

# CUSTOMIZED MOODLE LMS

## AN INTERNSHIP REPORT

*Submitted by*

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*in*

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## VADODARA INSTITUTE OF ENGINEERING

Halol Toll Road, At. Kotambi, Waghodia, Vadodara, Gujarat 391510

## CERTIFICATE

This is to certify that the internship report submitted along with the project entitled **Customized Moodle LMS** has been carried out by **Kaustubh Pandya** under my guidance in partial fulfillment for the degree of Bachelor of Engineering in Information Technology, 8<sup>th</sup> Semester of Gujarat Technological University, Ahmedabad during the academic year 2021-22.

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## VADODARA INSTITUTE OF ENGINEERING

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### DECLARATION

I hereby declare that the Internship report submitted along with the Internship entitled **Customized Moodle LMS** submitted in partial fulfillment for the degree of Bachelor of Engineering in Information Technology to Gujarat Technological University, Ahmedabad, is a bonafide record of original project work carried out by me at Orena Solutions Pvt. Ltd. under the supervision of Dr. Ekata Mehul Shah and Prof. Priya Patel internal guide and that no part of this report has been directly copied from any students' reports or taken from any other source, without providing due reference.

Name of the Student

Sign of Student

## Acknowledgement

Information in itself is a persistent cycle. At this second of our substantial enhancement, we hardly ever locate sufficient phrases to express our gratitude in the direction of the ones who had been continuously worried with us for the duration of our assignment. At the start, we wish to communicate our true appreciation to all who have assisted us with finishing this task in the most achieved way.

As a matter of first importance, we are extremely thankful to our external guide Mrs. Ekata Mehul Shah (Mentor at Orena Solutions) and internal guide Prof. Priya Patel has directed me to achieve our task and give them a wide experience of information. We are additionally extremely appreciative to the VADODARA INSTITUTE OF ENGINEERING for permitting me to do this internship in the field of CUSTOMIZED MOODLE LMS.

To wrap things up, we might want to recognize and thank in huge measures to all our own kindred companions and guides for their help.

## Abstract

A Learning Management System (LMS) is a term used to describe software tools designed to manage user learning interventions. LMS is a web-based technology used to plan, implement and assess a specific learning process. LMS which also referred as Course Management System (CMS) provide workspaces to facilitate information sharing and communication among students and lecturers to participate in course activities. Educators are able to distribute information to students, produce content material, prepare assignments and tests, engage in discussions, manage distance learning and enable collaborative learning using forums, chats and news services. Several examples of popular LMS are Blackboard, WebCT and Moodle. Recently, Moodle, an acronym for Modular Objectoriented Dynamic Learning Environment has become one of the most commonly used LMS. Moodle is a free LMS that enable the creation of powerful, flexible and engaging online courses and experiences. Several e-learning researches have been conducted in order to take advantage of Moodle's performance. A standalone tool for automatic detection of learning styles in LMS has been implemented. E-learning systems developed using Moodle accumulate an enormous amount of information which is very valuable for analyzing students' behavior and could create a gold mine of educational data. The learning system was developed using Moodle. This chapter analyzes the student's learning preferences and behavior while using the e-learning system based on Felder learning dimension, such as processing, perception, understanding and input. The first section of this chapter explains Moodle strength and features. The process of capturing and analyzing the student behavior while learning using hypermedia learning system has been discussed in the following section. We further discuss and conclude the analysis of the distribution of the learners learning style, preferences and their navigation behavior. The analysis is useful for providing parameters for classification of student's learning style based on student's learning characteristics while learning online.

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## **List of Abbreviations**

Moodle - Modular Object Oriented Dynamic Learning Environment

LMS - Learning Management System

GUI- Graphical User Interface

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## Chapter 1: Overview Of Company

### 1.1 About the Company

We the team of Orena Solution are passionate about trying to bridge the gap between the academics and the industry. We are a visionary ICT company, looking to rejuvenate the employability levels of the Indian workforce. Orena Solution comprises of members from fortune 500 companies having vast experience in ICT training, online and offline campuses and executive training through various company as well as Academic campuses.

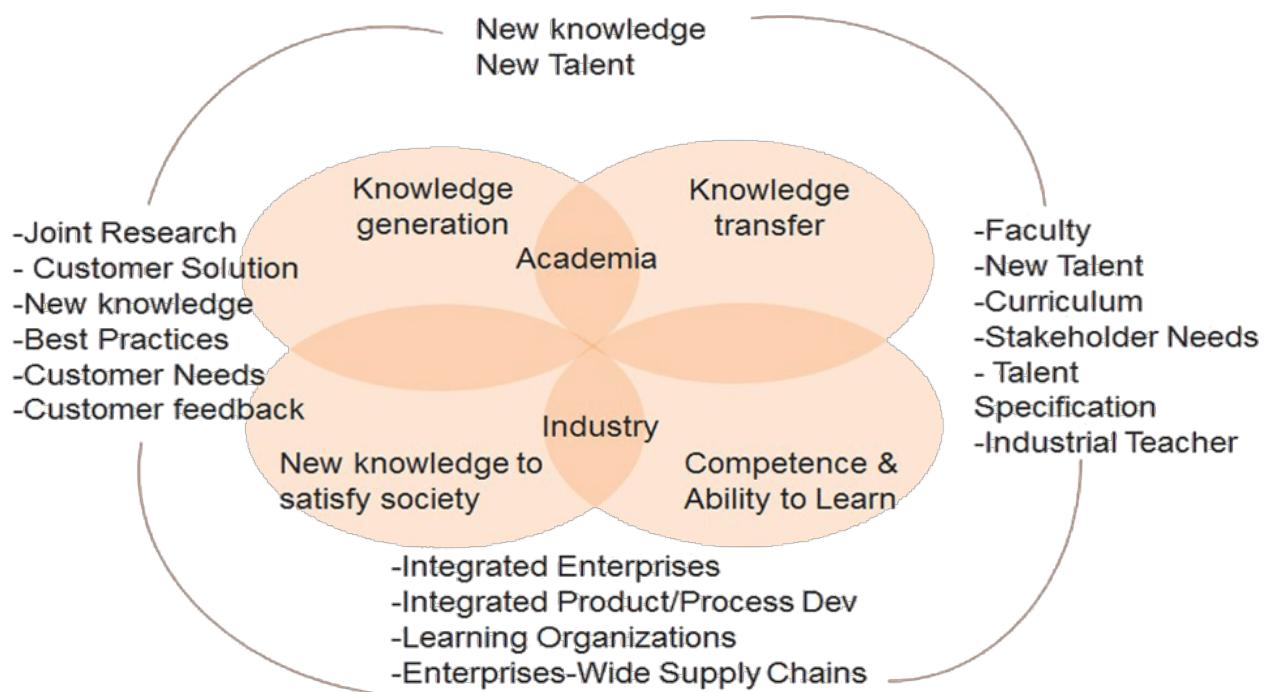
### 1.2 Different scope of work

Orena Solutions has initiated customized training programs during which fresher candidates get trained as per industry requirements in terms of technical and life skills. Based on the requirements of the company and information, like the job description, the number of openings and eligibility criteria, Orena Solutions will customize the curriculum as per the needs of the industry and would define the period of training and conduct the same as well.

Apart from this, we can support the campus recruitment on behalf of/or with the company, supporting them with our University partners for creating and enhancing the branding of the company.

Filtered candidates are provided to the industry, where the Orena Solutions will provide the placements or will provide it along with the company. As per the requirement of the companies, Technical Written-test, Aptitude test, psychometric test, practical test, and group discussions will be conducted based on the processes of the company.

### 1.3 Organization Chart



**Fig. 1.1**

### 1.4 Aim and Objectives of Internship

An internship provides a variety of benefits for young workers who want to broaden their chances for landing a job and jump-starting their careers. Internships give you a taste of what a profession is like, help you build your resume and let you meet people who can help you in your career.

Another benefit of an internship is developing business contacts. These people can help you find a job later, act as references or help you with projects after you are hired somewhere else. Meet the people who have jobs you would like some day and ask them if you can take them to lunch. Ask them how they started their careers, how they got to where they are now and if they have any suggestions for you to improve your skills.

## Chapter 2 : Introduction to Internship

### 2.1 SUMMARY

- Under this internship, I was allocated the project to develop entitled “Customized Moodle LMS” and “Campus Drive”.

### 2.2 PURPOSE

- The purpose of this project is to customize the Moodle LMS as per requirement of user and provide helpful environment to user.

### 2.3 OBJECTIVE

- The main objective of this project is to modify Moodle LMS as per requirements of the users and provide best user interface for particular user.
- For example:
- As per the users, their work will be different and they will need different environments also.
- Teacher, students and experts need different environments for their work. Their environments will not be the same.
- So purpose of this project is to provide different interfaces unambiguously.

### 2.4 TECHNOLOGY

- I used Wamp server to run Moodle LMS on my localhost in my device and Windows 11 to perform the changes and updations in the Moodle.

### 2.5 INTERNSHIP PLANNING

#### 2.5.1 Internship Development

- Moodle is an open source Learning Management System (LMS) software solution that provides different interfaces to teachers and students for grade their assignments and take tests/quizzes etc.

### 2.5.2 Internship effort and Time Scheduling

TITLE	DATE	STATUS
Moodle installation and overview	24/01/2022 to 27/01/2022	Complete
Study of Moodle plugins and its types	28/01/2022 to 31/01/2022	Complete
Created categories and adding various courses. Enrolling users into the courses and gave them the limited access as per the priority.	01/02/2022 to 04/02/2022	Complete
Moodle theme settings. Search autocomplete plugin installation.	16/02/2022 to 28/02/2022	Complete
Added Student Dashboard limitations. Applied prohibition on student and teacher for accessing priorities the out of their league . Disabled "Customize this page" option for students and teachers on the Dashboard	07/03/2022 to 15/03/2022	Complete
Campus Drive flow analysis. Fully function and working Candidate Registration form. Fully function and working Expert Collaboration form.	14/03/2022 to 04/04/2022	Complete
University Collaboration Form with database Company Collaboration Form with database	05/04/2022 to 15/04/2022	Complete

Table 2.1

## 2.6 What is Moodle ?

With the present pandemic hitting the world, it is interesting to note that the traditional means of imparting knowledge in institutes of higher education have also been impacted to a considerable extent. In this context, it has become imperative to explore other learning mechanisms one of which is Virtual Learning Approach. In this scenario, several learning management systems have evolved. Using Moodle, trainers can create and disseminate e- content in four quadrant approaches to their students in a flexible manner. The features of Moodle are personalized dashboard creation, easy to use interface, collaborative tools, automatic alerts and notifications, customized role creation, etc

Moodle can assist to customize the content for teachers' course content and also aid course delivery administrators to track of the performance of the students and customize the site as perinstitutional requirement.

The following are standard features of Moodle:

1. **Modern, easy to use interface:** Modern, easy to use interface signed to be responsive and accessible, the Moodle interface is easy to navigate on both desktop and mobile devices.
2. **Personalised Dashboard:** display current, past and future courses, along with tasks due.
3. **Collaborative tools and activities:** Work and learn together in forums, wikis, glossaries, database activities, and much more
4. **All-in-one calendar:** Moodle's calendar tool helps you keep track of your academic or company calendar, course deadlines, group meetings, and other personal events.
5. **Convenient file management:** Drag and drop files from cloud storage services including MS OneDrive, Dropbox and Google Drive.
6. **Simple and intuitive text editor:** Format text and conveniently add media and imageswith an editor that works across all web browsers and devices.
7. **Notifications:** When enabled, users can receive automatic alerts on new assignments and deadlines, forum posts and also send private messages to one another.
8. **Track progress:** Educators and learners can track progress and completion with an array of options for tracking individual activities or resources and at course level.
9. **Customisable site design and layout:** Easily customise a Moodle theme with your logo, colour schemes and much more - or simply design your own theme.
10. **Secure authentication and mass enrolment:** Over 50 authentication and enrolmentoptions to add and enroll users to your Moodle site and courses.

