

A  
REPORT  
*On*  
“E-Learning Management System”  
  
*for the partial fulfillment of the degree*  
*of*  
*Bachelor of Computer Application*

**SUBMITTED BY**

Narayan Bastakoti,(18530171)

Peshal Sangroula,(18530173)

Ravi Shankar Amatya,(18530175)

Sandhya Acharya,(18530178)

Srijana Chhetri,(18530181)

**SUBMITTED TO**



Department of Computer Application  
LUMBINI ENGINEERING, MANAGEMENT & SCIENCE COLLEGE  
Bhalwari, Rupandehi  
2021

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Under The Guidance of Mr. Binay Sharma

## **SUBMITTED TO**



Department of Computer Application  
LUMBINI ENGINEERING, MANAGEMENT & SCIENCE COLLEGE  
Bhalwari, Rupandehi  
2021

## CERTIFICATE

This is to certify that the project entitled “**E-Learning Management System**” has been carried out by the team under my supervision partial fulfillment of the degree of Bachelor of Computer Application of Pokhara University, Kaski, Nepal during the academic year 2020-2021(semester 6).

**Team:**

1. Narayan Bastakoti
2. Peshal Sangroula
3. Ravi Shankar Amatya
4. Sandhya Acharya
5. Srijana Chhetri

**Date:** .....

**Place:** Bhalwari, Rupandehi.

.....

Mr. Binay Sharma

**Supervisor**

.....

Mr. Satish Kumar Karna

**HOD,  
Computer Department**

.....

Er. Raj Kapur Shah

**Principal**

## PROJECT APPROVAL SHEET

Following team has done the appropriate work related to the “**E-Learning Management System**” in the partial fulfillment of the award of Bachelor in Computer Application of “Pokhara University, Dhungepatan” and is being submitted to Lumbini Engineering Management & Science College, Bhalwari.

**Team:**

1. Narayan Bastakoti
2. Peshal Sangroula
3. Ravi Shankar Amatya
4. Sandhya Acharya
5. Srijana Chhetri

	Name	Signature
<b>Supervisor:</b>	Mr. Binay Sharma	.....
<b>External Examiner:</b>	.....	.....
<b>Date:</b>	.....	
<b>Place:</b>	Lumbini Engineering, Management and Science College, Bhalwari.	

## **ACKNOWLEDGEMENT**

We take this opportunity to express our guidance to our Director Mr. Tulsi Prasad Sapkota, project guide Mr. Binay Sharma, head of BCA department, lecturer and principal of Lumbini Engineering College Er. Raj Kapur Shah for the special support given in preparing our project. It is because of the lab lectures on HTML, PHP, CSS, & JAVASCRIPT that we are capable on developing the sample module of the BCA sixth semester project. We thank our college department for their warm support which help us in our project.

## **ABSTRACT**

E-learning management system is a web based system that is designed to store, process, retrieve and analyze information concerned with the administrative and education management within educational institutes. This project aims at maintaining all the information about the different types of courses and related lessons effectively through online technology system. We should able to learn the educational materials through online system. The major purpose of this project is to enhance the quality of learning and teaching. Meet the learning style or needs of students. Improve the efficiency and effectiveness. Improve user-accessibility and time flexibility to engage learners in the learning process.

## Table of Content

<b>1. Introduction.....</b>	<b>1</b>
1.1 Definition .....	1
1.2 Objectives.....	1
1.3 Benefits.....	1
1.4 Disadvantages.....	1
<b>2. Methodology .....</b>	<b>2</b>
2.1 Tools Used.....	2
2.1.1 Hardware Requirement.....	2
2.1.2 Software Requirement .....	2
2.1.3 Tools Used For Development.....	2
2.1.4 Description.....	2
2.2 Process Design .....	3
2.2.1 Data Flow Diagram .....	3
2.2.2 Use Case Diagram .....	4
2.3 Testing .....	5
2.3.1 Testing Plan .....	6
2.3.2 Testing Strategy .....	6
2.3.2.1 Unit Testing .....	6
2.3.2.2 Integration Testing .....	6
2.3.2.3 System testing .....	6
<b>3. Result.....</b>	<b>7</b>
<b>4. Conclusion .....</b>	<b>13</b>
<b>5. References .....</b>	<b>14</b>

## List of Figures

Figure 1: Data Flow Diagram .....	4
Figure 2: Use Case Diagram .....	5
Figure 3: Home Page .....	7
Figure 4: Registration .....	7
Figure 5: Student Login .....	7
Figure 6: All Courses .....	8
Figure 7: Dashboard.....	8
Figure 8: List of Courses.....	8
Figure 9: Add New Course .....	9
Figure 10: Add New Lesson .....	9
Figure 11: Admin Login .....	9
Figure 12: Admin Change Password .....	10
Figure 13: Contact Us .....	10
Figure 14: Course with lessons .....	10
Figure 15: Student Feedback .....	11
Figure 16: List of Students.....	11
Figure 17: Profile Page .....	11
Figure 18: Search Lessons with course id.....	12
Figure 19: Update Course .....	12
Figure 20: Update Lesson .....	12



## **1. Introduction**

### **1.1 Definition**

E-learning, or electronic learning, is the delivery of learning materials through online platform. Basically, e-learning is training, learning, or education delivered online through a computer or any other digital device. E-learning is essential part in today's rapidly developed technology. The teaching can be based in or out of the classrooms. E-learning can also be termed as a network enabled transfer of skills and knowledge, and the delivery of education is made to a large number of recipients at the same or different times. The major resources for e-learning are computer and internet. Electronic devices now have an important place in the classrooms for learning. Books are gradually getting replaced by electronic educational materials like optical discs or pen drives. Knowledge can also be shared via the Internet, which is accessible 24/7, anywhere, anytime.

