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# Learning Management System

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Final Project

**CSE 370: Database Systems**

Section : 06

Group : 02

Dept. of Computer Science & Engineering, BRAC University

## **Submitted To**

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## Table of Contents

User scenario .....	Page 3
Requirements .....	Page 4
Use Case Diagram .....	Page 6
Class Diagram .....	Page 11

## User Scenario :

Our project was to develop a Learning Management System for our university to serve both of our students and the teachers. The system works as an open source study contents sharing portal of the university which delivers and manages all types of contents including any kind of document files and lecture sheets. There are 3 types of accounts to use – student, teacher & admin. Both students and teachers can share study contents and anyone who owns an account can view and download the contents. Students will not be able to see or download contents without an account which is for privacy. The notes uploaded by the students have to undergo an approval process where teachers or admin need to approve the note to be added to the portal. Teachers can also upload notes but they don't need anyone's approval unlike students to publish. Another special feature of the system is teachers can request courses for the next semester which wait for admin's approval to be added to the teachers' account. Admin can delete anything, teachers can delete only notes where students can not delete anything. Our goal to develop this system was making a document sharing portal for the University authority to minimize the dependency of third party applications.

## Requirements :

The functional and non-functional requirements of our project are given below.

### Functional Requirements :

1. Admin, students and teachers first have to register by valid approval.
2. Admin can add new courses to the system.
3. The system redirects users to other BRACU links for special purposes.
4. Every user can upload study contents.
5. Teachers and admins can approve notes to add.
6. Every user can view and download.
7. Only Teachers and admins can delete notes.
8. Only Teachers can request for courses.
9. Only Admins assign courses to teachers.
10. During log in, wrong password for 3 times in a row block the sign in page.

## Non-Functional Requirements :

1. The system is able to run on any web browser.
2. Once a file is uploaded the system doesn't degrade the quality of the file like some other third party systems do.
3. The number of different accounts the system can create is enough for the huge number of students and teachers in BRAC University.
4. Size of a single file to upload is limited.
5. Once a content is deleted can not be retrieved.
6. The server connected to the system can handle a huge amount of users at a time.
7. The system is very easy and handy to use.
8. The system is fast in average speed internet connection.
9. Users must change the initially assigned login authentication information (password) immediately after the first successful login. The initial password may never be reused.
10. Passwords shall never be viewable at the point of entry or at any other time.

## Use Case Diagram :

Here, use case diagram and scenario are described properly. Each use case diagram contains its name, level number, primary and secondary actors.

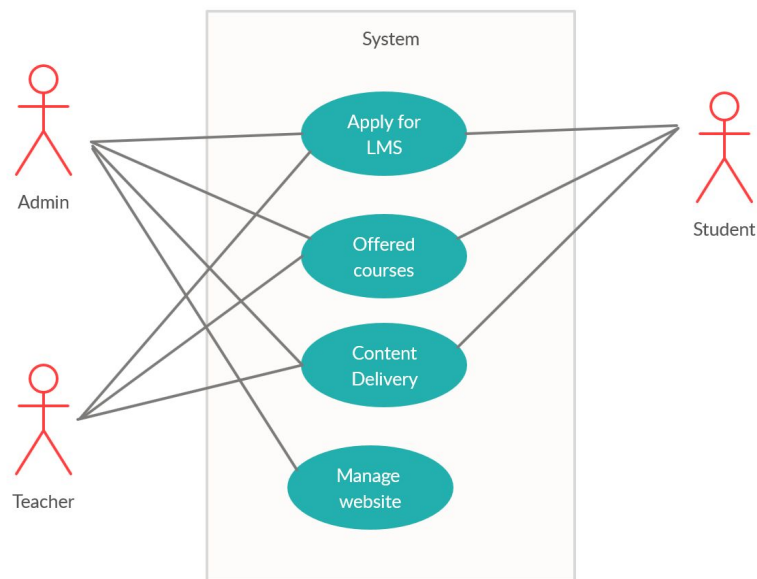


Figure 1 - Level 0: Learning Management System

**Use case Name :** Learning Management System

**Use case ID :** 0

**Primary Actor :** Admin, Teacher

**Secondary Actor :** Student

**Scenario for level 0 :** Teacher, student and admin can apply for LMS account, see offered courses and post contents. It's only admin's responsibility to manage website.