In addition, Moodle also supports some additional features such as Multilingual capability, Bulk course creation and easy backup, Manage user roles and permissions, Supports open standards, High interoperability, Simple plug-in management, Regular security updates, Detailed reporting and logs, Direct learning paths, Encourage collaboration, Multimedia Integration etc.

S.No	Students	Faculty	Administrators
1	Students can go through the content at their own pace with flexible timings (Competency based learning)	Creation and management of courses to suit their students	Administrators can enforce and monitor OBE
2	Contents of the missed classes can be viewed at any time	Preparation of online material in 'four quadrant' approach	Keeping track of progress and scheduling of the classes semester wise is possible
3	Difficult concepts/ portions can be studied repeatedly to get more clarity, if needed	Division of course into different modules/Topics and their scheduling is flexible by industry/Academia	Feedback systems can be integrated with LMS
4	Performance can be monitored throughout the semester	Design and Scheduling of assignments and assessments to the students can be made available to students at his/her convenience	Academic audit can be easily done and remotely also
5	Anytime, Anywhere learning is possible	Automatic Evaluation of Quiz and other day to day tests	Maintaining the records in a secured way
6	Courses can be learnt with lecture, video, animation and simulation of software embedded together	The content available in the Moodle can be fine-tuned for every batch.	Moodle server setup at institutional level is required or cloud subscription can be taken
7	Collaborative learning is possible	Group case studies for projects can be given	Training on Moodle and required platform/tools are essential
8	Learning outcomes can be monitored at every stage	Outcome Based Learning can be emulated	Learning outcomes can be measured
9	<b>Resources:</b> Desktop/Laptop with Headphone and reasonable internet bandwidth is needed to all faculty, students and Administrators		

Table 2.2

### 2.6.1 Moodle

- If you were a computer programmer the term “Modular Object-Oriented Dynamic Learning Environment” (Moodle) might make your heart skip a beat. If you were a teacher you might recognize the word as a verb that describes the process of lazily meandering through something, doing things as it occurs to you to do them, an enjoyable tinkering that often leads to insight and creativity.

- As such it applies both to the way Moodle was developed, and to the way a student or teacher might approach studying or teaching an online course. Anyone who uses Moodle is a Moodler. The Australian developer of Moodle (Martin Dougiamas), is both an educator and computer scientist. This combination brings unique qualifications to the art and science of using technology to reach learners in the 21<sup>st</sup> century.

### 2.6.2 Open Source e-Learning Software

- Moodle is a course management system (CMS) - a software package designed to help educators create quality online courses and manage learner outcomes. Such e-learning systems are sometimes also called Learning Management Systems (LMS), Virtual Learning Environments (VLE) and Learning Content Management Systems (LCMS). Students need only a browser (e.g., IE, Firefox, Safari) to participate in a Moodle course

- Moodle is Open Source software, which means you are free to download it, use it, modify it and even distribute it (under the terms of the GNU General Public License). Moodle runs without modification on Unix, Linux, Windows, Mac OS X, Netware and any other system that supports PHP, including most web host providers. Data is stored in a single database: MySQL and PostgreSQL are best supported, but it can also be used with Oracle, Access, Interbase, ODBC and others.

### 2.6.3 Language Support

- Moodle has 50 language packs, including: Arabic, Catalan, Chinese (simplified and traditional), Czech, Danish, Dutch, English (UK and US versions), Finnish, French (France and Canada versions), German, Greek, Hungarian, Indonesian, Italian, Japanese, Maori, Norwegian, Polish, Portuguese (Portugal and Brazil), Romanian, Russian, Slovak, Spanish, Swedish, Thai and Turkish.

### 2.6.4 Design Philosophy

- The design and development of Moodle is guided by a particular philosophy of learning, a way of thinking that you may see referred to in shorthand as a "social constructionist pedagogy". This page tries to explain in simple terms what that phrase means by unpacking **four** main concepts behind it. Note that each of these is summarizing one view of an immense amount of diverse research so these definitions may seem thin if you have read about these before.

- If these concepts are completely new to you then it is likely that these ideas will be hard to understand at first. We recommend that you read this carefully, while thinking about your own experiences of trying to learn something.

1. Constructivism
2. Constructionism
3. Social Constructivism
4. Connected and separate

## 2.6.5 Creating a New User Account

- Before you can do anything in Moodle you must create a New Account. By default this is done via e-mail confirmation. A message is sent from Moodle after completing the New Account registration form, accessible from the main Login screen. Other forms of user authentication are supported in Moodle (e.g. manual accounts only, external database, POP3, LDAP etc.), and these are explained in the Administration section of this manual.

- Once a user account is established the primary Moodle administrator can change an accounts login permissions. Following are types of user accounts that can be assigned to a Moodle user:

- Student (default - can interact with course content only)
- Teacher with Editing Permissions (can populate a course with activities and provide learner feedback - e.g. grades, assignment comments etc.)
- Teacher without Editing Permissions (can provide learner feedback only - e.g. grades assignments comments,etc)
- Course Creator (can create new courses, teach within them and assign teachers)
- Administrator (can do anything and go anywhere within Moodle)

## 2.6.6 Moodle Screen Elements

- Learners can access a Moodle course using almost any browser, including Internet Explorer, Mozilla, Firefox and Safari for the Macintosh. It is important that learners have a familiarity with using their browser.

## 2.6.7 Course Setup - Side Blocks

- If this is the first time you are entering a new course created for you by an administrator, it will be mostly blank (see Fig. 4). Course templates have block areas on the left and right sides, with course content activities being added in the middle of the screen. Side blocks can be added, removed and moved around on the course homepage to fit your needs.

- To reveal Moodle's features for adding content and arranging side blocks in your course, click the "Turn editing on" located in the top right corner of the screen. This action will reveal features for adding activities and resources in the content area of the course, and allow you to work with side blocks. The following is a description of Moodle side blocks included during installation, and their functions.

### People

This block has three selections, including:

- Participants (shows list view of everyone enrolled in course)
- Groups (see Learner Management section in manual)
- Edit profile (allows a user to add personal information to their profile)

## Activities

Whenever you add a different activity or resource to your course, an icon will appear in this block representing the specific Moodle “module” (e.g. Forum, Journal, Assignment etc.). These icons will link to a list of all instances of that modules activity that appear throughout the course. For students this provides a quick way to access a specific learning activity, teacher feedback or grade. For teachers they can access Learner Management features covered in that section of the manual.

## Calendar

This block allows a user to post significant events, relative to their account permissions:

- Site (event viewable in all courses - created by admin users)
- Course (event viewable only to course members - created by teachers)
- Groups (event viewable only by members of a group - created by teachers)
- User (personal event a student user can create - viewable only by the user)

## Upcoming Events

This block displays upcoming Calendar events in an abbreviated list, with links to the actual event so all details can be viewed. If this event is an Assignment, Forum, Quiz or Chat closing date the participant can link directly to this activity.

## Search

Allows participants to do a Google like search of all Forums, for the occurrence of their search value.

## Administration

These features are discussed in the Learner Management section of the manual.

## Courses

This block will display a list of all courses (only) that a participant is enrolled in, allowing one-click access to another course home page.

## Latest News

The News forum (default) within your course provides a why in which you can post course news you want participants to receive. Any posting made in this forum will display as a listeditem in the Latest News block.

## Recent Activity

This block displays two types of information for a participant; an abbreviated list of what they have done since their last login (displayed within the block), and a more detailed “Full report of recent activity”. This latter features provides the participant with a Normal view displaying a list of recent activity by module, or an advanced view where report criteria can be set.

**Online User**

Displays name and image of everyone logged in to the course within the past 5 minutes.

**Customizing Block Placement**

When editing is turned on, symbols for manipulating a block appear in the header includes:

- Eye - Hides or shows the block to students
- X - Removes block and adds it back to Block drop-down list
- éV - Moves block up or down in position
- çè - Moves block to left or right side of screen

**2.6.8 Course Setup - Settings**

- In the simplest of terms, a Moodle course is comprised of learning activities presented to participants within a specific format. This format can be open-ended consisting of a number of topics, or it can be more formal such as structured around a beginning and ending date, or it can be formatted to encourage informal learning. Moodle allows you to select one of these three formats while setting up your course:

- Topic (for open-ended or ongoing enrollment - self paced learning)
- Weekly (structured, with a beginning and ending time period - e.g. school environments)
- Social (Forums that encourage informal modes of learning - peer interaction)

- All features available from the Administration block will be covered in the Learner Management section of the manual, except for the **Settings** selection. This selection is central to course management in that this is where you will structure the online learning experience for your participants. When you click the **Settings** link in the Administration block the “Edit course” settings screen appears, allowing you to make the following selections:

**Category:**

It is likely that your course may be one of several selections available at the Moodle site front page. Courses are typically assigned to a category (e.g. Language Arts, Workplace Safety etc.), and your Moodle administrator may have done this when the course template was created. If not, make a selection from the Category value list that places your course in the correct category for your organization.

**Full name:**

Give your course a full name, as it will appear in the header area of the home page(e.g. Moodle 101), and in the site front page category.

**Short name:**

This is the name that will appear in the Navigation bar “breadcrumbs” (e.g. M101)

**ID Number:**

If you have an official code name for this course then use it here. Otherwise, leave blank.

**Summary:**

Enter a brief description for your course; about a paragraph of information that describes it to someone visiting the site front page.

**Format:**

Select a display format for the course (Topic, Weekly or Social).

**Course start date:**

If you selected Weekly format, assign a date for when the course will go live.

**Enrollment period:**

If you would like to set a time limit for how long a participant can be enrolled in your course, make a selection here. If you do not wish to set an enrollment period limit, select Unlimited. When you set enrollment period limits, a participant will be automatically unenrolled from the course on the specified number of days after they have first entered the course.

**Number of weeks/topics:**

If you choose either Topic or Weekly format, select the number of topics or weeks your course will be comprised of.

**Group mode:**

Group mode allows you to segment participants into either Separate or Visible groups. Groups are discussed in the Learner Management section of the manual.

**Force (Group mode):**

If the group mode is "forced" at a course-level, then the course group mode is applied to every activity in that course. Individual group settings in each activity are then ignored. This is useful when, for example, one wants to set up a course for a number of completely separate cohorts.

**Availability:**

This option allows you to "hide" your course completely. It will not appear on any course listings, except to teachers of the course and administrators. Even if students try to access the course URL directly, they will not be allowed to enter.

**Enrollment key:**

A course enrolment key is what keeps unwanted people out of your course. If you leave this blank, then anyone who has created a Moodle username on this site will be able to enroll in your course simply by going in to it. If you put something here, then students who are trying to get in for the FIRST TIME ONLY will be asked to supply this word or phrase. The idea is that you will supply the key to authorized people using another means like private email, snail mail, on the phone or even verbally in a face to face class. If this password "gets out" and you have unwanted people enrolling, you can un-enroll them (see their user profile page) and change this key. Any legitimate students who have already enrolled will not be affected, but the unwanted people won't be able to get back in.

**Guest access:**

You have the choice of allowing "guests" into your course. People can log in as guests using the "Login as a guest" button on the login screen. Guests ALWAYS have "read-only" access - meaning they can't leave posts or otherwise mess up the course for real students. This can be useful when you want to let a colleague in to look around at your work, or to let students see a course before they have decided to enroll. You have a choice between two types of guest access: with the enrolment key or without. If you choose to allow guests who have the key, then the guest will need to provide the current enrolment key EVERY TIME they log in (unlike students who only need to do it once). This lets you restrict your guests. If you choose to allow guests without a key, then anyone can enter into your course.

