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*National University  
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**GGGE1155**  
**COMPUTER IN EDUCATION**

**Assignment 2**

**Title: Report on Learning Management System, Course Management System and Content Management System**

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## **1.0 INTRODUCTION**

We were given a task by Dr. Fariza as our second assignment in Week 3. The purpose of this report is to differentiate the definition, features and functions of Learning Management System, Course Management System and Content Management System. This report was done by examining all the online information collected from Google search engine network that each of us shared in Google Docs. As the task is a group work so in order to complete the task, we required everyone's commitment to do it as a team to complete the task within the given time.

## **2.0 LEARNING MANAGEMENT SYSTEM**

### **2.1 HISTORY:**

The first teaching machine was invented by Sidney Pressey in 1924. The device consisted of typewriter with a window that could conduct multiple choice questions. In 1929, M.E LaZerte invented a mechanical device that presented a problem to student and whether the solution step taken by the students were correct or not. In 1956 to 1990, changes and upgraded-system were done by the inventors which consists of teaching system that automatically adjusted the difficulty of the question based on the learner performance. The systems let its user interact, including instructors and authors who can create material, and students in completing the online material, creation of ARPANET, widespread of e-Learning, invention of TCP/IP, Project Athena - a five years initiative to explore innovative uses of computers for education and the launching of LMS first class. In 1992, open-source, internal network of LMS were released while in 2004, SCORM was released . The progress that took part between 2005 to 2008 were OLAT 5.0 that emphasis on a collaborative environment thus, eucalyptus was released as the first open-source. Finally in 2012, the most modern LMS was hosted in the cloud-freeing the companies from the burden maintaining the house-systems and installing (Mindflash.com, 2015).

### **2.2 DEFINITION:**

Learning Management System (LMS) is a software application used for the administration, documentation, tracking, reporting and delivery of e-Learning courses and training programs. According to Hall (2001), he presented the alternative definition which is Learning Management Strategies is software that automates the administration of training events. All Learning Management System manage the log-in of registers users, manage course catalogs, record data from learners, and provide reports to management.

## 2.3 **FEATURES:**

The following features were retrieved from (Upsidelearning.com, 2015).

1) **Responsive Framework:**

Light and responsive design on learner's side and compatible on desktops, tablets and smartphones

2) **Configurability:**

Fully configurable course catalog with numerous levels of public and private categories.

3) **User-friendly GUI:**

Web 2.0 Interface and easy navigation through well defined menus and logically defined structure

4) **Virtual Classroom Management:**

Creation and scheduling of any number of virtual meetings and text chat with the instructor or other learner

5) **eCommerce:**

In-built eCommerce engine with shopping cart and accept payments from PayPal, Credit/Debit cards and Netbanking services

6) **Classroom Training Management:**

Ability for users to download event to outlook calendar, waitlist concept, session planning and scheduling

7) **Social Learning & Knowledge Collaboration:**

For example, integration with Live Twitter, content - photos and videos sharing and global discussion board

8) **Client/User License Management:**

Centralised user license management; site admin can manage user licenses for multiple clients

9) **Blended Learning:**

Ability to blend and deliver e-learning, classroom training and virtual classroom

**10) Instructor/Expert Workflow:**

Instructor will be able to answers learner queries for the learning element, access reports and his/her training calendar

**11) User Management:**

Self-enrolment for users where users can be approved and enrolled manually by administrator

**12) Assessment:**

For example, multiple questions supported, multiple exam templates, ability to set time limit, mandatory questions, difficulty rating

**13) Online Content Management:**

Seamless exporting and publishing of authored courses to the LMS

**14) Multi-lingual Support:**

There are many type of languages available and the users can switch between the languages

**15) Communication:**

Equipped by automated system notifications on course allocation, modification and completion.

