etc. and is made available on your website. It helps in editing, publishing and modifying the content of the website.

Features of CMS

1. **User Management** − It allows managing the user information such as changing the role of the users to (subscriber, contributor, author, editor or administrator), create or delete the user, change the password and user information. The main role of the user manager is **Authentication**.

2. **Media Management** − It is the tool for managing the media files and folder, in which you can easily upload, organize and manage the media files on your website.

3. **Theme System** − It allows modifying the site view and functionality. It includes images, stylesheet, template files, and custom pages.

4. **Extend with Plugins** − Several plugins are available which provides custom functions and features according to the users need.

5. **Search Engine Optimization** − It provides several search engine optimization (SEO) tools which makes on-site SEO simple.

6. **Multilingual** − It allows translating the entire content into the language preferred by the user.

7. **Importers** − It allows importing data in the form of posts. It imports custom files, comments, post pages, and tags.

Web Content Management System (WCMS)

- WCMS is a specific kind of CMS. Dedicated specifically to websites, it's a CMS subset, known as 'Web Content Management System.' WCMS is a web management system that handles content as well.

- It's defined as software that is designed to help you create and manage content to distribute on the web.

Key Difference between WCMS and CMS

Content management system (CMS) is a computer application of digital content, which supports multiple users in a collaborative space.

Web Content Management Systems (WCMS) manages content with clearly defined ownership pertaining to documents, movies, photographs, phone numbers and scientific data points.

In general terms, an external or internal CMS offers features to manage web content, while a WCMS takes those features and extends them into different areas, such as:

- Collaboration
- Digital asset management
- Workflow management / Business process management
- Web content management
- Knowledge management
- Document imaging
- Document management
- Records management

Impact and Business Trends with WCMS

Commercial WCMS products have the following benefits:

1. **Quicker response times:** making new web content such as marketing materials available on the web is much quicker because content owners can update materials to a website directly, without the need to assign such tasks to technical personnel;

2. **More efficient workflows:** requests for changes and updates to a site are simplified under a WCMS framework. Users across different departments can add and apply changes to web content with a pre-defined and agreed upon workflow process.

3. **Improved security**: under a WCMS framework, content is only published after approval by designated supervisors or managers. This reduces the chance of publishing material by mistake, which is usually due to human error. In addition, most WCMS systems provide <u>audit trails</u> of publishing activities all of which help maintain accountability;

4. Other benefits include improved version tracking, integration with translation servers, and consistency of page presentation through the use of common page layouts and controlled templates

The Common Components Of WCMS

- WCMS are programmed in languages such as Java and PHP, and run on a web server.

- WCMS may also contain additional components such as workflow engines, search engines, and email integration modules.

- Web content and data is normally stored in data repositories or databases such as MySQL (open source) or Oracle (commercial).

- For the purposes of accountability, users normally need to be authenticated before they can access the WCMS.

Security Concerns and Precautionary Measures

- WCMS is a software application, it is prone to bugs just like any other program. **Vulnerabilities** (absolute path traversal vulnerability) have been found in WCMS in 2006. This flaw would allow remote authenticated users to download arbitrary files.

- Another security concern lies with the protection of **authentication credentials** when accessing a WCMS. Some WCMS products do not provide adequate protection for logins and passwords.

  - for example, some password including administrator password are sent as plain text over the network.

Precautionary Measures

There are a number of precautionary measures that should be done proactively to mitigate the security threats identified above:

1. Any alerts or warnings about **vulnerabilities** on the WCMS product being used should be addressed immediately, especially if the WCMS can be accessed directly from the Internet.

2. Any patch management process should also address additional WCMS modules, including email subsystems, backend database servers, JAVA runtime environments, and so on.

3. A strict password policy should be defined. This should include a minimum password length, initial assignments to personnel, restricted words and formats, and a limited password life cycle.

4. Logins and passwords sent over the Internet should be protected by SSL / TLS, so that attackers can't sniff them over the network. In general, access to administration pages should be further controlled and these should not be open to Internet access.

5. When publishing any web content from the WCMS to the production web server, file transfer programs such as FTP should be replaced by a Secure Shell (or SSH) that protects transmission channels by encrypting data. Some SSH implementations also support a feature that controls which IP addresses are allowed to connect to the destination server.

6. A good WCMS should keep an audit trail, logging all editing and approval activities. These audit trails should be retained for a period commensurate with their usefulness and should be secured so they cannot be modified and can only be read by authorized persons.

Begin with WordPress

What is WordPress?

WordPress is an open source **Content Management System (CMS),** which allows users to build dynamic websites and blogs. WordPress is the most popular blogging system on the web and allows updating, customizing and managing the website from its back-end CMS and components.

- WordPress was initially released on 27th May, 2003 by Matt Mullenweg and Mike Little.

- WordPress was announced as open source in October 2009.

Advantages of WP

- It is an open source platform and available for free.

- CSS files can be modified according to the design as per users need.

- There are many plugins and templates available for free. Users can customize the various plugins as per their need.

- It is very easy to edit the content as it uses WYSIWYG editor (What You See Is What You Get is a user interface that allows the user to directly manipulate the layout of the document without having a layout command).