**Hidden sections:**

This option allows you to decide how the hidden sections in your course are displayed to students. By default, a small area is shown (in collapsed form, usually gray) to indicate where the hidden section is, though they still can't actually see the hidden activities and texts. This is particularly useful in the Weekly format, so that non-class weeks are clear. If you choose, these can be completely hidden, so that students don't even know sections of the course are hidden.

**News items to show:**

A special forum called "News" appears in the "Weekly" and "Topics" course formats. It's a good place to post notices for all students to see. (By default, all students are subscribed to this forum, and will receive your notices by email.) This setting determines how many recent items appear on your course home page, in the Latest News block or News forum. If you set it to "0 news items" then the Latest News block won't appear on the home page.

**Show grades:**

Many Moodle activities allow grades to be set. By default, the results of all grades within the course can be seen in the Grades page, available to students from the

course home page "Administration" block. If a teacher is not interested in using grades in a course, or just wants to hide grades from students, then they can disable the display of grades using this setting. This does not prevent individual activities from using or setting grades, it just disables the results being displayed to students.

### **Show activity reports:**

Activity reports are available for each participant that show their activity in the current course. As well as listings of their contributions, these reports include detailed access logs. Teachers always have access to these reports, using the "Activity" link visible on each participant's profile page. Student access to their own reports is controlled by the teacher via this course setting. For some courses these reports can be a useful tool for a student to reflect on their involvement and appearance within the online environment, but for some courses this may not be necessary. Another reason for turning it off is that the report can place a bit of load on the server while being generated. For large or long classes it may be more efficient to keep it off (default).

### **Maximum upload size:**

This setting defines the largest size of file that can be uploaded by students in this course, limited by the site wide setting created by the administrator. It is possible to further restrict this size through settings within each Moodle activity module.

## **2.6.9 Course Setup - Design Tools**

- This section will discuss Moodle design tools (editing symbols and the HTML editor), used during course creation. A good way to become familiar with these basic features is to add a summary description in the Top section of the course home page for your participants. Begin by clicking the "Turn editing on" button. This action will reveal:

- Block side block for adding, removing and moving side blocks
- Add an activity and Add a resource lists
- Activity/Resource editing symbols

### **Editing Symbols**

Each time you add an instance of an activity or resource to your course, a series of editing symbols will appear alongside the link. For example, these symbols appear to the right of the "News forum", added by default when the course shell was created. The following is an explanation for these editing symbols:

- è Indents activity (left-facing arrow appears to un-indent)
- ↗ Moves activity up or down in relation to other activities (in topic/weekly areas)
- Allows you to Edit the activities properties
- X Deletes activity
- ⓘ Hides activity from students (or shows the item if it is already hidden)
- ⓘ Displays "Group" setting status of activity (Groups discussed in Learner Management)

### Course Home Page Summary Description

To add comments in the Top section of the course home page that describes your course to participants, click the Edit icon link for the Top section area. This action will bring up the sections Summary of week/topic property screen. You can add an image with your description, and when complete simply click “Save Changes” to see your summary appear on the course home page. Each topic/week in your course can have a Summary description

### HTML Editor

When you are creating your course you will frequently use Moodle’s built in HTML editor. Your students will use this tool when responding to Forum posts, making Journal entries, creating a Dialogue response and when they use a Wiki. The HTML editor can be disabled by the Moodle administrator, but is a useful tool for enriching course content.

The HTML editor is not as feature rich as a commercial application like Dreamweaver or FrontPage, but you can do almost anything these tools can. A button on the tool bar allows.

Images stored in the course “Files” area can be easily inserted and you can create links to resources stored on another server. Hyperlinks and anchor points can also be easily inserted into a document. Moodle has built in media filters, discussed in the Administration section of the manual, that allow you to embed Flash, QuickTime, MP3 and Windows Media files into the HTML editor so they play directly within the page you create.

### 2.6.10 Course Setup - Adding Activities and Resources

- A Moodle course is populated with activities in one of two ways; by adding a “module” instance from the Activities drop-down menu (Fig. 18), or by adding an internal or external resource (Fig. 19). An internal resource is defined as a file you create within Moodle using say the HTML editor, and an external resource is typically a file stored elsewhere on the Internet, on another server or elsewhere within Moodle.

This section of the manual will explain both activity modules and resources. The following activity modules are discussed:

- Assignment
- Book (not standard)
- Quiz

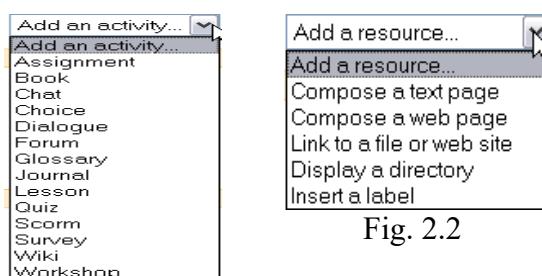


Fig. 2.2

Fig. 2.1

#### Assignment Module

In a bricks & mortar classroom an instructor may provide learners with an assignment that typically gets assessed (or graded) for completion. Adding an instance of an Assignment module activity allows you to do this. An assessment can be made from either a participant’s online submission of an electronic file (Word, PowerPoint etc.), or from an offline submission of the project in an actual classroom.

In either case the instructor can provide an assessment/grade or written feedback to the participant on their assignment, using Moodle's Learner Management features (see that section of the manual). When you select Assignment from the drop-down menu a property screen appears with the following values to be completed:

**Assignment name:**

Give your assignment a name (e.g. "Report on Topic Content")

**Description:**

You can be as brief or expanded as you want when adding details of the assignment. If you are adding rich content, tables etc. to your description, expand the HTML editor into full screen mode so you can make your webpage document look nice when participants view it.

**Assignment type:**

Select whether participants will complete the assignment as an Offline activity, or Upload a single file. If the latter, participants will have an option at the bottom of the screen to upload a file (not viewable during teacher login).

**Allow resubmitting:**

Select whether course participants can submit the assignment more than once.

**Grade:**

If this assignment is graded, select a value for the grade or select a scale that is being used. In the Learner Management section of the manual you will learn how to create custom grade scales and assessment of your own.

**Maximum size:**

If you selected Upload a single file for Assignment type, set this value for the maximum size file (Word, Excel PowerPoint etc.) a participant can upload. This is typically only a few megabytes in size, unless the assignment is a multimedia file submission.

**Due date:**

When the course is running in a "Weekly" format there is an option to set a date for when this assignment is due by. This date will appear in the course Calendar as a reminder for participants. If you are using Topic format, set this date for say a few years in advance so the assignment activity will never become unavailable to students.

**Book Module (non-standard)**

Book module allows you to set up indexed multi-page study material, which is ideal for presenting linear content (think PowerPoint). Property options allow you to set how chapters are numbered and whether participants can print content. There is also an option that allows you to add custom titles to each section of content created.

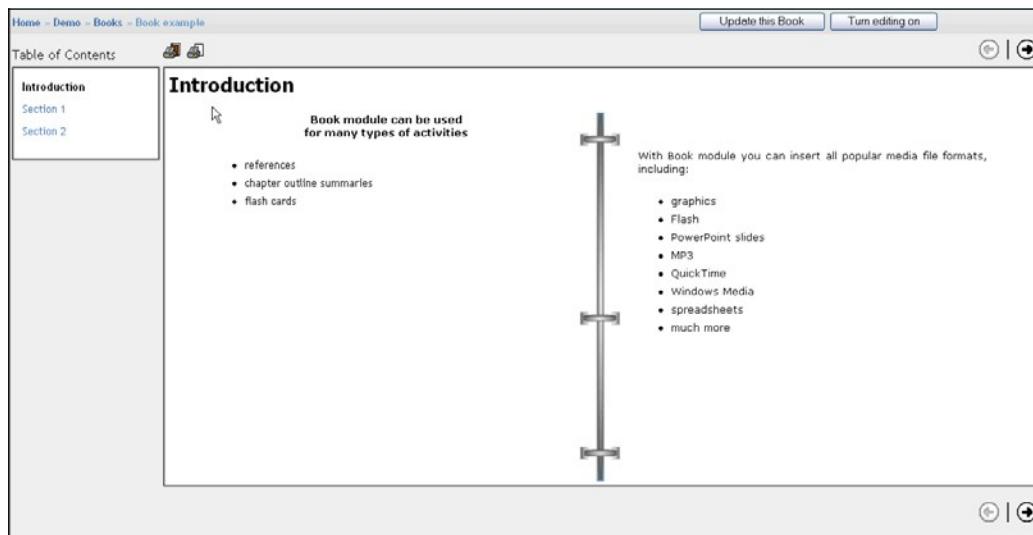


Fig. 2.3

### Quiz Module

Quiz module allows the teacher to design and set quiz tests, consisting of multiple choice, true-false, short answer questions etc. These questions courses and even between courses. Quizzes can allow multiple attempts. Each attempt is automatically marked, and the teacher can choose whether to give feedback or to show correct answers. Quiz module includes grading facilities.

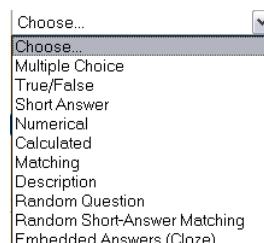


Fig. 2.4

Working with Quiz module involves a simple step-by-step process, which includes:

**Step 1** - Create a quiz activity on the course home page using the “Add an activity” drop-down list, and set all properties for the Quiz. Properties can include:

- an opening and close date for the quiz
- a time limit
- whether answers and questions are shuffled when a new attempt is made
- whether more than one attempt is allowed
- whether attempts build on previous attempt
- a grading method or curve
- how quiz gives feedback

- h.) whether students can view past attempts
- i.) a maximum grade given for the quiz
- j.) an optional password to access the quiz

**Step 2** - Select a category to create your quiz questions in. If no categories exist, click the “Edit categories” button and add a new category

**Step 3** - From the Create new questions list select a type of question to create. Moodle allows you to import questions from a file or other learning management system such as Blackboard, WebCT and IMS QTI formats.

**Step 4** - Once you have added questions to the category, you will publish these question to the Quiz activity. Select each one and click the “<<Add selected to quiz” button. After placing each question in the proper order (Fig. 27) and optionally assigning a grade value, you are ready to complete the Quiz activity. Simply click the “Save this whole quiz” button and the Quiz activity will now be available from the course home page.

To start building a category of questions, either select an existing category or create a new one as indicated. Once you have made your selection from the Category drop-down list, the screen will refresh and display any existing questions that have been created under the category you have selected (Fig. 25). Moodle gives you options at this point as to how questions are created and added to the category:

- **Import questions from file:** this imports existing questions from file systems Moodle recognizes (AON, Blackboard, Course Test Management, GIFT, IMS/QTI, Missing word format and WebCT).
- **Create multiple questions:** this feature creates a specified number of random questions. These questions are drawn randomly from your database of pre-existing questions. You specify the category the questions come from, so Moodle will not accidentally ask questions about Othello when you are teaching Hamlet!
- **Create new question:** (most common selection)

When you create a new question, it is stored in the category you select. It is then always available to add to any quiz at any time. To create a new question, select the type of question you want from the pull-down menu. You have the option of adding:

1. Multiple choice questions
2. True/False questions
3. A short answer question
4. A numerical question
5. Matching question
6. Description question
7. Random set
8. Random short answer
9. A special embedded question (Cloze)

**Multiple Choice** – To add a multiple choice question, select Multiple Choice in the “Create new question” drop-down menu. This will take you to the multiple choice question screen. Type in the name of the question (something to help you identify the question in the list), and type in the question. You do not have to type the answers in the “Question” box – the program will list the answers you type in the various “Choice #” boxes.