### **1.2 Objectives**

The major objectives of e-learning can be shown as follows:

- To enhance the quality of learning and teaching
- To improve the efficiency and effectiveness
- To improve user-accessibility
- To make time flexibility to engage learners in the learning process
- To meet the learning style or needs of students etc.

### **1.3 Benefits**

There are several benefits of this system. Some major benefits are:

- It can be easily accessible for all the learners who have internet access on their digital device.
- It is very interesting and exciting for those who prefer rather than going to school, college or institutes.
- This system helps on quick delivery of several courses and related lessons.
- It reduced the fees for students on learning process. After applying this system the fees required for vehicles, library etc will be saved.
- Lectures can be taken any number of times.
- The course and lesson can be updated easily based on the learners needs etc.

### **1.4 Disadvantages**

This system is not useful for those who do not have internet access on their digital system.

## **2. Methodology**

### **2.1 Tools Used**

In order to operate the various functions and block of codes, following tools are used.

#### **2.1.1 Hardware Requirement**

The minimum hardware requirement for developing the system includes the following:

Processor: Pentium 4, 3.2 GHz or higher

RAM: 1GB

Hard Disk: 20 GB free space of HD

#### **2.1.2 Software Requirement**

The minimum software requirement required for developing System.

Operating System: Windows 98, Windows XP

The Web Server: XAMPP

Since the language used is PHP and backend is MYSQL, Hence XAMPP server that provides the local server environment was selected.

Web browser: Chrome, MS edge, Firefox.

#### **2.1.3 Tools Used For Development**

Editor: Sublime Text Editor

Front End development Tools: HTML, CSS, Bootstrap Framework and JavaScript

Back End development Tools: MYSQL

#### **2.1.4 Description**

##### **HTML**

For the implementation in the front end we have used HTML for a good look and feel to the user with the display of the contents of the design and the system. We applied bootstrap and ajax for our responsive site. Different markup tags are used like anchor tag for link, bold tag for making the font bold etc.

##### **CSS**

For the style implementation CSS is used. CSS made our system more decorative which can make the users feel good looking site. Taking margins, providing sizes, color filling for various pages and contents and other several designs are implemented using the concept of the CSS.

## **Java Script**

JavaScript is most commonly used as a client side scripting language. This means that JavaScript code is written into an HTML page. When a user requests an HTML page with JavaScript in it, the script is sent to the browser and it's up to the browser to do something with it.

## **MYSQL**

For the database connection MYSQL is used in this project. Various queries are used to interact with the database. Insertion, edit, delete and selection of the data are performed through queries. Database has various tables like student table, admin table, course details table etc. It is always written inside the PHP tag.

## **PHP**

Hypertext Preprocessor PHP is used to validate in the server side. Our project is dynamically implemented by using PHP. There is a dynamic page content in our site. User can dynamically access our system and interact with the facilities which they want, to make this success and possible we have used PHP in our system. Admin handle the site dynamically only with the use of different php variables, functions, and methods.

## **2.2 Process Design**

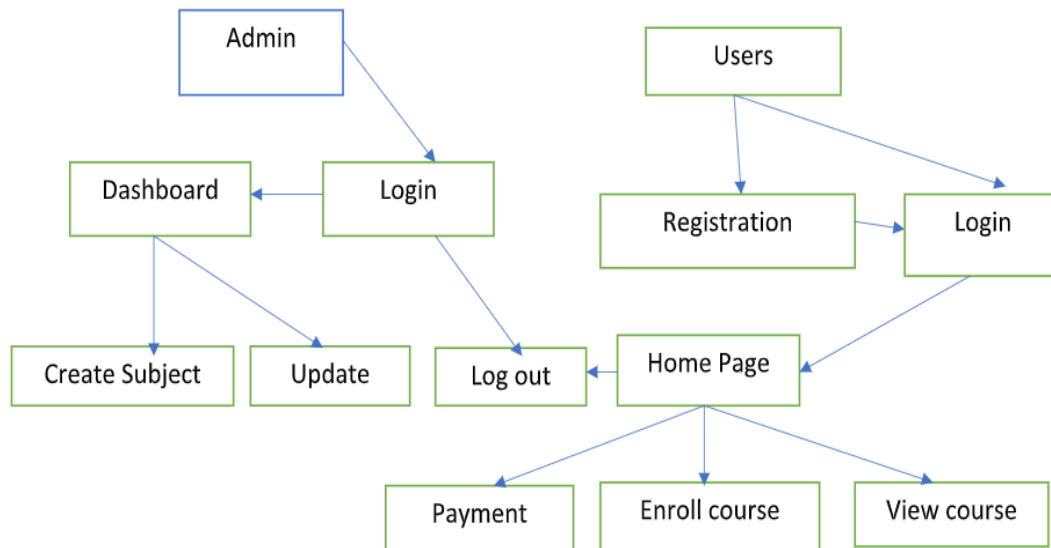
In the process design there are various methods to represent the units of the system. We have used different diagrams for understanding the requirements of the system. Some of them are Data Flow Diagram and Use Case diagram.

### **2.2.1 Data Flow Diagram**

This is the graphical representation of the developed system. This diagram describes the several functions and the related web pages. When the user enters the URL of the system on any browser, the home page also known as index page will be opened as shown in the diagram. The user should register them by clicking on sign up button initially. Then the user can login to the system and can enroll the courses and related lessons based on their requirements. If the user is not login to system as user then they cannot access the courses.

In admin section, the authorized person can login by entering the email and password to handle the admin dashboard. The admin can easily add, delete, and update the courses and related lessons.

Both admin and users can change their password according their needs. After fulfilling the needs the user can leave the system by clicking on Log out button.



