# Learning Management System

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# 1. Project Summary

LMS[1] is a software program that helps you to create, manage and deliver e-Learning courses. It provides tools to manage teaching and learning process and integrates various learning resources together.

It allows to create eLearning content (lessons), organize it into courses, deliver the content, enroll students to said courses, and finally, monitor performance.

In our project we are designing and pioneering new approaches to solve all the necessary ways of implementing LMS for the betterment of education field.
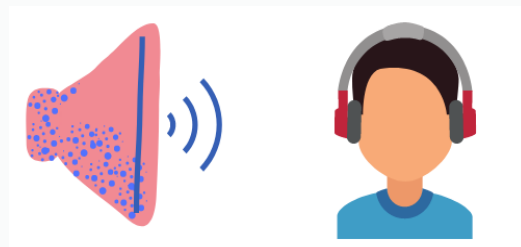
# 2. Project Background

The e-learning process provides to users flexibility[2]. In the LMS system the learner will find all the study materials starting from pdfs, videos or any media contents.

Although there are many LMS systems currently available like: Google Classroom, Schoology, Moodle and e-learning platforms like Edureka, Coursera, Simplilearn etc. they have a few limitations. These include:
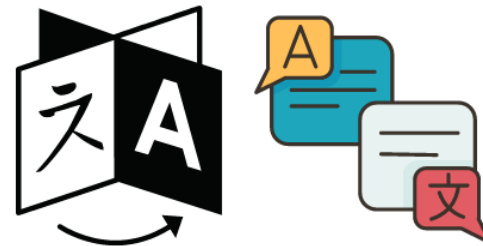
1. Most of the online assessments are limited to questions that are only objective in nature.
2. They can be hard to interact by those who have poor knowledge of computer technology.
3. Unappealing user interface[3]
4. The authenticity of a particular student's work is also a problem.

The new upgrades we are adding to the current LMS system are:

1. To use audio-vision to enhance learning (audible contents).
2. Solve language barriers by using subtitles and accent.



Audible content
Global or local accent and language

3. Besides quiz based education, the online exams will receive descriptive answer by allowing students to write the answers in hand and then take photo one by one and add those as media file.



Take photo of written content And upload

4. There will be viva questions for each online exam where the students must keep their webcam switched on and there will be face recognition and speech processing of the answer the students are providing with AI technology[4]. Students will be given marks when they are able to give answer to the viva question[5] which has the same theme of the question's solution previously given in the system.



Viva test

5. Add ranking board system to make students motivated and bring their competitive attitude.


Ranking

Our LMS will have website, software and android app package allowing all the students to use the process efficient for them. Also we will let Share invaluable resources links and information via social sites making our LMS open source e-learning platform. As this LMS will allow schedule feedback sessions[6] that take place on social media sites more engagements will be assured and so more students will get notified and co-operated.

# 3. Project Design

Our Learning Management System includes full facilities for both students and instructors. There will be:

**For Students**
- Course Selection
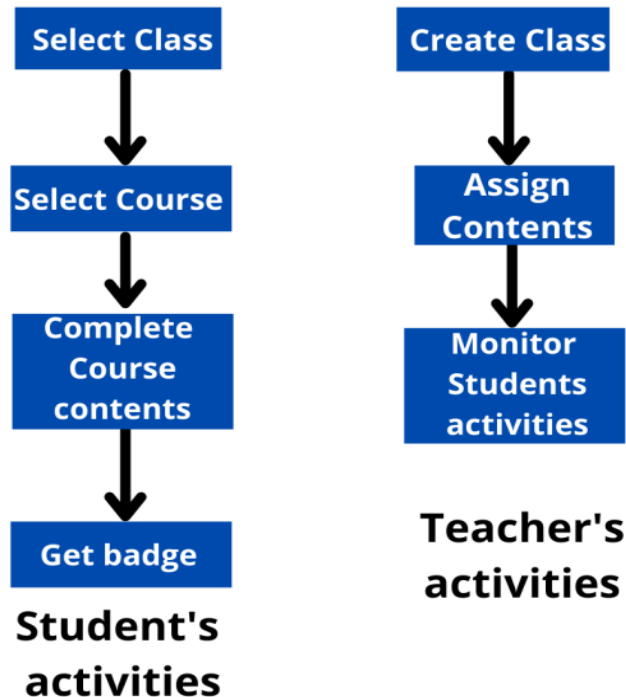- Download contents
- Upload Answer scripts
- Profile Management