You may select an image to display, if you have any loaded resources in the course Files area (see Learner Management section of manual). You may then select if students are allowed to select more than one answer, or if there is only one answer allowed. Next, fill in your answers for the multiple choice question, and include feedback text if you wish.

In Moodle, you have an option to apply a weight to multiple choice questions. The positive answers must add up to 100%, or the system will ask if that is what you want to do. You do have the option to assign negative weight to an answer, such that a wrong answer might actually count against the student, instead of being no credit. This might be true where multiple answers are possible, such that A) is worth 50%, B) is worth -50% and C) is worth 50%. A student selecting A) and C) would get full credit, but a student selecting A) and B) would get no credit at all. You do have the option to make a wrong answer not count either way as well.

When you are done filling in your questions, answers, feedback and grade, click on “Save changes.” This action will return you to the quiz edit screen, with the new question listed. You are now ready to add another question.

**True/False** – the questions are just that – true/false. To add a true/false question, select True/ False from the “Create new question” drop-down menu. This will take you through a process similar to that of creating multiple choice questions discussed above.

**Short Answer** – To create a short answer question, select Short Answer from the “Create new question” drop-down menu. This will take you through a process similar to that of creating multiple choice questions discussed above. Fill in the question name (something that will tell you what the question is) and the question itself. The question can have up to 5 short answer “answers.” This can be very flexible. You can make a fill-in-the-blank (e.g. President Bush is    years old), or just ask for answers (Name the first 3 presidents).

**Note:** One big caution to pass on to students: a misspelled answer is WRONG (unless you put in the right answer and the 2 or 3 most common misspellings – that would work).

Next to each answer is the “Grade” field. The total points of the question must equal 100%. In the case of the president’s question above, you would make each answer worth 33% of the question. In the case of the fill-in-the-blank question, one answer would be worth 100%. You can have multiple answers be worth 100% (in the case of listing common misspellings, or in the case of “Name 1 of the first 3 Presidents” – where 3 answers would be worth 100% each).

You may also fill in feedback for each answer. Feedback generally comes up if you type an answer that the quiz has, so on short answer questions, the feedback is limited to telling you why your answer is correct (on short answer questions only). The feedback can show the student the correct answer if the student guesses wrong, even if the wrong answer is not in the list of answers. Once you are finished, click on “Save changes” to return to the quiz editcreation screen.

**Numerical Question** – To add a numerical question, make sure “Numerical” is selected in the “Create new question” drop-down menu. This will take you through a process similar to that of creating multiple choice questions discussed above. A numerical question is a question that expects a number for the answer. It has the added flexibility to accept a range of answers (10 +- 3 would accept anything from 7 to 13).

Fill in the “Question name” with anything that will help you identify the question. In

the “Question” box, fill out the question you wish to ask (“How fast can Matt run?”). If you have loaded any picture images to the system (from Files area), you will have the option to display the image as part of the question. Next, fill in the correct answer, and the accepted error (2 in the example would allow a correct answer of 8-12). You may then fill in feedback if you wish to use that feature. When everything is filled out the way you want it, click on “Save changes.” The question will then appear in the list of questions on the main quiz screen.

**Matching** – To add a matching question, select “Matching” from the drop-down menu. This will take you through a process similar to that of creating multiple choice questions discussed above. Fill out a question name that you will recognize, and then write the “big” question – this is the introduction the student sees. This could be “Match the following questions with the correct answers,” or “Match the name of the president with the year he was elected,” or anything else you like.

Next, fill in at least 3 questions that will be matched to the answers you provide. The “questions” can be one word to be matched to the answer. Each matching part is worth an equal amount (if you have four matches, each is worth 25% of the whole question. The whole question then can be weighted on the quiz – more on weighting later). When you are finished filling in the whole question (remember the program treats all the matches – even if there are eight – as one question), click on “Save changes.” You will then be taken back to the quiz editing screen where you will see your new question added to the list.

**Description** – To add a description, select “Description” from the drop-down menu. A description is not actually a question. It allows you to add text to a quiz (such as a story or an article) that you can then ask other questions about. Fill in the “Question name” with a name that will help you remember the description. Then, in the “Question” box, fill in your description (story, article, etc.). If you have uploaded pictures in the Files area, you can choose to display them with the description (so your description can describe a picture). When everything is filled out the way you want it, click on “Save changes.” Your description should now appear in the list of questions on the main quiz screen.

**Random question** – To select a random question, select “Random question” from the drop-down menu. A random question will select a question that already exists randomly from all the questions in any category you specify. If you have 10 questions in say an Othello category, this feature will pick one of those questions at random. Select the category you wish to draw the question from (“Default” in example). You may name the question if you wish (you might want to add the category to the name – i.e. “random Default#1”). Note that you can mix random questions with “normal” questions on a quiz. When you are done, select “Save changes,” and you should see the main quiz screen with the new random question added (“Random Default #1” in my example):

**Random Short-Answer Matching** – This question makes a matching question by drawing random questions and answers from among the short-answer questions you have created. You must have at least two short-answer questions in a category for this feature to work.

A category is whatever category you were in when you selected the random short answer matching question. The question name can be anything you like, but it is suggested adding a number to the end (#1, #2, etc.). You may leave the existing default introduction, or you may change it if you wish. You then select the number of questions you would like to

have. When you are finished, click on “Save changes.” You should see the quiz editing screen with the new question listed (“Random Short-Answer Matching #1” in example):

**Embedded Answers (Cloze)** – This question type embeds the answers into the question. This allows you to have questions. These are great questions, but do require some formatting.

The “Question name” names the question for the list. The “Image to display” lists any pictures you have uploaded to your “Files” section. The “Question” part is where you type your question, but this MUST include the formatting. This can take some getting used to. To create a question, the following would be entered in the Question area:

This entry will display a question. The formatting works like this:

- Normal text is just typed (like “This question consists of some text with an answer embedded right here” from above).
- To open a field in the embedded question, use the left bracket {and close the field with the right bracket}.
- To insert a pull-down menu, type the number of points the field (menu) is worth (1, 2, 3, etc.). The entire question is worth the total of all the points of each part (menus and short answer parts). Follow the number by a colon, followed by the word MULTICHOICE followed by another colon (1: MULTICHOICE). Then type your possible answers followed by tildes (~). The correct answer must start with an equals sign (=). An answer that counts for partial credit starts with the percent sign followed by the credit followed by a percent sign (%50% for 50 % credit). This entry would make a pull-down menu of 5 items. This menu would be worth 2 points. In this example, Washington, Jefferson and Lincoln are wrong, Franklin is right, and Adams is worth half-credit.
- To insert a short answer (fill-in-the-blank), put in the points the short answer is worth, followed by a colon followed by SHORTANSWER followed by a colon (2:SHORTANSWER:). Then put an equals sign (=) followed by the right answer inside the brackets. An example would be {2:SHORTANSWER:=Maine}. This would make a blank worth 2 points where the answer is Maine (and spelling does count!). You may list other correct answers by separating them by a tilde sign (~) – like this (don’t forget the = sign): {2:SHORTANSWER:=Maine~=Ohio}.

When you have everything the way you want it, click on “Save changes”. Your Embedded answers question will now display on Editing quiz screen list of questions for your category.

**Title and Description** can be whatever you like.

**Maximum grade** is set to a number from 0 to 100. For all of the following examples, we will use a maximum grade of 100.

**Grading strategy** has several options – Accumulative, Not Graded, Error Banded, Criterion, and Rubric.

- Accumulative grading: This is the default setting. Accumulative grading breaks each project into sections (you determine the number, from 1-20) that can be individually graded and

- commented upon. The grades of each piece determines the final grade (based on the maximum grade you set). This style of review uses yes/no questions, grading scales (i.e., “poor” to “excellent”) and purely numeric grading (1-100).
- Not Graded: This setting is used for peer review where the students may comment on work, but not grade it. The teacher may assign grades to the comments that are made; not assigning grades on the comments means the assignment does not count for a grade (it is used for peer comments only).
- Error Banded: This style of grading sets up multiple yes/no expectations for an assignment. If the element is there (a “yes” answer), credit is given; if not (a “no” answer), no credit is given for that part of the assignment. Each individual part may be weighted if desired.
- Criterion: For this type of grading scale, you set up criteria for the peers to choose from. The students then chose ONE criterion that most closely matches the project. Each criterion has a grade assigned to it, so by choosing one criterion, the reviewer gives the grade associated with that comment.
- Rubric: This review setting is very similar to “Criterion,” except that the teacher assigns different sections to each project. Then, within each section, the reviewer selects one comment that most closely matches the project being reviewed. Grades from each section are then combined to give the final grade.

**Number of Comments, Assessment Elements, Grade Bands, Criterion Statements or Categories** in field determines how many elements an assignment will have evaluated. This is the number of things you wish to have evaluated. You could set this to “3,” and have the peers evaluate on style, content, and grammar (for example). If this field is set to 0, then the group may only make comments in the “General Comments” section of an assignment.

**Allow Resubmissions** field allows students to resubmit their assignment at any time. This can be useful to encourage students to write several drafts incorporating suggestions made. The system will then keep the highest grade of all the assignments submitted by the student (the highest grade is the largest teacher-peer combined score).

**Number of Assessments of Examples from Teacher** forces the students to walk through one or more example projects that the teacher has put online. The student will have to make comments and grade the project, and then these comments can be graded by the teacher. Students can NOT submit their own work until they have gone through all of the examples the teacher has set up.

**Number of Assessments of Student Submissions** field sets how many other projects the student can evaluate and comment on. If there are more submissions than the allowed assessments, the reviewer will get a random set to evaluate.

**Self-Assessment** field, if set to “Yes,” allows students to evaluate and grade their own work. This is added to the “Number of Assessments...” (if the “Number of Assessments...” is set to 5, the student must still evaluate 5 other students’ work). If the “Number of Assessments...” is set to “0” and this field is set to “Yes,” then the project is

for self-evaluation only.

If the **Assessments must be agreed** field is set to “Yes,” then the assessments from students are open to review from other students. If other students disagree with the evaluation made by the original reviewer, then the evaluation process will continue until the students do agree, or until the assignment passes the closing time.

**Hide Grades before Agreement** field allows the teacher to hide the numeric grades from other reviewers while they are trying to reach agreement. If this field is set to “Yes,” then all the numeric parts of the evaluation are hidden – students can only see each other’s comments. The grades will appear after the reviewers agree with each other.

**Maximum Size** limits how big the project can be. In general, we recommend making this as big as you can unless space is an issue.

**Deadline** field sets when the workgroup assignment closes. After this point, student grades will appear (if hidden) and peer evaluation stops.

## Learner Management Features

In this section of the manual you will be introduced to Moodle’s features for managing learneractivity, including:

- Groups
- Activities block
- Administration block

### Groups

Moodle allows you to separate students into groups, when for example you assign projects to course participants that will work together. You must have either “Separate” or “Visible” groups enabled in the course Settings properties to use the Groups feature. If you click on “Groups” in the People block a screen like appears (you must first click the “Turn editing on” button)

### Activities Block

- Activities block lists all Moodle modules added during course reaction (e.g., Forums, Quizzes, Assignments, etc.). The first time you enter your course the only module that is listed is “Forums.” This is because one forum (News) exists by default. The Activities block list will grow as you add different activities to your course.

- As a teacher in the course you can access each activity within a module category that appears in the Activities block. Simply click the modules icon to see a list of activities within this category. For example, a list of all “Assignment” activities with a link that allows you to view each students submission for an individual course assignment.