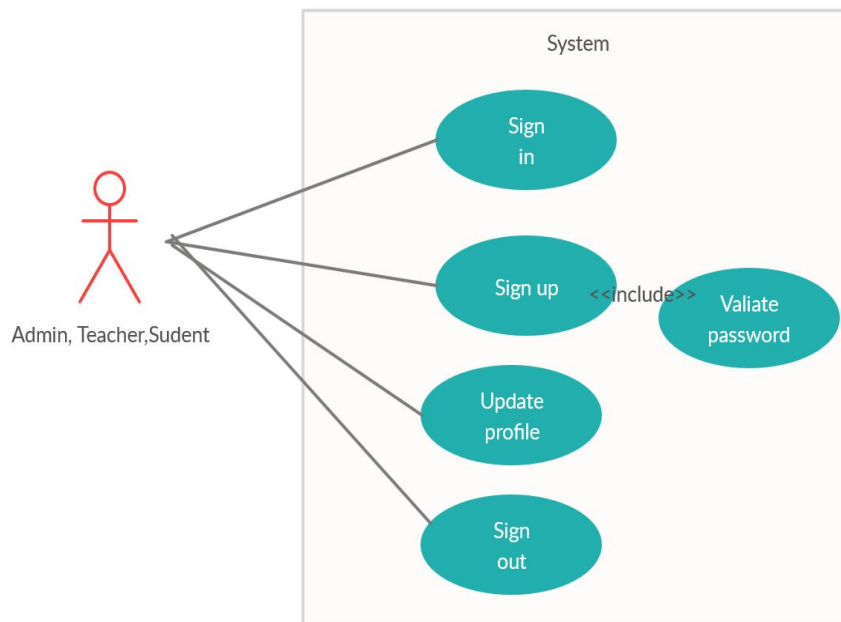


Figure 2 - Level 1: Apply for LMS

**Use case Name :** Apply for LMS

**Use case ID :** 1

**Primary Actor :** Admin, Teacher

**Secondary Actor :** Student

**Scenario for level 1 :** "Through apply for LMS" it will sign in to the system by giving a particular id and password and the system verifying the id and password will provide access to the users. The users will logout from the system after performing their task in the system and after signing up, user can update their profiles respectively.



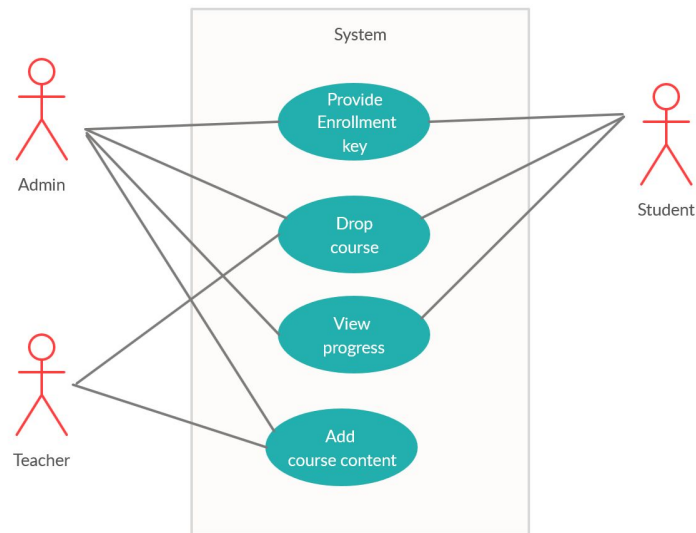


Figure 3 - Level 2: Offered courses

**Use case Name :** Offered courses

**Use case ID :** 2

**Primary Actor :** Teacher, Admin

**Secondary actor :** Student

**Scenario for level 2 :** In this case, teachers will provide various activities to their assigned courses which will be placed in the dashboard, and when necessary both teacher and students can drop certain course(s). For the students, they have to enter into their particular courses by providing the enrollment key just for once, then they will be automatically registered for that subject also can mark their progress after completing the activities given by teacher. Admin has the authority to view and edit any aspects.