**16) Learner Support:**

User friendly learner interface; search feature; automatic email notification and reminder; comprehensive calendars

**2.4 EXAMPLES:**

These are the top 20 most popular learning management system used by organizations to manage, track, and deliver training programs: Edmodo ( with almost 300 000 customers), Moodle, Blackboard, SuccessFactors, SkillSoft, Schoology, Cornerstone, Instructure, TOPYX, Desire2Learn, Collaborize Classroom, Litmos, Latitude Learning, DigitalChalk, eFront, TalentLMS, Meridian Knowledge Solutions, Docebo, Educadium, eLogic Learning. In Universiti Kebangsaan Malaysia we are also integrated with Learning Management System which is SMPWeb.

## **3.0 COURSE MANAGEMENT SYSTEM**

### **3.1 HISTORY:**

Looking at its history, Course Management System, also known as CMS at first was used to reinforce academic classroom classes in academic settings, for example universities and colleges (Carliner, 2005). According to Cmg.screenstepslive.com, (2015) it was programmed with a very basic tool set that incorporate a folder structure, evaluation devices, survey tools, discussion groups, announcement boards, and grade books. Besides, the fact that CMS is well-known for requiring practically no knowledge of programming language, such as HTML has increased its popularity via the Internet users and of course, it was evolving faster than ever (Harrington, Gordon & Schibik, 2004). Under those circumstances, in the last decade, there has been a rush by higher education institutions to adopt CMS technologies with an end goal to create effective learning environments for anywhere and anytime.

### **3.2 DEFINITION:**

Course Management System (CMS) is defined as a set of tools that enables the instructor to create online course content and post it on the Web without having to handle HTML or other programming languages (Techopedia.com, 2015). However, different scholars vary in how they define a CMS. For example, Carliner (2005) described a CMS as simply an online system that was initially designed and marketed to support classroom learning in academic settings, such as universities and high schools. On the other hand, Vincini & Barnes (2009) expressed a CMS as an Internet-based software that creates and distributes course content, manage students enrolment and track students performance. Other writers also wrote that CMS is utilized in the same respect as a LMS. For example, Ferriman (2012) defined CMS is the main function of an LMS that acts as a secure place to store and launch training to a subset of users.

### **3.3 FEATURES:**

Cft.vanderbilt.edu (2015) presents the following elements for a CMS in education:

- An area for faculty posting of class materials such as course syllabus and handouts
- An area for students posting of papers and other assignments
- A grade book where faculty can record grades and each student can view his or her grades
- An integrated email tool allowing participants to send announcement email messages to the entire class or to a subset of the entire class
- A chat tool allowing synchronous communication among class participants
- A threaded discussion board allowing asynchronous communication among participants

### **3.4 FUNCTIONALITY:**

Since they first emerged in the mid 1990s, there has been quite a lot of evolution from the original days where systems were installed. Nowadays, many current CMS are utilized mostly for online or blended learning together with supporting the distance learning. Much like iFolio facilitates you with the access to the learning materials, a CMS is a software-based package in which educators can make course materials available to students, administer assessments, facilitate self-paced learning, and assess students understanding of the course materials (Cmg.screenstepslive.com, 2015). For instance, it gives the instructor an approach to deal with post the course materials without needing to physically print it out for the students. In addition, this platform also benefits the students by giving them the ample time to deliver their assignments, communicate with their peers and lecturers, and take an interest in online forms without boundaries of time and space (Vincini & Barnes, 2009).

### **3.5 EXAMPLES:**

Examples of Course Management System (CMS) include Blackboard, Joomla, Drupal, SilverStripe, MODx, CourseWorks, Stellar and CHEF.



## **4.0 CONTENT MANAGEMENT SYSTEM**

### **4.1 HISTORY:**

The very first guys who wrote CMS are by Roven (1994), Blitzen (mid, 90's), Ingeniux (1999) and Vignette. CMS has a very structured development environment in terms of the main features. One had to use tags and templates because there was no WYSIWYG which stands for What You See Is What You Got. Fortunately, they are all now has been demolished. CMS were most written by web design agencies rather than software companies and every single agency had their own. This occurred until they found it was not a core skills and so with the dot.com crash came a refocus most marketing agencies recede from coding development and started focusing on design which most did better than code.