- Let’s look at the learner management function for “Assignment #1: PowerPoint example. Notice there are 5 submitted assignments. If we click the “View 5 submitted assignments” link on the right, this action will reveal a screen (Fig. 58) that allows the

teacher to access each student's uploaded assignment, grade this assignment and add feedback comments for the student to review.

- If this were an "Offline" assignment submitted in class, the teacher would simply add the grade and feedback comments. In either case, once learner management functions are completed simply click the "Save all my feedback" button. Students will be e-mailed a message indicating the teacher has commented/graded their assignment.

- Journal module has the same learner management properties for giving students feedback on their journal entries, and notified via e-mail when the teacher has commented on their entry.

- Finally, when Quizzes is selected from the Activities block, a list of all course quizzes appears, allowing the teacher to select a specific quiz and view student results. Simply click the link on the right side of a quiz in the list to see student's results. Results can be viewed in different ways, including:

- Overview(shown)
- Re-grade attempts
- Detail statistics
- Simple statistics

## Administration Block

- **Turn editing on** allows you to make changes to the course (e.g. add activities).
- **Settings** allows you to change the look of your class (see page 11).
- **Teachers** lists all the teachers. One of the selections in this block has already been discussed in the Course Management section of the manual (page 11). The remainder of the selections in this block are discussed here, including:
- **Students** lists all of the students in the class. You can manually enroll or un-enroll a student from here.
- **Backup** allows your class data to be backed up.
- **Restore** allows you to restore old class data (that was backed up).
- **Scales** allows you to define special scales for evaluation. These are made up of word evaluations (i.e., Excellent, Good, Average, etc.)
- **Grades** lists the grades of the tests and quizzes of each enrolled student.
- **Logs** shows you all of the activity in your class for a set amount of time.
- **Files** allows you to upload files (e.g. graphics, Word, PP, Excel doc's etc.) into your course, for inclusion in an activity or layout.
- **Help** brings up the Moodle abbreviated manual pages.
- **Teacher forum**" is a teacher-only discussion board.

## Teachers

This feature lists all teachers in a course (typically just you). From here you can add a co-teacher if you wish. To add another teacher to your class, click on the "Add teacher" button next to the name of the teacher you wish to add (or type in the teacher's name if there are too many users to show).

Once you have added a teacher, you can set the "Order" of the teachers (for listing purposes – 1 is at the top, lower numbers are in numerical order on the list). If you wish, you can select "Hide" from the "Order" menu. This hides that teacher from the students (unless the teacher posts something in the class). This is useful if you want another teacher to audit the class with you.

The last setting is the “Edit” menu. If this is set to “Yes,” the teacher can do anything a normal teacher can do (create assignments, grade, etc.). If this is set to “no,” the teacher has the access rights of a teacher (the teacher can go anywhere and see everything in a class), but the new teacher will not be able to change anything (no editing permissions).

## **Students**

You can add or un-enroll a student from your class manually from the Students property screen. On the left are the students currently enrolled in the class, and on the right are the students that could be added to the class.

To add a new student, click on the left-facing arrow next to the student’s name (or type in the student’s name in the “Search” field if there are too many students to list). The student should move from the “Potential student” column to the “Enrolled students” column. To un-enroll a student from a class, click on the right-facing arrow next to the student’s name. The student should move from the “Enrolled students” column to the “Potential students” column. Please note that students may enroll themselves by clicking on the class listing of your class (they will need the enrollment key if you supply one).

## **Backup**

Generally, you will not have to worry about backup as the primary Moodle administrator has set a schedule of site wide backups. However, it is a best management practice to perform a course backup at regular intervals, and to store this backup locally on your computer. After clicking the Backup link you will see options for specific activities you wish to backup. Simply follow the on-screen instructions to complete a backup.

## **Restore**

If you have backup files you wish to restore to the system, click on this button.

## **Scales**

The Scales feature allows you to create a word-based custom evaluation scale (like “fair,” “excellent,” etc.) that is used as the grading instrument within an activity. Default scales include 1-100 and Separate and Connected ways of knowing. Here’s how to create a custom grading scale:

- Click Add a new scale button from within the Scales property window
- Name – This is the name of the scale.
- Scale – This is where you input your scale words. You can have as many as you like, but they need to be separated by commas, and they should be from the lowest level comment (like “Poor”) to the highest level comment (like “Excellent”).
- Description – This is an optional field. You may type anything you like here that describes your custom scale.

When you are done typing in the information, click on “Save changes” button. The new scale will now be available within all resources where scales can be applied (Forums, Assignments, Quizzes, Lessons, Journals, Workshops).

## Grades

Grades feature displays the grades and scales applied for Forums, Quizzes, Assignments, Lessons, Journals, Workshops and SCORM activities that students have completed, submitted or posted. You can easily download grades in Excel or text format for inclusion in a grade book, and you can select which course on the site you are enrolled in as a teacher to view grades.

## Administration Features

This section of the manual assumes you have “Administrator” account permissions within Moodle (see page 6). If you have these permissions, the Administration block (Fig. 68) will appear on the site front page after login.

There are two types of administrators; a primary admin who installs/ upgrades Moodle, and site admins designated by the primary admin. Site admins have the same permissions as a primary admin, except they cannot designate other site admins.

There can be only one primary admin, but many site admins (not a good idea)

The following is an explanation of features available from the Administration block on the site front page, after login. All of these features are available from a single screen (Fig. 69) when you click the Admin link at the bottom of the block.

## Configuration

- **Variables:** Moodle’s main configuration properties set by the primary admin during installation are stored in this area. These properties include the site language default and behaviors of certain features.
- **Site settings:** Properties that allow you to add a description on your site front page, set display features and define what teachers and learners are called.
- **Themes:** Moodle comes with over a dozen stock themes, including the default orange theme. Additionally, there are a number of themes that developers have contributed at moodle.org. This property window allows you to select a theme your entire site will use.
- **Language:** If you know what you are doing and want to change Moodle’s default language strings, use this setting. You can also check to see if the language pack you are using (e.g. English, Spanish etc.) is up to date (Fig. 70). To change the wording that appears in a language string file (e.g. moodle.php), click the “Compare and edit current language” button. You can now select and edit language files directly in the browser, if the file you wish to change is set with write permissions on the server.
- **Modules:** Modules are used within Moodle when creating learning objects (e.g., Forums, Assignments, Quizes etc.). This setting allows you to hide a module from a course creator, delete a module or change setting behaviors for a specific module.
- **Blocks:** Side blocks within Moodle can also be hidden, deleted and with a few blocks you can change settings.

## Users

- **Authentication:** By default, Moodle creates a New Account on the site using “Email-based authentication”, unique for each student user. This means that users will create their own accounts and will be sent an e-mail message that contains a link back to the site, which completes the authentication process. On subsequent visits the user will just Login at the site prompt. An administrator can set Moodle to authenticate new users in several other ways , including:
  - Manual accounts only (individual enrollments by admin)
  - No authentication (as name implies, no authentication allowed)
  - PAM (Pluggable Authentication Modules)
  - Use a First Class server
  - Use a POP3 server
  - Use an IMAP server
  - Use an LDAP server
  - Use an NNTP server
  - Use an external database
- **Edit user accounts:** When you click this link Moodle allows the administrator to browse a list of all site users, and edit or delete their account.

**Add a new user:** When the admin uses “Manual accounts only” as an authentication scheme they can add a new user to the site from this screen.

**Upload user:** If you are sure you want to import multiple user accounts from a text file, then you need to format your text file as follows:

- a.) Each line of the file contains one record
- b.) Each record is a series of data separated by commas
- c.) The first record of the file is special, and contains a list of fieldnames. This defines the format of the rest of the file.

**Required fieldnames:** these fields must be included in the first record, and defined for each user username, password, first name, last name, email

**Default fieldnames:** these are optional - if they are not included then the values are taken from the primary admin institution, department, city, country, language, time zone

**Optional fieldnames:** all of these are completely optional. The course names are the "short names" of the courses - if present then the user will be enrolled as students in those courses. Group names must be associated to the corresponding courses, i.e. group1 to course1, etc. id number, icq, phone1, phone2, address, URL, description, mail format, mail display, HTML Editor, auto-subscribe, course1, course2, course3, course4, course5, group1, group2, group3, group4, group5

- d.) Commas within the data should be encoded as &#44 - the script will automatically decode these back to commas.
- e.) For Boolean fields, use 0 for false and 1 for true.
- f.) Note: If a user is already registered in the Moodle user database, this script will return the user id number (database index) for that user, and will enroll the user as a student in any of the specified courses WITHOUT updating the other specified data.

- **Enrolments:**

Authentication and enrollment are two different processes in Moodle. Authentication is the process whereby a student creates an account that allows them to login to the site. The enrollment scheme you select controls how the student will access a specific course on the site. Moodle allows you to make one of four selections from the Enrolments screen:

- Internal Enrolments:**

This is the default and used in most situations. A user will enter a course by clicking its link on the site front page. The course owner can establish an “enrolment key” with the courses Settings properties.

**External Database:** an external database can control who is enrolled in courses, provided it follows a table structure that Moodle expects.

## 2.6.11 Installation

Moodle is primarily developed in Linux using Apache, MySQL and PHP (also sometimes known as the LAMP platform), but is also regularly tested with PostgreSQL and on Windows XP, Mac OS X and Netware 6 operating systems. The requirements for Moodle are as follows:

- Web server software. Most people use Apache, but Moodle should work fine under any web server that supports PHP, such as IIS on Windows platforms.
- PHP scripting language (version 4.1.0 or later). PHP 5 is supported as of Moodle 1.4.
- A working database server: MySQL or PostgreSQL are completely supported and recommended for use with Moodle.

Most web hosts support all of this by default. If you are signed up with one of the few webhosts that does not support these features ask them why, and consider taking your business elsewhere.

If you want to run Moodle on your own computer and all this looks a bit daunting, consider downloading either the EasyPHP or Xampp Windows distro at <http://goohio.com/moodle/>. These all-in-one installations make no registry changes on your computer so they easily uninstall by deleting the directory. Both distributions include Apache, MySQL, PHP and Moodle.

The latest Moodle release is available for download at <http://moodle.org>. Here is a quick summary of the contents of the Moodle folder, after being unzipped, to help get you oriented:

config.php - contains basic settings. This file does not come with Moodle - you will create it.

install.php - the script you will run to create config.php

version.php - defines the current version of Moodle code index.php - the front page of the site

- admin/ - code to administrate the whole server
- auth/ - plugin modules to authenticate users
- blocks/ - plugin modules for the little side blocks on many pages
- calendar/ - all the code for managing and displaying calendars
- course/ - code to display and manage courses
- doc/ - help documentation for Moodle (eg this page)

- files/ - code to display and manage uploaded files
- lang/ - texts in different languages, one directory per language
- lib/ - libraries of core Moodle code
- login/ - code to handle login and account creation
- mod/ - all the main Moodle course modules are in here
- pix/ - generic site graphics
- theme/ - theme packs/skins to change the look of the site.
- user/ - code to display and manage users

### **Step 1: Create a Database**

You need to create an empty database (e.g. "moodle") in your database system along with a special user (e.g. "moodleuser") that has access to that database (and that data-base only). You could use the "root" user if you wanted to for a test server, but this is not recommended for a production system.

If you are using a web host, they will probably have a control panel web interface for you to create your database. The **Cpanel** system is one of the most popular of these. To create a database in Cpanel:

1. Click on the "**MySQL Databases**" icon.
2. Type "moodle" in the database field and click "**Add Database**".
3. Type a username and password (not one you use elsewhere) in the respective fields and click "**Add User**".
4. Now use the "**Add User to Database**" button to give this new user account "**ALL**" rights to the new database.
5. Note that the username and database names may be prefixed by your Cpanel account name. When entering this information into the Moodle installer - use the full names.