**Figure 1: Data Flow Diagram**

### 2.2.2 Use Case Diagram

Use Case Diagrams are the models that represent the user's expectations to implement the system. The people and the systems that interact with the target system are called actors. The features of the system that the actors use are called use cases. Some use cases interact with other use cases, a relationship modeled using dependency arrows. The goal of the use case is to identify all the features that the client expects the system to support, but it doesn't reveal any details about the implementations these features. Use cases can be written in several ways but the most common way is to represent the system from outside the system. Use case diagram are valuable because they:

1. Identify the client's expectations of the system.
2. Identify the specific features of the system.
3. Identify the behavior of the system.
4. Provide a simple and easy understood for the clients to view among the features.

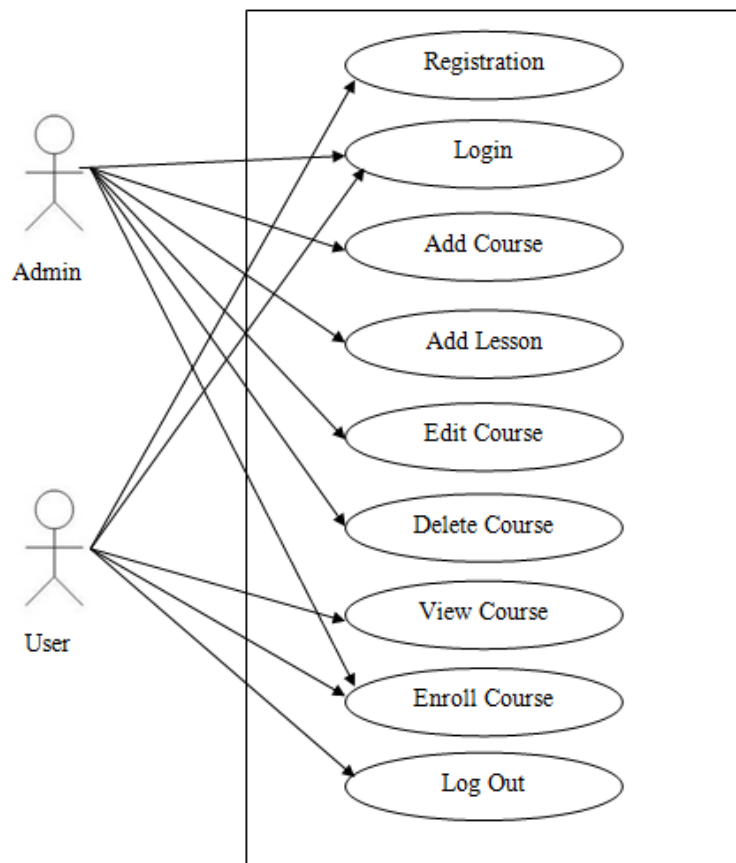


Figure 2: Use Case Diagram

### 2.3 Testing

Software testing is an investigation conducted to provide stakeholders with information about the quality of the software product or service under test [7]. In system development life cycle testing is performed in the phase level. It is the evaluation of the software against the requirement gathered from the user and system specification. Testing process is performed to detect the difference between the systems behavior and the actual behavior for this requirement specification is used.

Testing is carried for some reasons:

1. The defects found during testing are not corrected; the testing process gives the idea to make reliable system.
2. The defects found in the system reveals the most common kind of defects which can be used for developing appropriate preventive measures like training, proper design and reviewing.
3. The defects found helps in the process of making the software reliable

### **2.3.1 Testing Plan**

The testing sub-process includes the following activities in a phase dependent manner:

1. Create Test Plans.
2. Create Test Specifications.
3. Review Test Plans and Test Specifications.
4. Conduct tests according to the Test Specifications, and log the defects.
5. Fix defects, if any.
6. When defects are fixed continue from activity.

### **2.3.2 Testing Strategy**

The development process repeats this testing sub-processes a number of times for the following phases.

#### **2.3.2.1 Unit Testing**

Unit testing tests a unit of code (module or program) after coding of that unit is tested. Unit testing was performed for registration, login and forget password also unit testing has been performed for every function in this project during development phase.

#### **2.3.2.2 Integration Testing**

Integration testing is basically a logical extension of unit testing. In simple words, two tested units are combined into a component and the interface between them is tested. It identifies problems that occur when different units are combined. The different modules of this project have undergone integration testing while being merged.

#### **2.3.2.3 System testing**

System testing tests the behavior of whole system defined by the scope of the development project. It might include tests based on risks as well as requirement specification, business process, use cases or other high level description of system behavior, interaction with operating systems and system resources. It is most often the final test performed to verify that the system meets the specification and its objective. It is used in our system to test whether the system works properly or not.

System testing has been performed at the completion of each feature and is still taking place to make improvements on the existing System. The system testing cases that have been done have been listed below along with the test output.