- Media files can be uploaded easily and quickly.

- It offers several SEO tools which make on-site SEO simple.

- Customization is easy according to the user's needs.

- It allows creating different roles for users for website such as admin, author, editor and contributor.

Disadvantage of WP

- Using several plugins can make the website heavy to load and run.

- PHP knowledge is required to make modifications or changes in the WordPress website.

- Sometimes software needs to be updated to keep WordPress up-to-date with the current browsers and mobile devices. Updating WordPress version leads to loss of data, so a backup copy of the website is required.

- Modifying and formatting the graphic images and tables is difficult.

WordPress Dashboard

The **WordPress Dashboard** (or WordPress Admin Dashboard) is the first screen which you will see when you log into the admin area of your blog. The Dashboard displays a brief overview of your WordPress website.

The WordPress Dashboard is divided into few parts and can be categorized as shown in the following illustration.
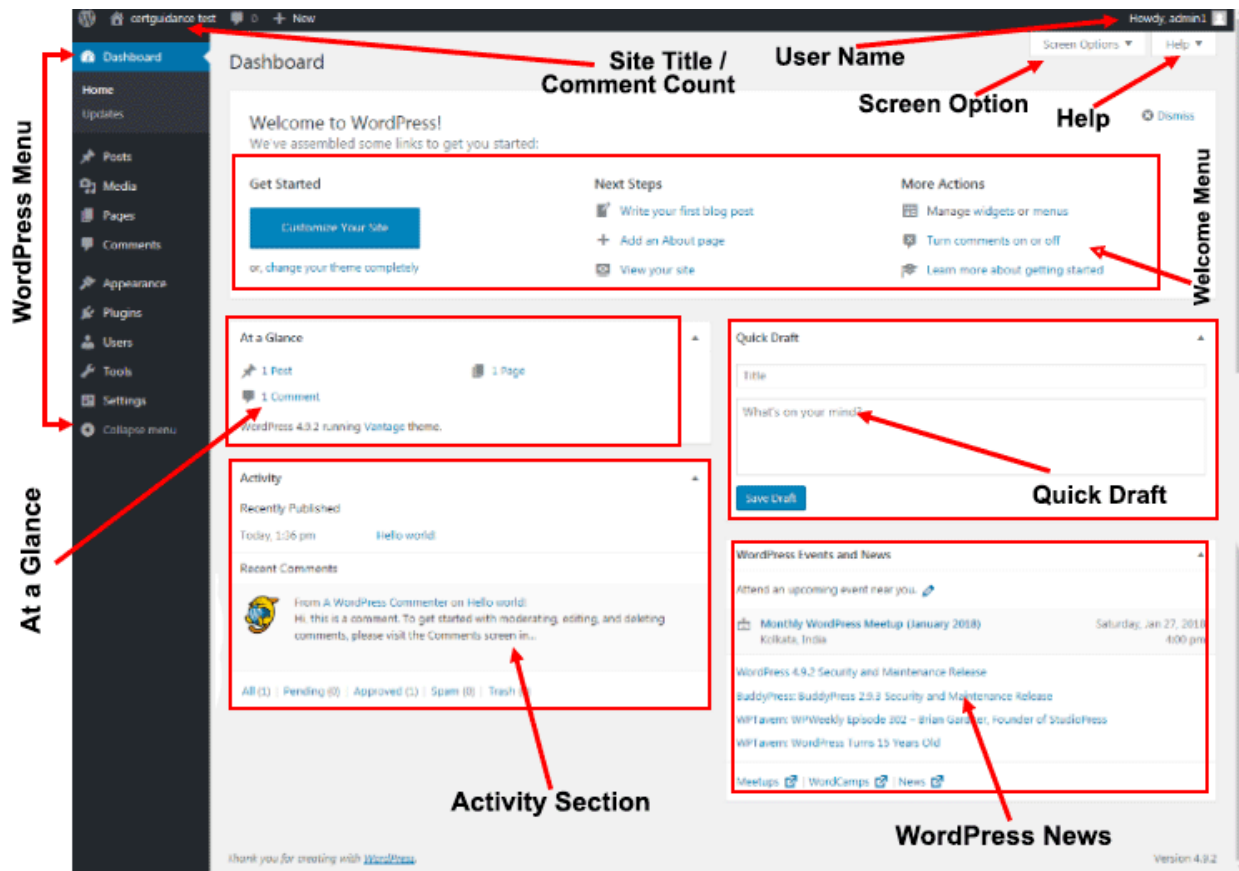
Dashboard Menu

Screen Options

- The dashboard contains different types of widgets which can be shown or hidden on some screens. It contains check boxes to show or hide screen options and also allows us to customize sections on the admin screen.

Welcome

- It includes the **Customize Your Site** button which allows customizing your WordPress theme.

- The center column provides some of the useful links such as **creating a blog post**, **creating a page and view the front end of your website**.

- The last column contains links to widgets, menus, settings related to comments and also a link to the **First Steps With WordPress** page in the WordPress Codex.