If you have access to Unix command lines then you can do the same sort of thing by typing commands. Here are some example Unix command lines for MySQL:

```
# mysql -u root -p
> CREATE DATABASE moodle;
> GRANT SELECT,INSERT,UPDATE,DELETE,CREATE,DROP,INDEX,ALTER ON
  moodle.* 
TO moodleuser@localhost IDENTIFIED BY 'yourpassword';
> quit
# mysqladmin -p reload
```

And some example command lines for PostgreSQL:  
# su - postgres  
> psql -c "create user moodleuser createdb;" template1  
> psql -c "create database moodle;" -U moodleuser template1  
> psql -c "alter user moodleuser nocreatedb;" template1

### **Step 2: Create a Data Directory**

Moodle will also need some space on your server's hard disk to store uploaded files, such as course documents, user pictures and uploads. The Moodle installer tries hard to create this directory for you but if it fails then you will have to create a directory for this purpose manually (recommended).

For security, it's best that this directory is NOT accessible directly via the web. The easiest way to do this is to simply locate it OUTSIDE the web directory, but if you must have it in the web directory then protect it by creating a file in the data directory called .htaccess,

containing this line: deny from all

To make sure that Moodle can save uploaded files in this directory, check that the web server software (e.g. Apache) has permission to read, write and execute in this directory. On Unix machines, this means setting the owner of the directory to be something like "nobody" or "apache", and then giving that user read, write and execute permissions(777). On Cpanel systems you can use the "File Manager" to find the folder, click on it, then choose "Change Permissions".

On many shared hosting servers, you will probably need to restrict all file access to your "group" (to prevent other web host customers from looking at or changing your files), but provide full read/write access to everyone else (which will allow the web server to access your files). Speak to your server administrator if you are having trouble setting this up securely. In particular some sites that use a PHP feature known as "Safe Mode" may require the administrator to create this directory properly for you.

### **Step 3: Run The Installer Script**

To run the installer script (install.php), just try to access your Moodle main URL using a web browser, or access **http://yourserver/install.php** directly. (The Installer will try to set a session cookie. If you get a popup warning in your browser make sure you accept that cookie!). The first installation setup screen prompt you for a default site language.

Moodle will detect that configuration is necessary and will lead you through some screens to help you create a new configuration file called **config.php**.

After the language selection screen, Moodle will detect whether PHP is set up correctly on the server (Fig. 83). If any settings do not Pass this check, make sure you correct whatever feature on the server that has not passed before proceeding with installation. See General Web Server Settings section for suggestions.

The next screen in Moodle's installer (Fig. 84) will ask you about the location of Moodle on your server. You will be asked for the absolute Web address for your site, and for the name of the directory where Moodle is located. Make sure you enter the server name. Finally, enter the server path for where the "moodledata" directory is located (see Step 2).

Now installer will ask for your database connection information (Fig. 85), starting with the **Type** of database (MySQL or Postgre SQL) used. This is often a point where a problem may occur if you are not

familiar with these properties. In most cases the **Host Server** name will be simply "localhost". Some ISP's will use a specific name or IP address for their database server, in which case you will enter that name or number (e.g. mysql.ispname.net).

Now add the name of your **Database** as it was set up. This is typically prefaced with the name of your Moodle server, an underscore, and then the name of the database (Fig. 85). Do the same when you add the **User** name assigned to the database. Note that for security reasons you should create a unique user name and password for Moodle's database. Finally, add just the **Password** (no underscore) that was assigned to the database. By default Moodle uses a table prefix of "mdl". Unless you are a database admin or know what you are doing, do not change this value.

At the end of the Installation process Moodle will try and write the config.php file into the right location. If Moodle is unable to do this (Fig. 86), which may be the case because of

permission settings, you will be given an option to download the file so that you can then manually upload config.php into the main Moodle directory on the server.

### **General Web Server Settings**

Firstly, make sure that your web server is set up to use index.php as a default page (perhaps in addition to index.html, default.htm and so on). In Apache, this is done using a DirectoryIndex parameter in your httpd.conf file, which might look like this:

```
DirectoryIndex index.php index.html index.htm
```

Just make sure index.php is in the list (and preferably towards the start of the list, for efficiency).

Secondly, if you are using Apache 2, then you should turn on the AcceptPathInfo variable, which allows scripts to pass arguments like `http://server/file.php/arg1/arg2`. This is essential to allow relative links between your resources, and also provides a performance boost for people using your Moodle web site. You can turn this on by adding these lines to your httpd.conf file.

### **AcceptPathInfo**

Thirdly, Moodle requires a number of PHP settings to be active for it to work. On most servers these will already be the default settings. However, some PHP servers (and some of the more recent PHP versions) may have things set differently. These are defined in PHP's configuration file (usually called php.ini):

```
magic_quotes_gpc = 1 (preferred but not necessary)magic_quotes_runtime = 0 (necessary)
file_uploads = 1
session.auto_start = 0
session.bug_compat_warn = 0
```

If you don't have access to httpd.conf or php.ini on your server, or you have Moodle on a server with other applications that require different settings, then don't worry, you can often still OVERRIDE the default settings. To do this, you need to create a file called **.htaccess** in Moodle's main directory that contains lines like the following. This only works on Apache servers and only when Overrides have been allowed in the main configuration.

```
DirectoryIndex index.php index.html index.htm
```

```
<If Define APACHE2>
```

```
AcceptPathInfo on
```

```
</IfDefine>
```

```
php_flag magic_quotes_gpc 1
php_flag magic_quotes_runtime 0
php_flag file_uploads 1
php_flag session.auto_start 0
php_flag session.bug_compat_warn 0
```

You can also do things like define the maximum size for uploaded files:

```
LimitRequestBody 0
```

```
php_value upload_max_filesize 2M
```

```
php_value post_max_size 2M
```

The easiest thing to do is just copy the sample file from **lib/.htaccess** and edit it to suit your needs. It contains further instructions. For example, in a Unix shell:  
`cp lib/.htaccess .htaccess`

## **Chapter 3 : System Analysis**

### **3.1 STUDY OF CURRENT SYSTEM**

In this system, Site Administration can add users like teacher, student, non-editing teacher,etc. and also teacher uploads assignments and quiz/test questions and students submits assignments as well as quiz/test and then teacher grades them.

On the basis of the grades, report is created which give the detailed results in the form of bar graph, pie chart and percentage.

### **3.2 PROBLEM AND WEAKNESS OF CURRENT SYSTEM.**

In perspective of current LMS system, it is not able to provide different interfaces for different user and also have simple layout without any ease of plugins which is not user friendly.

Current system allows some users to modify the changes on LMS, which is not a good interface. For example, students can check the other students' grades, participants enrolled in it.

### **3.3 REQUIREMENT OF NEW SYSTEM**

We requires new system for create different GUIs for different user and also do changes in look of LMS.

### **3.4 FEATURES OF NEW SYSTEM**

New System provides different user interfaces for particular user and contains good design also. I If any teacher comes then it will able to upload or check assignment or test and set any event etc. And if any student comes then it will only able to give a test, submit an assignment or check event etc.

### **3.5 LIST MAIN MODULES.**

#### **Admin:**

Admin can make changes in Moodle LMS. Admin has all access to the LMS. Admin can create different courses as well as users.

#### **Teacher:**

Teacher can check the assignment, set an event in calendar, set a test, upload question bank, give grades to assignments and test and also enroll the student into particular course.

#### **Student:**

In system, Student can submit an assignment and give a test and also get certificate in particular course.

#### **Non-editing Teacher:**

Non-editing teacher is able to see submitted assignments, grades, participants but can neither grade them nor modify anything.