**For Teachers**
- Course Management
- Handout Deliver
- Assignment
- Evaluation
- Student Management

**For Administrators**
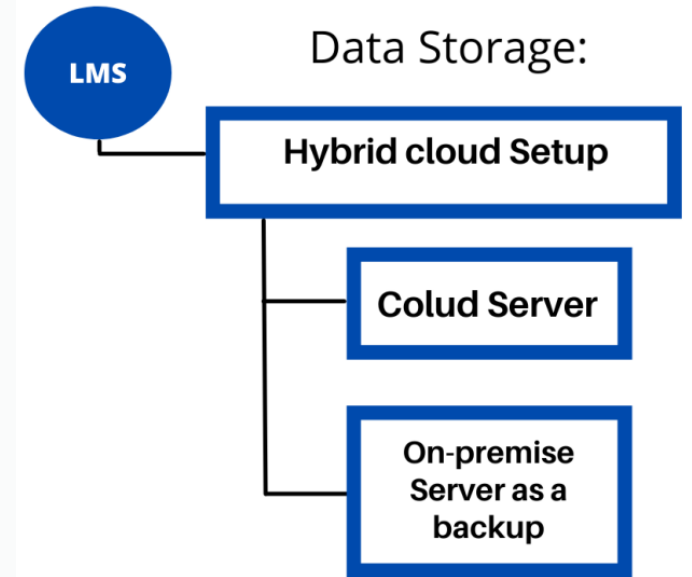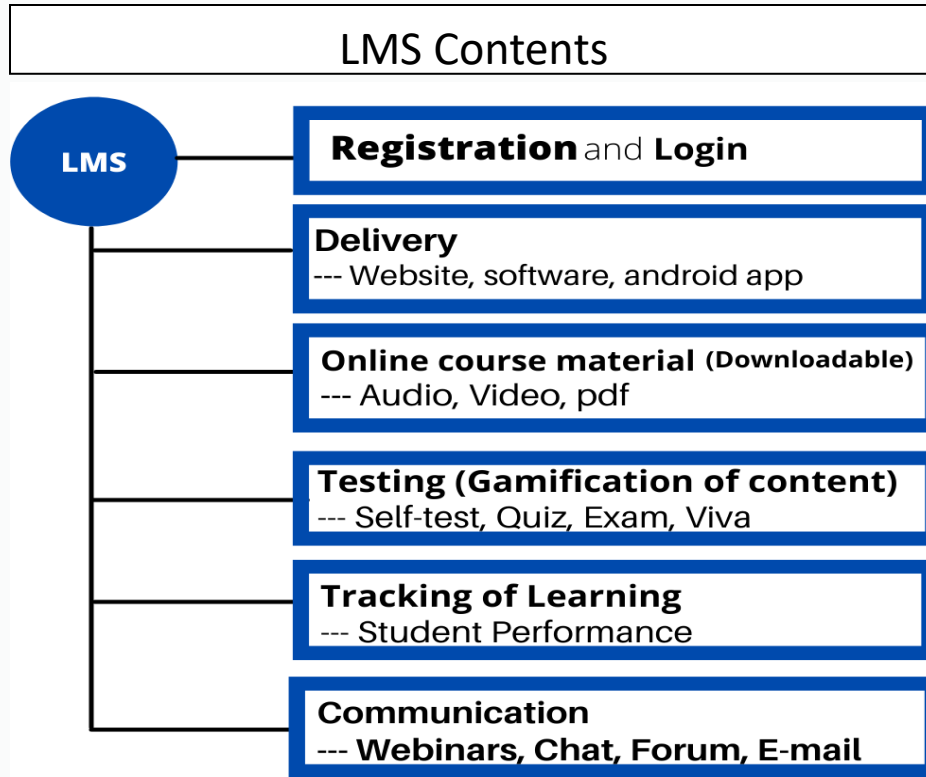- Teachers Role
- Student's Role
- Full system Management