Quick Draft

- The **Quick Draft** is a mini post editor which allows writing, saving and publishing a post from admin dashboard. It includes the title for the draft, some notes about the draft and save it as a Draft.

WordPress News

- The **WordPress News** widget displays the latest news such as latest software version, updates, alerts, news regarding the software etc. from the official WordPress blog.

Activity

- The **Activity** widget includes latest comments on your blog, recent posts and recently published posts. It allows you to approve, disapprove, reply, edit, or delete a comment. It also allows you to move a comment to spam.

At a Glance

- This section gives an overview of your blog's posts, number of published posts and pages, and number of comments. When you click on these links, you will be taken to the respective screen. It displays the current version of running WordPress along with the currently running theme on the site.

Main Menu

The WordPress Dashboard comes with a default navigation menu shown in the left sidebar. This navigation menu is also the **main menu** of WordPress.
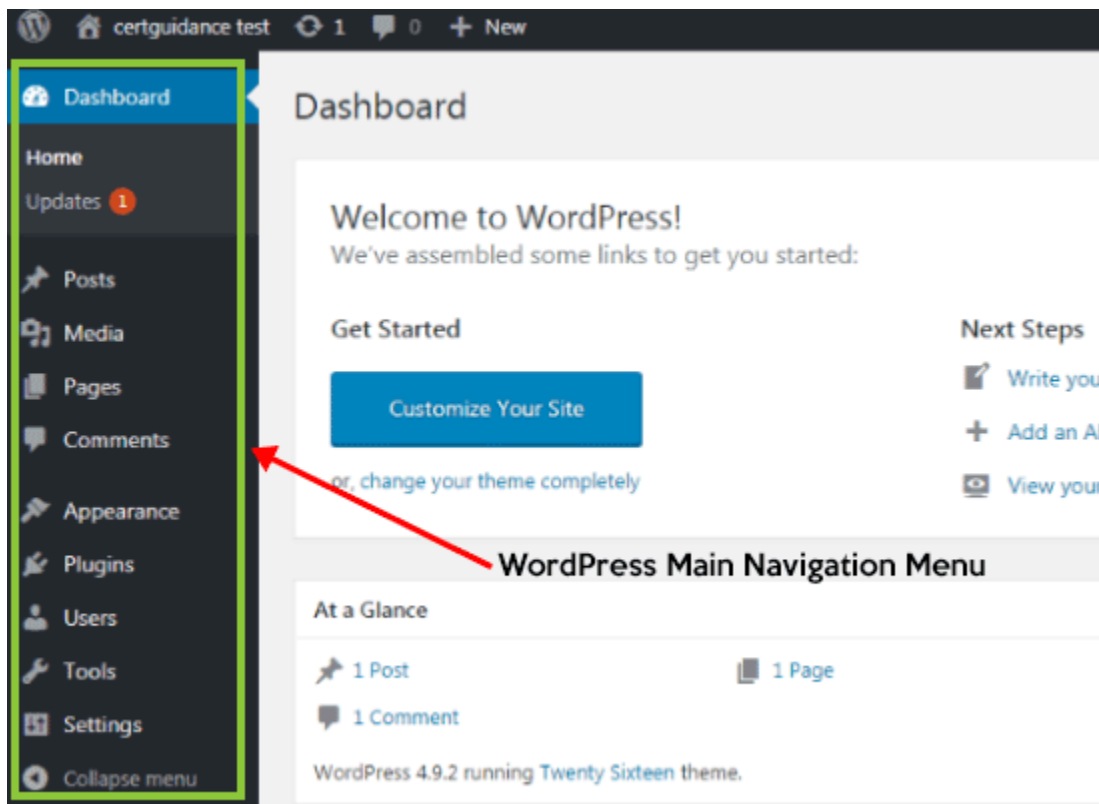
Posts
This is where you can create a new Blog Post. You can also update your Categories and Post Tags.

Media
This is where all your uploaded images, documents or files are stored. You can browse through your Media library, as well as edit and update the files.

Pages
This is where you create and maintain all your Pages.

Comments
You can manage all your Comments within this section, including replying to comments or marking them as spam.

Appearance
This menu is where you control how your site looks. You can choose a new Theme, manage your site Widgets or Menus and even edit your site theme files.

Plugins
Plugins extend and expand the functionality of WordPress. You can add or delete plugins within here as well as activate or deactivate them.

Users
This screen lists all the existing users for your site. Depending on your Role, you can also add new users as well as manage their Roles.

Tools
This section gives you access to various convenient tools. You can also Import data to your WordPress site or Export all your WordPress data to a file.

Settings
This is where your site is configured. Among other things, it allows you to configure your site name and URL , where your Posts appear, whether people can leave Post Comments or not and numerous other settings. Most times, once your site is setup, there's no need to change any of the settings within this section.

Collapse menu
At the bottom of the menu you'll see a link called *Collapse menu*. Clicking this will hide the menu and simply display their icons instead. Click the small arrow icon again to expand the menu.

Occasionally when you install a plugin, they will have their own configuration or setup pages. The location of these will be entirely dependent on the individual plugin but most times these pages will either appear within the *Tools* section, the *Settings* section or in a completely new menu section at the bottom of the menu.