### 3. Result

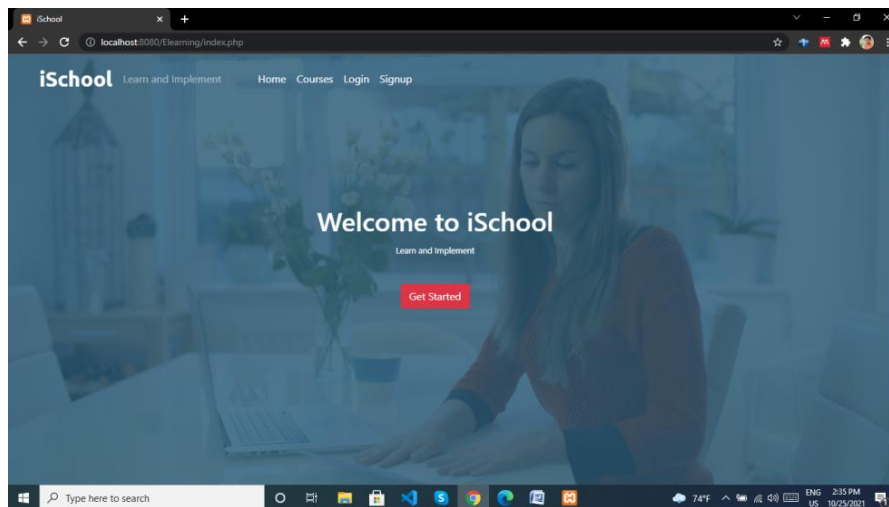


Figure 3: Home Page

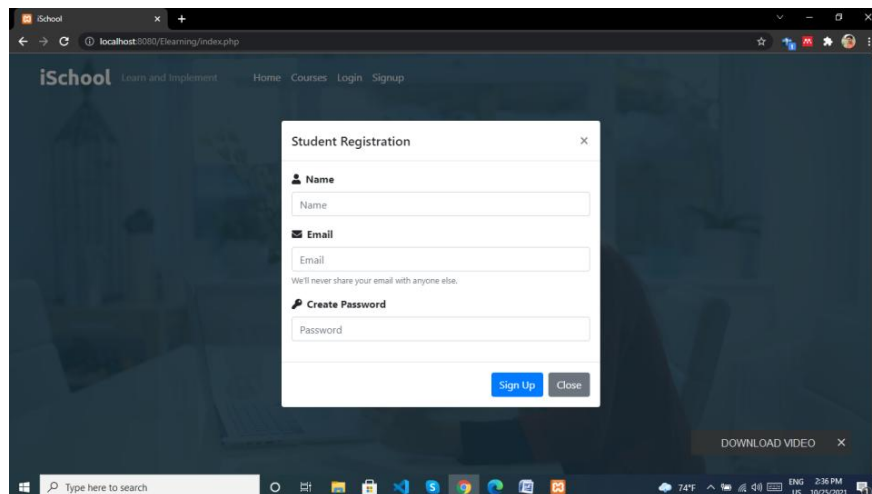


Figure 4: Registration

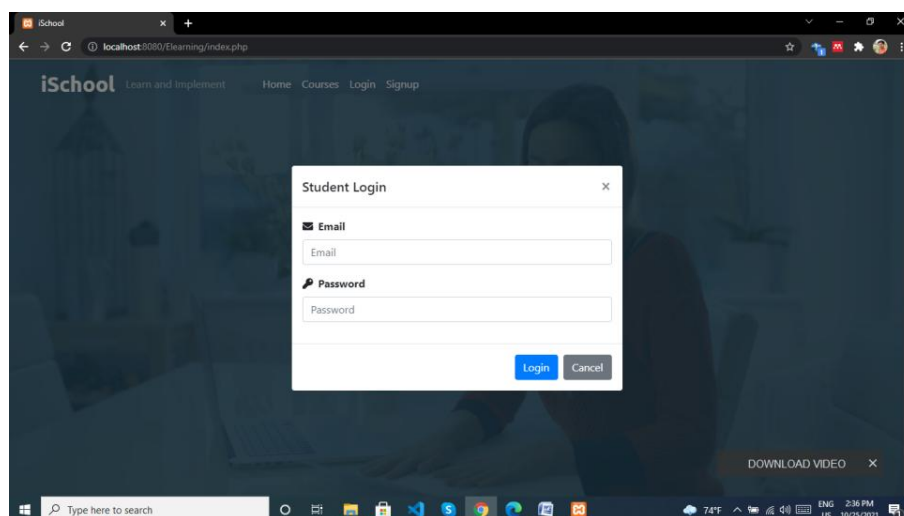


Figure 5: Student Login

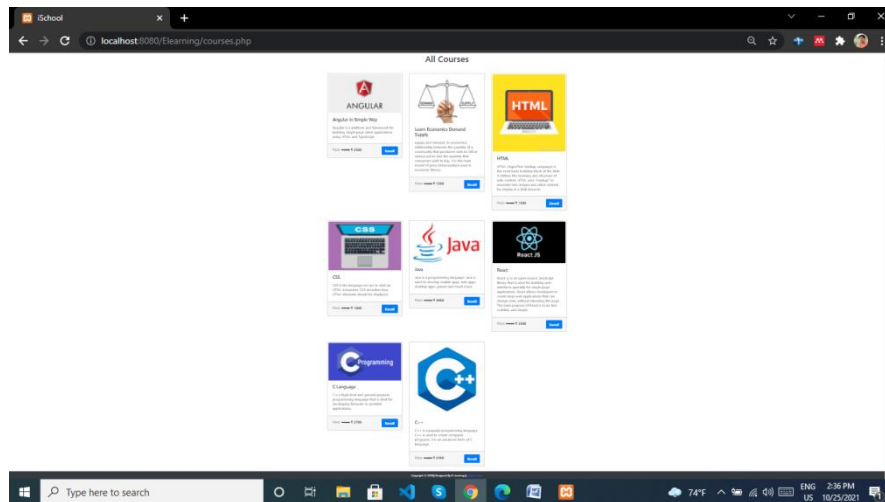


Figure 6: All Courses

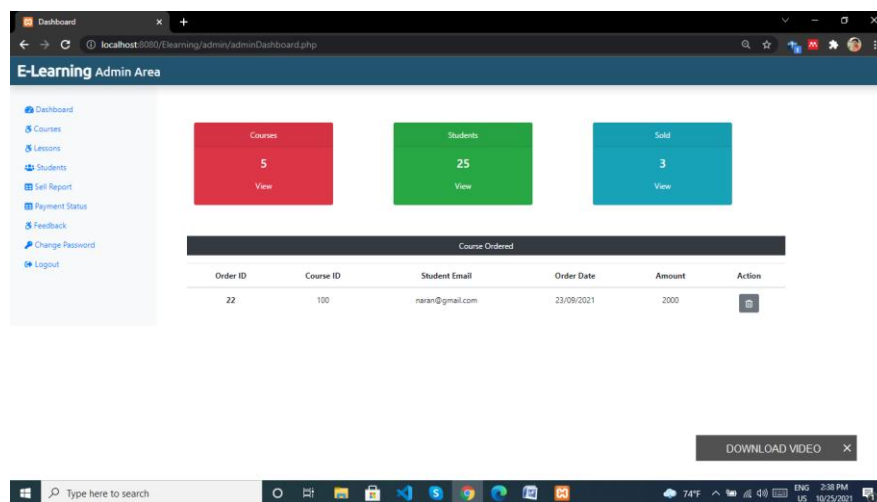


Figure 7: Dashboard

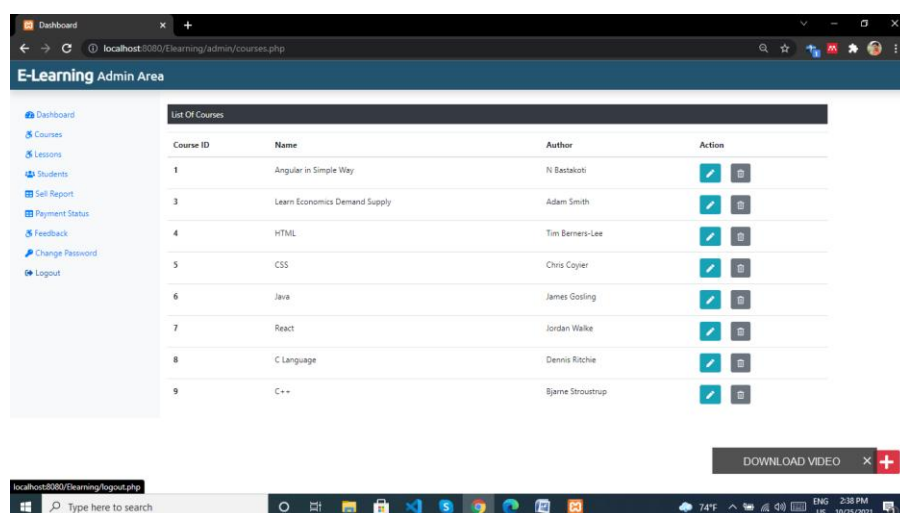


Figure 8: List of Courses



The screenshot shows the 'Add New Course' form in the E-Learning Admin Area. The form is located at `localhost:8080/Elearning/admin/addCourse.php`. It includes a sidebar with navigation links: Dashboard, Courses, Lessons, Students, Sell Report, Payment Status, Feedback, Change Password, and Logout. The form fields are:

- Course Name
- Course Description
- Course Author
- Course Duration
- Course Original Price

Figure 9: Add New Course

The screenshot shows the 'Add New Lesson' form in the E-Learning Admin Area. The form is located at `localhost:8080/Elearning/admin/addLesson.php`. It includes the same sidebar as Figure 9. The form fields are:

- Course ID (pre-filled with 5)
- Course Name (pre-filled with CSS)
- Lesson Name
- Lesson Description
- Lesson Video Link (with a 'Choose File' button and 'No file chosen' text)

At the bottom of the form are 'Submit' and 'Close' buttons.

Figure 10: Add New Lesson

The screenshot shows the iSchool website at `localhost:8080/Elearning/index.php#`. An 'Admin Login' modal is displayed over the website content. The modal has the following fields and elements:

- Email: `admin@gmail.com`
- Password: masked with asterisks
- Login button
- Cancel button

The background website shows a header with 'iSchool' logo and navigation links (Home, Courses, Login, Signup). Below the header is a profile for 'B Sandhya', QA Engineer, with Facebook and Instagram links. The footer contains 'About Us', 'Contact Us', and copyright information.