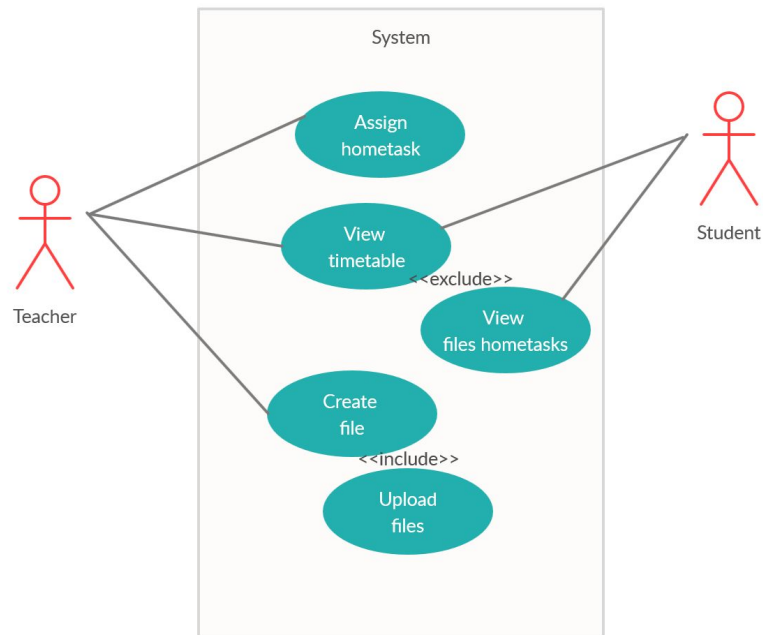


Figure 4 - Level 3: Content delivery

**Use case Name :** Content delivery

**Use case ID :** 3

**Primary Actor :** Teacher

**Secondary actor :** Student

**Scenario for level 3 :** Teacher will supply needed papers and assign home works so that students can get those from anywhere online. Also teacher can keep track of students by checking timetable where students can see the uploaded files and home tasks when they need.

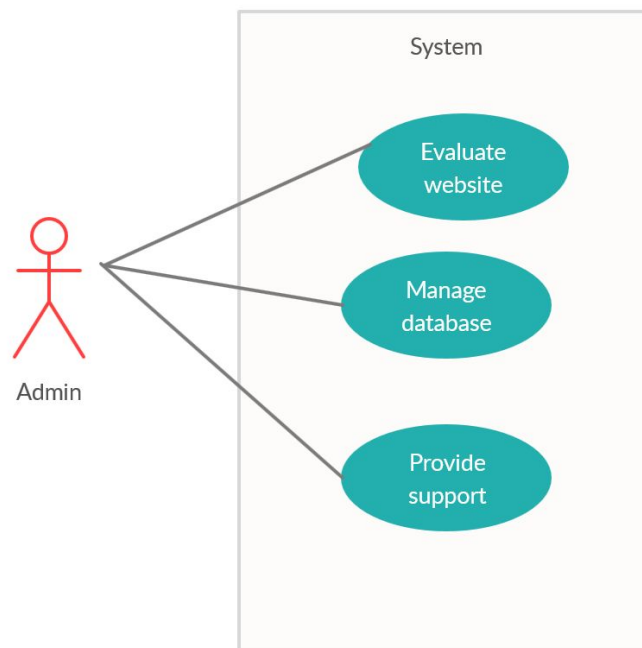


Figure 5 - Level 4: Manage website

**Use case Name :** Manage website

**Use case ID :** 4

**Primary Actor :** Admin

**Scenario for level 4 :** Admin handles bugs and evaluates the website regularly and can bring updates whenever needed with time.