**Student's activities**

Select Class → Select Course → Complete Course contents → Get badge

**Teacher's activities**

Create Class → Assign Contents → Monitor Students activities

Some of functional requirements are:

| LMS Contents |
| --- |



**Registration** and **Login**

**Delivery**
--- Website, software, android app

**Online course material** **(Downloadable)**
--- Audio, Video, pdf

**Testing (Gamification of content)**
--- Self-test, Quiz, Exam, Viva

**Tracking of Learning**
--- Student Performance

**Communication**
--- **Webinars, Chat, Forum, E-mail**

Data Storage:

Hybrid cloud Setup

Colud Server

On-premise Server as a backup

## 4. Project Cost

The cost of an eLearning project consists of following components:

1. The cost of the LMS;

2. Implementation costs;

3. Setup training;

4. Technical support;

5. Maintenance and updates.

| Description | Cost (BDT) |
|---|---|
| **Software Development** | 250000.00 |
| **Hybrid Server Setup (One time for 12 months)** | 192000.00 |
| **Web Portal design & development** | 100000.00 |
| **Android Application Design and Development** | 100000.00 |
| **Integration of Payment procedure** | 75000.00 |
| **Integration of SMS application** | 20000.00 |
| **Total** | 545000.00 |

## 5. Time Scheduling

This period of time may vary depending on additional workload, last-minute changes, and additional submission and third party service providers.

| Phase | Action Items | Days: |
|---|---|---|
| **Review & Signoff** | Proposal review and Signoff<br>Advance Payment as specified in payment plan | 15 |
| **Planning** | Requirement Analysis<br>Design, Review and approval of feature listing for web, software and Android app | 30 |

| Phase | Action Items | Days: |
|---|---|---|
| **Design, Development & Integration** | Designing and development of database structure<br>Development of navigation scheme of web portal<br>Develop and integrate features/modules<br>Development and integration of custom controls<br>Design Ul for Software<br>Design Ul for Website<br>Design Ul for Android app | 95 |
| **Design Ul for Software** | Review/edit web portal and android app<br>Test all links, forms, integrated applications and email addresses to make sure they all work effectively<br>Present the product for review and approval<br>Training | 15 |
| **Payment method** | Apply for merchant account and integration of Payment Gateways | 20 |
| **Final Handover** | Transfer and handover of ownership of the Product<br>Launch on Live Server<br>Final payment | 4 |
| **Maintenance and Support** | Setup of dedicated support team for maintenance and support<br>Continual improvement on agreed terms | 1 |
| | Total | 180 days<br>= 6 months |

# 6. Conclusion

Learning management systems (LMSs) may provide learners with resources in various formats, such as videos, quizzes, and forum discussions to support their learning, but having access to an LMS does not necessarily mean that learning has occurred effectively. Despite its apparent usefulness, whether the use of the LMS can indeed help learners learn more effectively remains an interesting matter for course providers, LMS vendors, and learners. LMS system quality, information quality, and service quality affect learners' system use and user satisfaction, and ultimately their learning effectiveness[7].

# 7. Reference

[1]https://en.wikipedia.org/wiki/Learning_management_system#:~:text=A%20learning%20management%20system%20(LMS,emerged%20directly%20from%20e%2DLearning.

[2] https://www.onlinebusinessschool.com/how-the-flexibility-of-online-learning-is-helping-online-learning/

[3] https://leftbrainmedia.com/limitations-of-off-the-shelf-lms-software/

[4] https://www.analyticsinsight.net/machine-learning-is-helping-students-take-online-exams/

[5] https://onlineexamhelp.eklavvya.in/conduct-viva-online/

[6] https://www.wbtsystems.com/learning-hub/blogs/get-student-feedback-online-courses

[7] https://blog.mettl.com/advantages-disadvantages-online-examination/