## Chapter 4 : System Design

### 4.1 System Design & Implementation

#### 4.1.1 Use Case

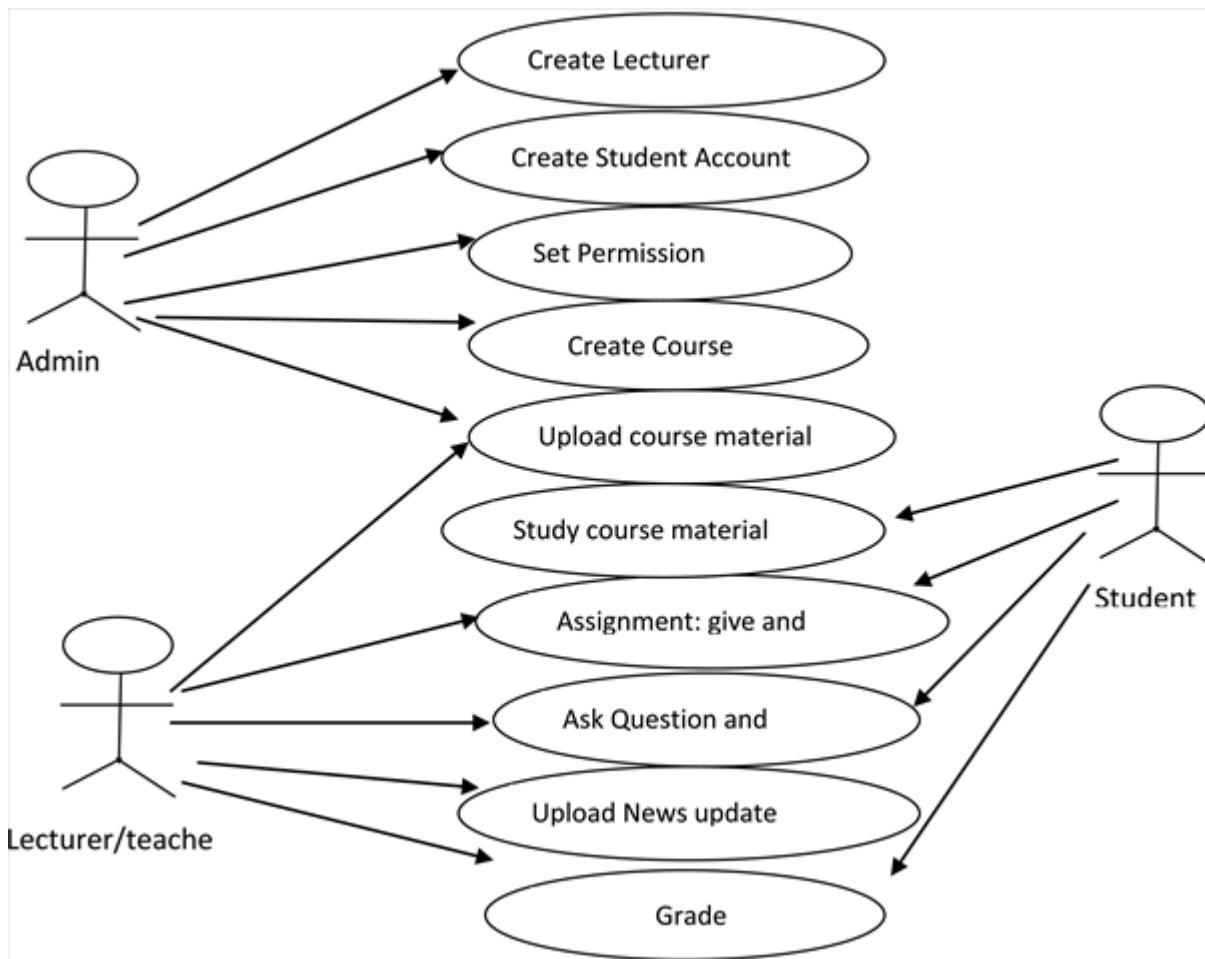


Fig. 4.1

#### 4.1.2 Activity Diagram

DFD 0 Level

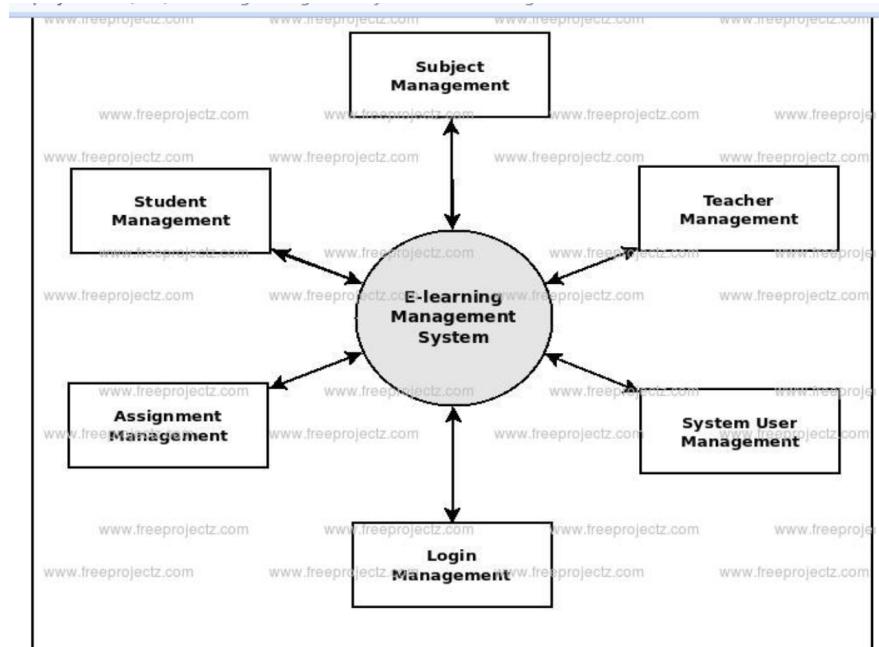


Fig. 4.2

DFD 1 Level

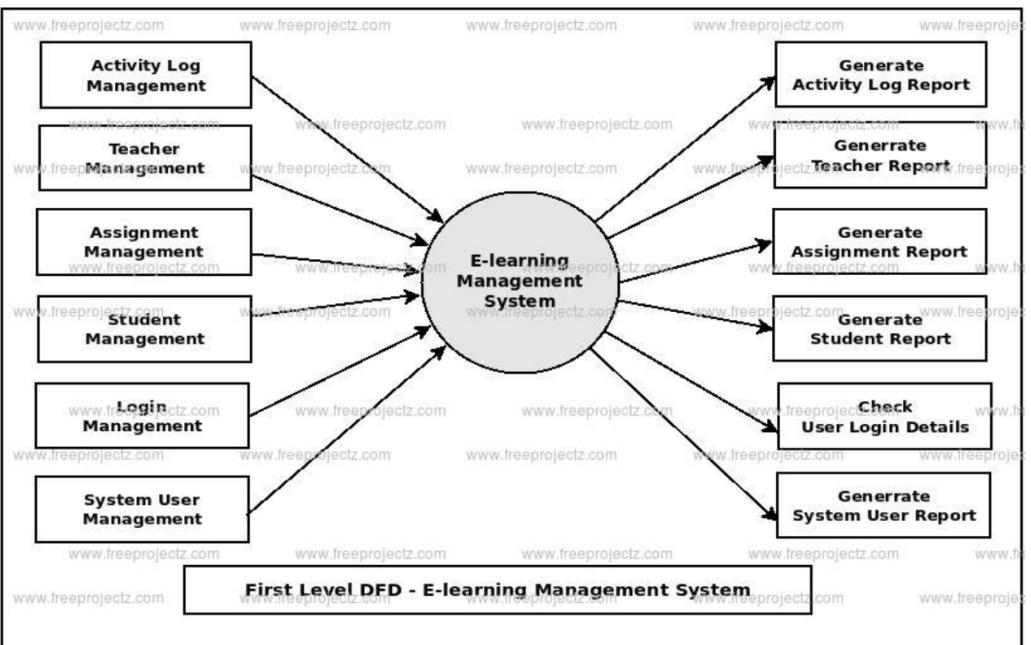


Fig. 4.3

DFD 2 Level

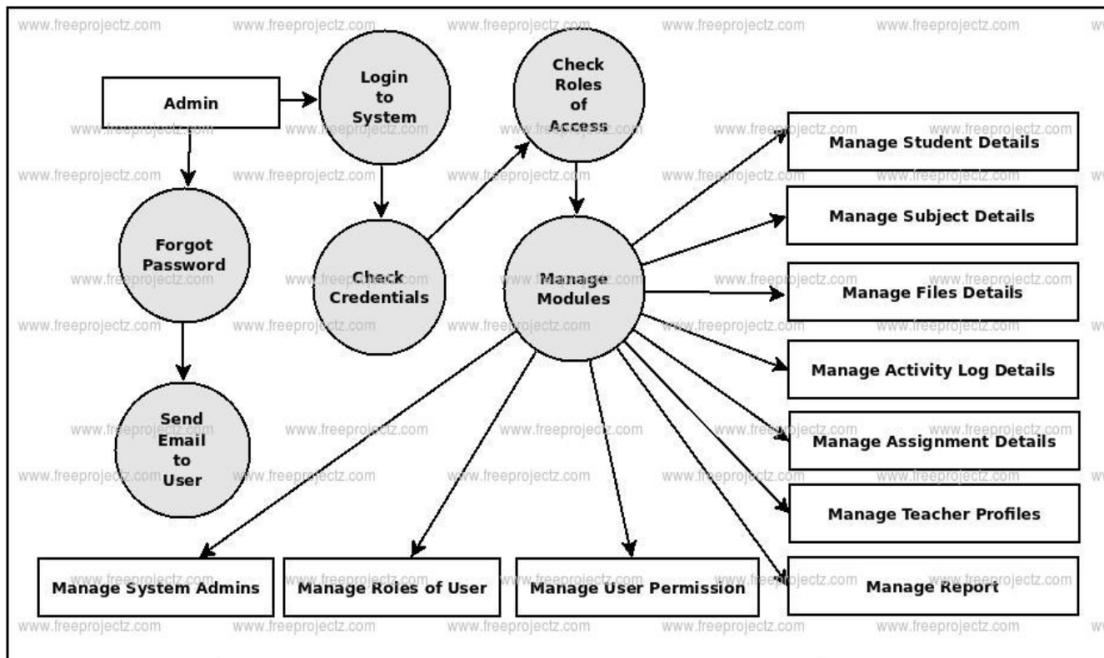
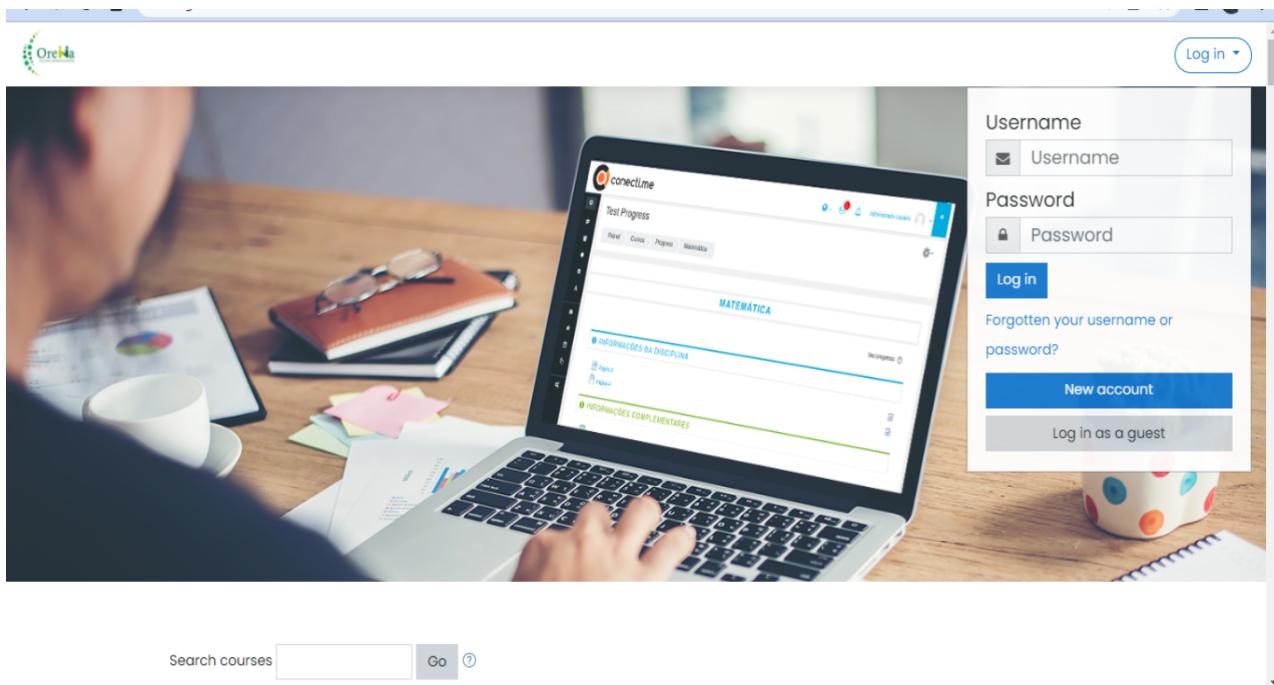


Fig. 4.4

## Chapter 5 : Implementation and Screenshots

### 5.1 Creating new account or login if already account is created then accessing the Moodle LMS

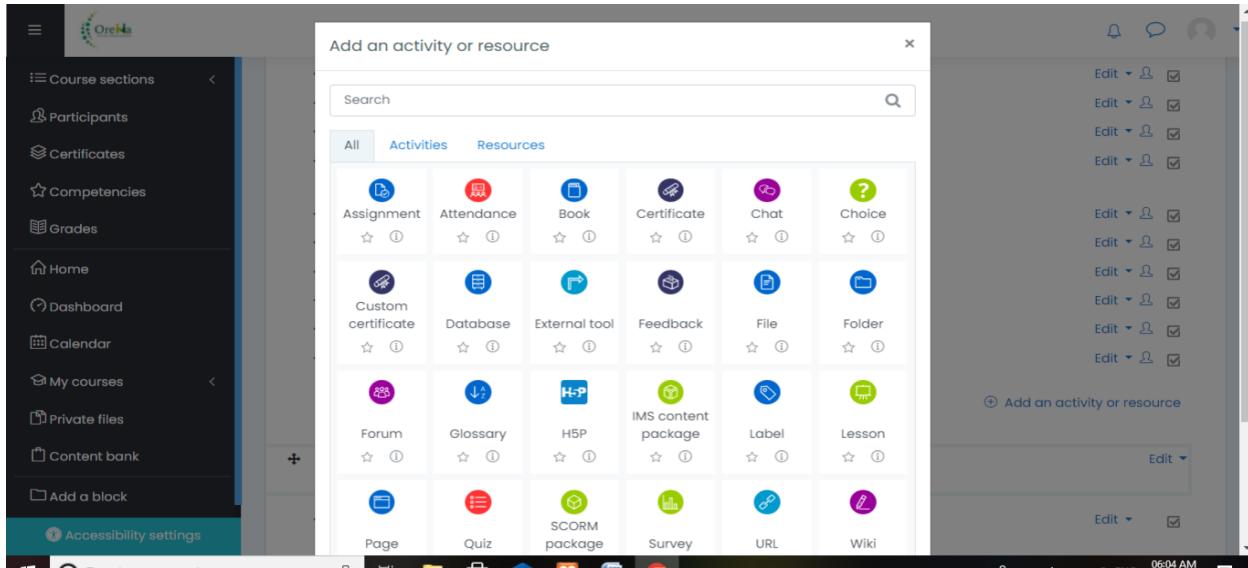
**Step 1:** First of all User have to login/create new account using valid Username and Password.