## Class Diagram :

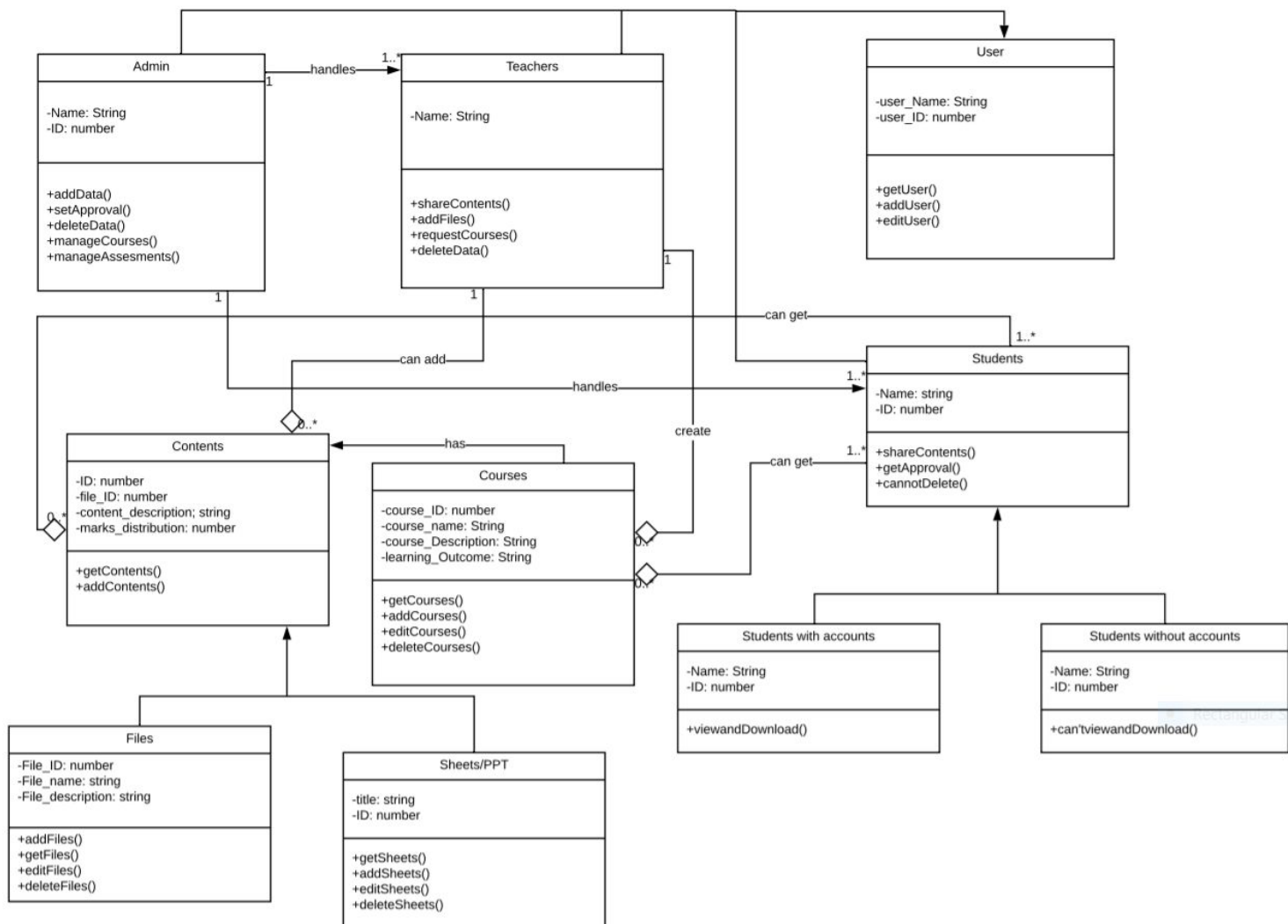


Figure 6 - Class Diagram

## Description of out class diagram :

In this detailed Learning Management System (LMS) class diagram we tried to demonstrate the flow of access and activity as best as we can. It shows the full description of Admin, Teachers, Students, Courses and Contents where admin will be able to handle teachers and students all the data. Admin, Teachers, Students are generalized as users. Users will be able to add users (admin, Teachers, Students). Teachers can create courses and courses have contents where contents consist of two types (files and sheets). Teachers can add, update, delete that files or sheets but students will be able to add that contents only. Everybody has access to get the uploaded contents. After that students will be able to get courses where students can be two types one with accounts and the others without accounts. Students with accounts can view and download contents whereas students without accounts cannot view and download contents. Admin have access to all the tasks that teachers and students can do. As an addition, admin can manage courses and assessments.