Figure 11: Admin Login

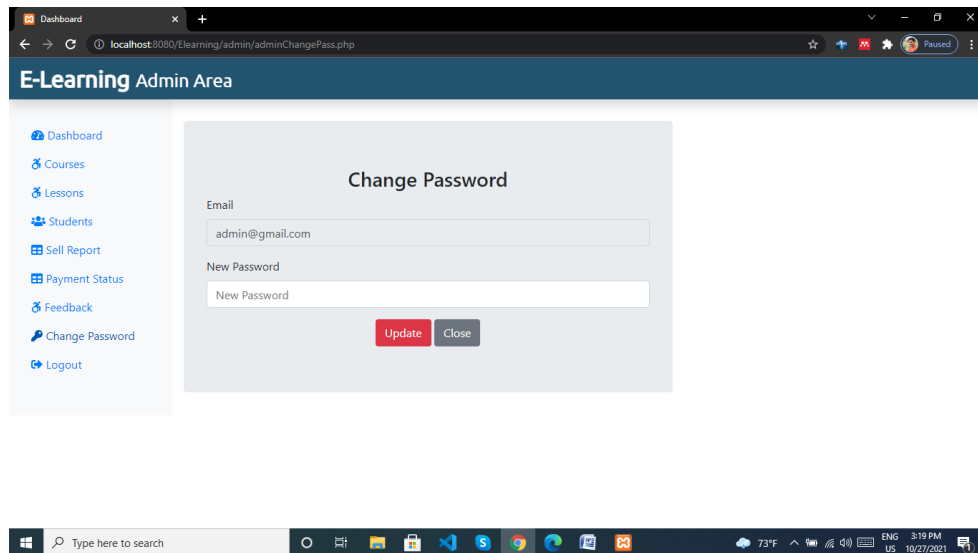


Figure 12: Admin Change Password

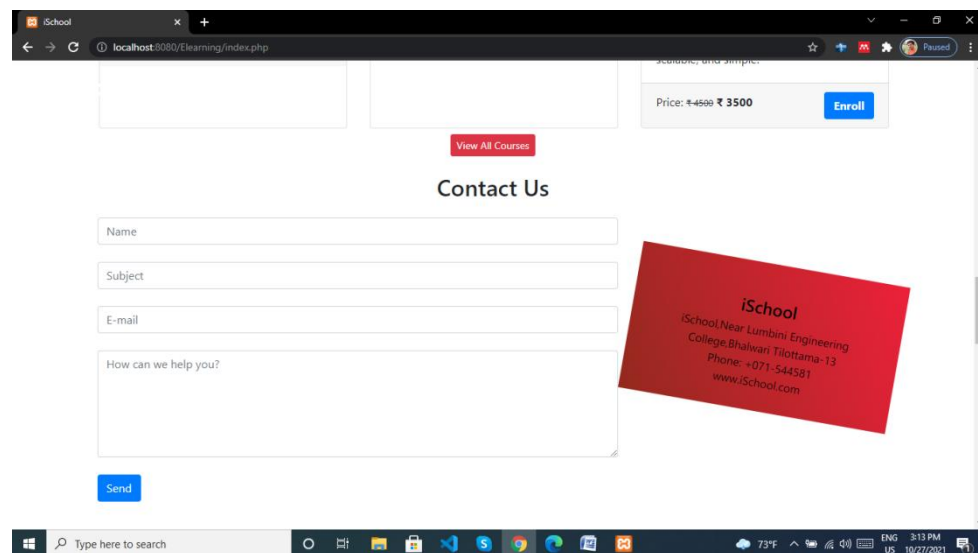


Figure 13: Contact Us

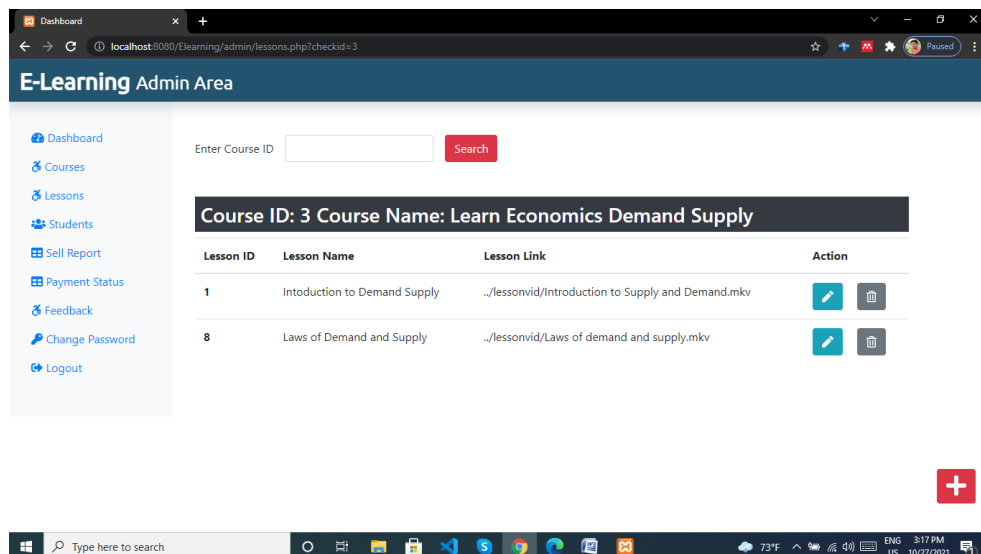


Figure 14: Course with lessons

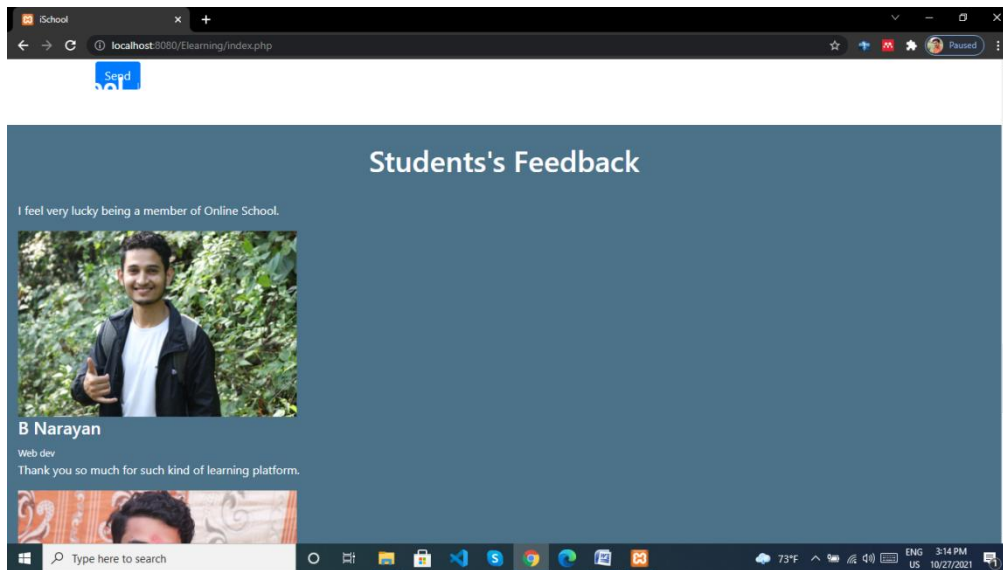


Figure 15: Student Feedback

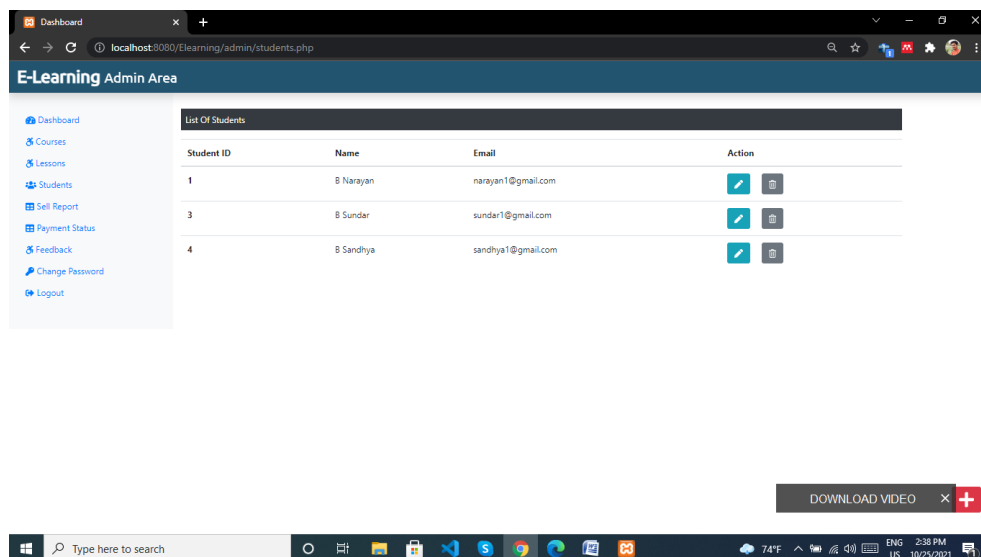


Figure 16: List of Students

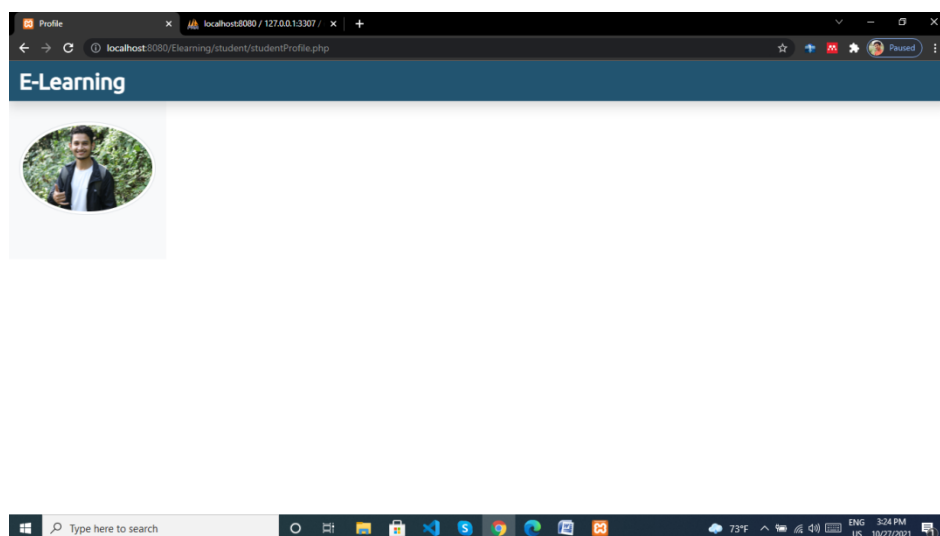


Figure 17: Profile Page

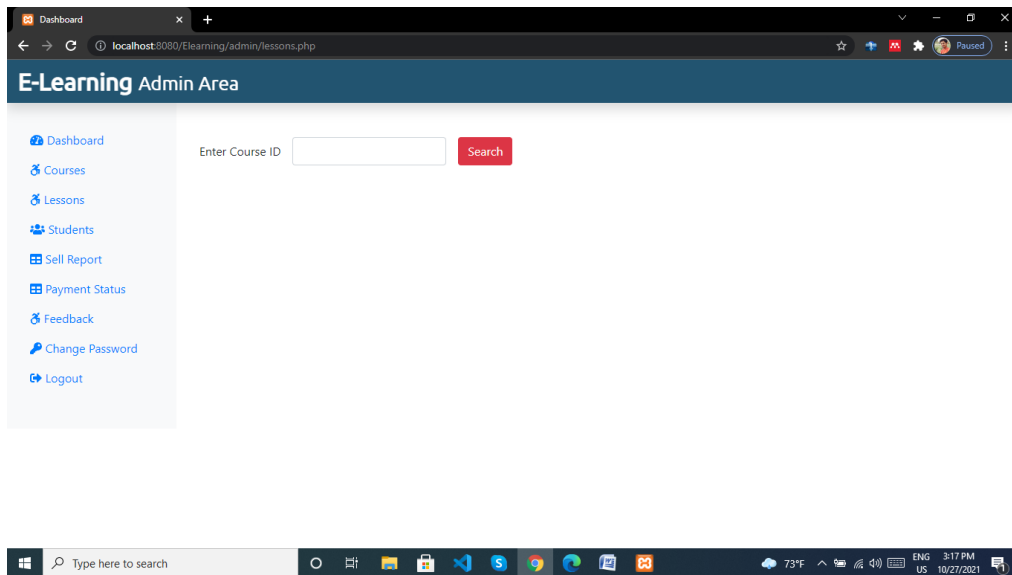


Figure 18: Search Lessons with course id

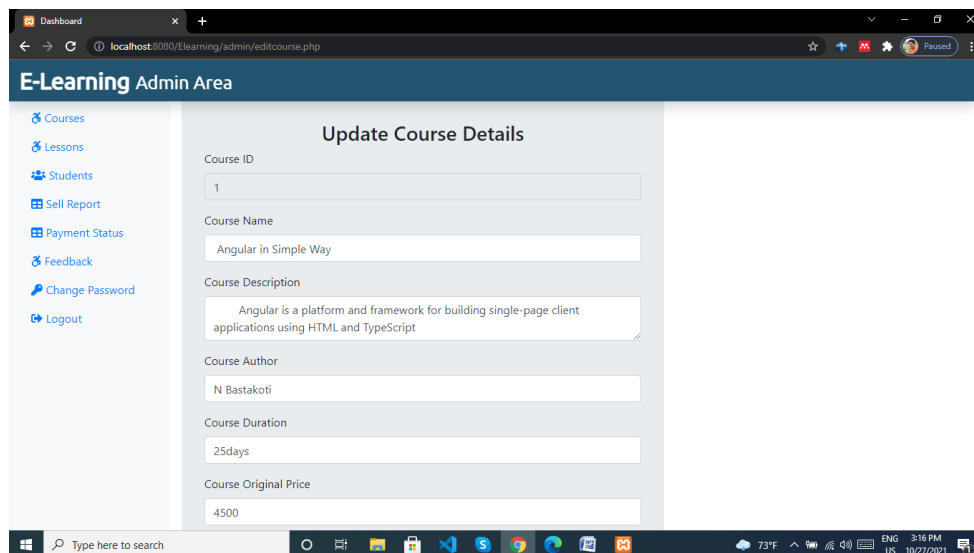


Figure 19: Update Course

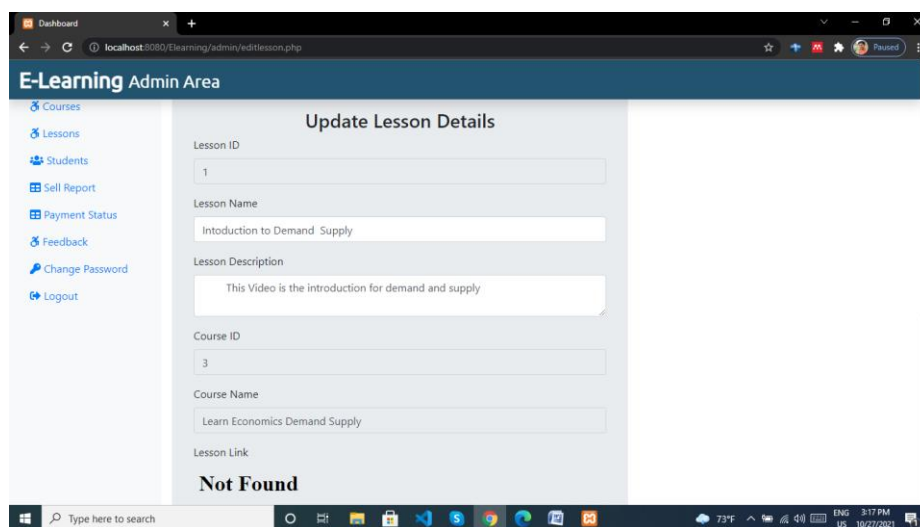


Figure 20: Update Lesson