**Fig. 5.1**

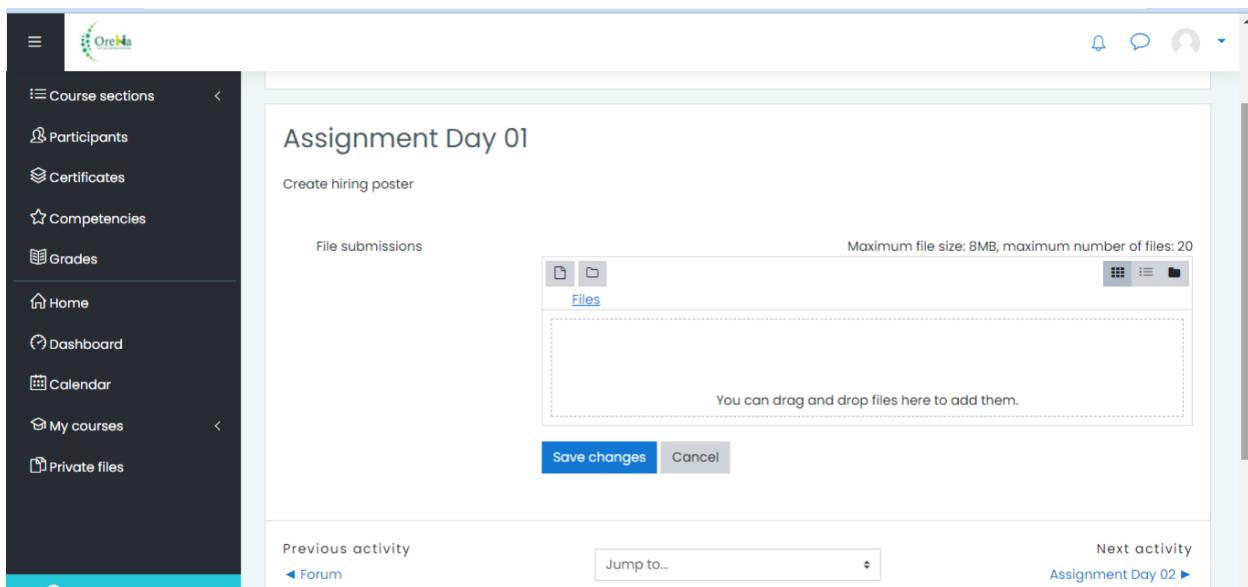
**Step 2:** After login users will be allow accessing LMS.

**Step 3: If user is teacher then it will able to upload assignments.**



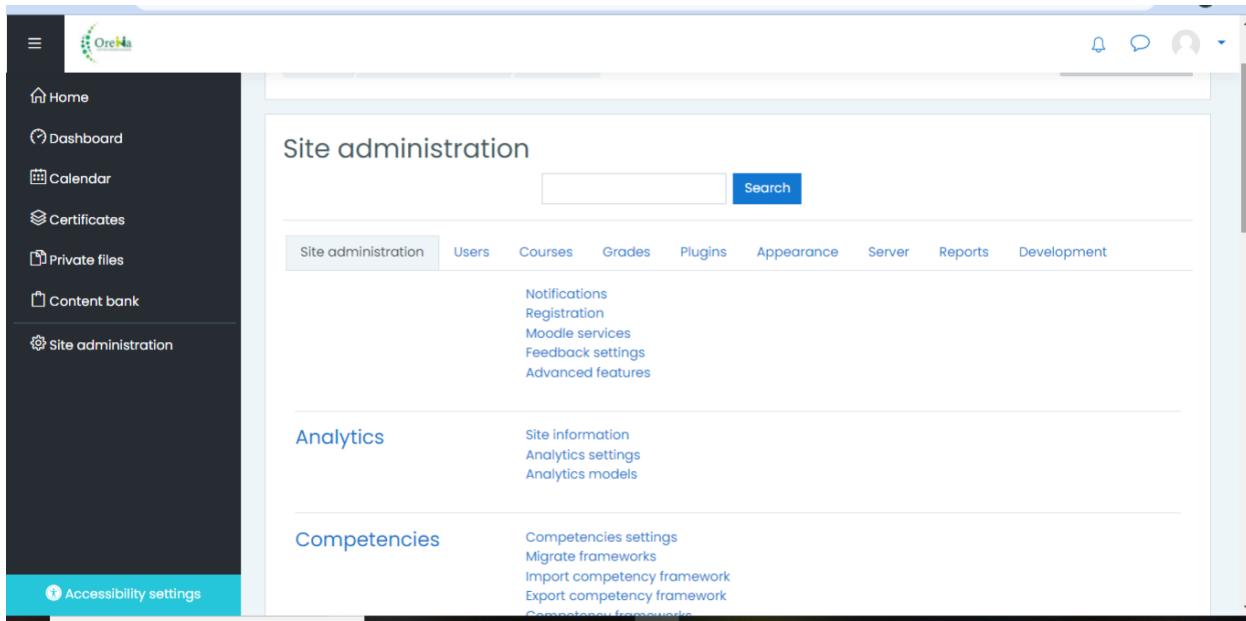
**Fig. 5.2**

**Step 4 : If user is student then it will be able to submit an assignment**

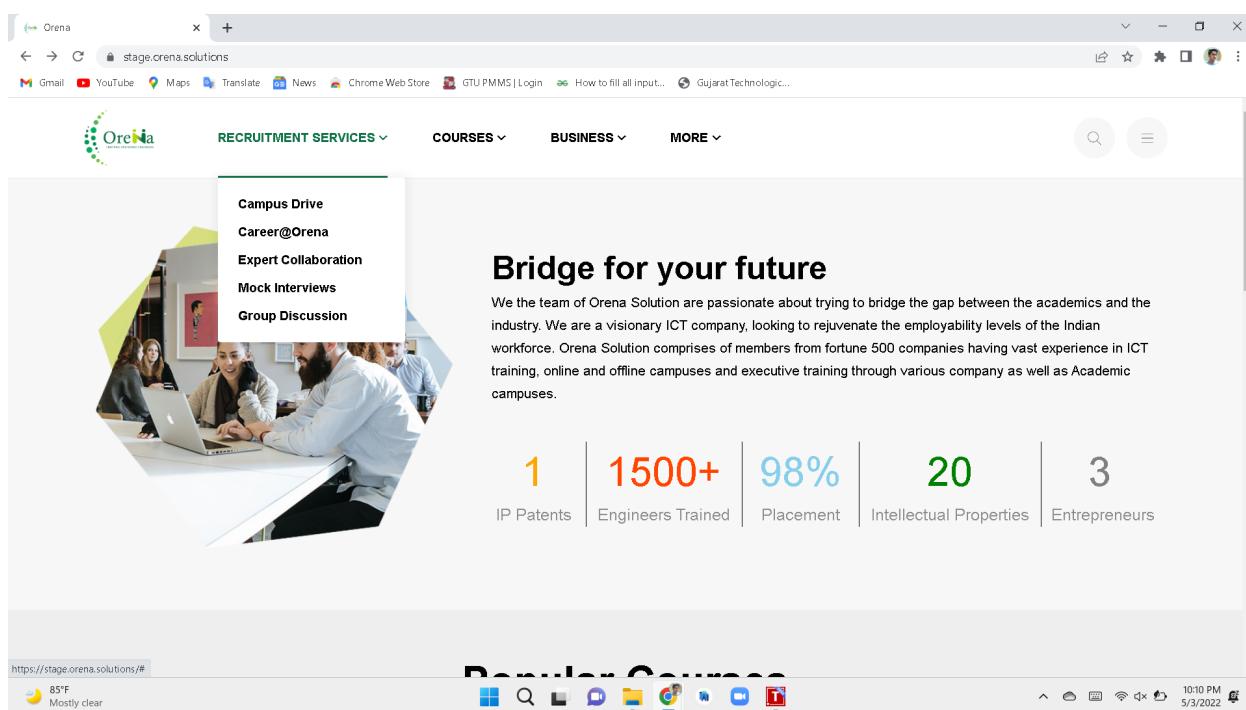


**Fig. 5.3**

### Step 5 : If user is admin then it will be allow to do any modification with LMS



**Fig. 5.4**



**Fig. 5.5(Campus Drive)**

The implementation: [https://stage.orena.solutions/campus\\_drive.php](https://stage.orena.solutions/campus_drive.php)



## Chapter 6 : Testing

### 6.1 TEST RESULT AND ANALYSIS

#### 6.1.1 TEST CASE

<b>Test case number</b>	<b>1</b>
Name	Admin enter in LMS
Description	If admin want to enter in website, they have to enter valid password or user name after that they can enter or visit this LMS
Input data	<ul style="list-style-type: none"> <li>- User name</li> <li>- Password</li> </ul>
Expected Output	<ul style="list-style-type: none"> <li>- If user name and password is correct than admin can enter in website.</li> <li>- But if any one of them are incorrect they can't enter in this website.</li> <li>- If password or username will be wrong then it will be display.</li> </ul>

**Table 6.1**

<b>Test case number</b>	2
Name	Student enter in LMS
Description	If student want to enter in website, they have to enter valid password or user name after that they can enter or visit this LMS
Input data	<ul style="list-style-type: none"> <li>- User name</li> <li>- Password</li> </ul>
Expected Output	<ul style="list-style-type: none"> <li>- If user name and password is correct than student can enter in website.</li> <li>- But if any one of them is incorrect they can't enter in this website.</li> <li>- If password or username will be wrong then it will be display.</li> <li>- Teacher will be able to submit assignments and check grades.</li> </ul>

**Table 6.2**

<b>Test case number</b>	3
Name	Teacher enter in LMS
Description	If teacher want to enter in website, they have to enter valid password or user name after that they can enter or visit this LMS
Input data	<ul style="list-style-type: none"> <li>- User name</li> <li>- Password</li> </ul>
Expected Output	<ul style="list-style-type: none"> <li>- If user name and password is correct than teacher can enter in website.</li> <li>- But if any one of them is incorrect they can't enter in this website.</li> <li>- If password or username will be wrong then it will be display.</li> <li>- Teacher will be able to upload , check assignments and grades to students.</li> </ul>

**Table 6.3**

## **Chapter 7 : Conclusion**

### **7.1 CONCLUSION ANALYSIS OF INTERNSHIP**

At Orena Solutions I have upgraded and sharpen my skills of HTML, CSS, Bootstrap and Javascript. In future these skills will be very helpful in technical fields. Also, the team members were so supportive my doubts were cleared at the time and with proper guidance and technicality. Not only technical Knowledge but also how professionals work in industry, how to deal Youth client's requirements and overcome the requirements. After this I am ready to explore my knowledge and skills in industry. As from now my goal is not be just place data reputed company but to be acknowledgeable person in the industry.

### **7.2 SUMMARY OF INTERNSHIP**

The proposed system will work for:

- Learning system.
- Simple Log-in and registration.
- Less Time and Space Complexity.
- User friendly
- Easy to use and access.

## References

During this project I have used below reference sites.

- <https://moodle.org/>
- [https://docs.moodle.org/400/en/Main\\_page](https://docs.moodle.org/400/en/Main_page)
- <https://www.youtube.com/watch?v=3ORsUGVNxGs>
- <https://moodle.org/plugins/>
- <https://moodle.org/plugins/browse.php?list=category&id=3>