### **4.2 DEFINITION:**

Content Management System (CMS) is an application (more likely web-based) provides capabilities for multiple users with different permission levels to manage (all or a section of) content, data or information of a website project, or internet / internet application. This statement is agreed by Shaikh (2015) who stated that CMS is created to support the creation, management, distribution, publishing, and discovery of corporate information. In addition, Shaikh (2015) also added that CMS covers the complete lifecycle of the pages on site, from providing simple devices to create the content, through to publishing, and finally to archiving. On the other hand, Kartner (1998) define CMS as a system that allow content to be stored, retrieved, edited, updated, controlled, then output in a variety of ways such that the incremental cost of each update cycle and output production shrinks dramatically over time. It is a great concept.

### **4.3 FEATURES:**

Based on Kartner (1998), the features of Content Management System are:-

#### **a) Data Repository**

Also called a database, it intends to facilitate access, updating, and re-distribution. The format of the information might be SGML or even plain ASCII text. It may be accessed from a local network, internet, or the Internet, and security to control authorized access must be thought out and included.

#### **b) User Interface**

The set of screens used to interact with the data make up the user interface. It will utilize numbers of different-but-familiar interfaces, especially those who use Internet browsers and word processors. Frequently those are used in combination with custom interfaces designed to meet the specific process needs of an organization or publication.

#### **c) Editorial Tools**

The key components of most CMS solutions are word processors and SGML. Tools are provided to allow content creation and editing, as well as a fluid file form that facilitates the ongoing processing of the content. The ideal set of editorial tools would allow authors to work in a software environment that they are comfortable with, such as a word processor or text editor, while following a few basic rules.

#### **d) Workflow Scheme**

The workflow scheme works to track of each data element, its check-in and check-out history, as well as its version history. That allows those checking on the status of an article to know whether it has been accessed, is being edited, has been submitted for copy editing, has been returned to the author for re-work, or has been accepted in its final form. On top of that, the workflow scheme can also generate custom reports to provide status information in a variety of formats. It allows the publisher to control (or at least track) the content and process.

#### **e) Output Utilities**

The output utilities works as filters that take information in the data repository and format it for various publishing media. For instance, a filter may generate the CD-ROM version of the content in its final form, but may generate a print version in a partially tagged form to be sent to a typesetter for pagination. After getting the data in shape and providing access to it, the content will remain safe even it is without well-developed output utilities. It clearly make the job easier.

#### **4.4 EXAMPLES:**

- a) Dropbox
- b) Google drive
- c) Website
- d) Blog
- e) Wordpress

## **5.0 CONCLUSION**

To conclude, Learning Management System (LMS) is a very easy, systematic, and accessible software for everyone. This medium is very helpful especially in e-Learning or technology courses or training programs because LMS is designed for training and education record system. Institutions such as colleges and universities often use this LMS software to distribute online courses and assignment on campus-courses and as a medium for distributing blended college courses online. In addition, corporate trainers also use LMS to provide online training, automate record keeping and facilitate employee registration.

Next, Course Management System (CMS) is basically designed to support educative or academic courses. Back then, it allows the educators to create courses website, where documents can be uploaded in popular formats without having to convert them to a certain web format. These days, it still plays a prominent role in education system, particularly in higher education as it enables teaching a single course by only developing one curriculum to be used by all educators. Besides, due to its robust discussion board application, CMS also efficiently supports distance learning.

Last but not least, Content Management System (CMS) in a simple term refer to for formatting and editing content on website. In the context of internet, CMS is a piece of software that allows one to manage and create content. Examples that indicate CMS are dropbox, google drive, website, blogs, wordpress and many others.

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