## **4. Conclusion**

By using this web based project, we can get improving in literacy rate in both urban city as well in rural areas and finally as a whole in Nepal. Students or learners can learn the various courses on their needs from any places and at any time. This ultimately helps on maintaining the equality in education all over Nepal or in the world.

## 5. References

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- [www.elearninglearning.com](http://www.elearninglearning.com)
- Ivan Bayross. Web Enabled Commercial Applications Development Using... HTML, JavaScript, DHTML and PHP, 4<sup>th</sup> Revised Edition.
- [www.geekyshows.com](http://www.geekyshows.com)

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स्थायी लेखा नं.

२०७७-०४-०२



२०७८-०७-१३



नेपाल सरकार  
आन्तरिक राजस्व विभागबाट जारी गरिएको

स्थायी लेखा नम्बर परिचय-पत्र

स्था.ले.नं.: १२८८१४१३४

नाम: अनिल बराल

ठेगाना: तिलोत्तमा- १०, रुपन्देही

जन्म मिति: २०५२/०९/०२

परिचय पत्र.नं: ३७-०१-७३-०३१४६

जारी मिति: २०७८/०७/१३

संस्था: आन्तरिक राजस्व कार्यालय वुटवल



हामीले तिरेको कर हाम्रो विकासका लागि, आधुनिक र समृद्ध नेपालका लागि

ध्यान विवरण



कुनै विवरण फेला परेन

पुनःलोड गर्नुहोस्





स्थायी लेखा नं.

२०७७-०४-०२

२०७८-०७-१०



नेपाल सरकार  
आन्तरिक राजस्व विभागबाट जारी गरिएको

## स्थायी लेखा नम्बर परिचय-पत्र

स्था.ले.नं.: १२८७६३६६७

नाम: नारायण वस्ताकोटी

ठेगाना: तिलोत्तमा- 6, रुपन्देही

जन्म मिति: २०५५/०३/२२

परिचय पत्र.नं: ३७-०१-७४-००८३९

जारी मिति: २०७८/०७/१०

संस्था: आन्तरिक राजस्व कार्यालय वुटवल



हामीले तिरेको कर हाम्रै विकासका लागि, आधुनिक र समृद्ध नेपालका लागि

## प्यान विवरण



कुनै विवरण फेला परेन

पुनःलोड गर्नुहोस्

