JABALPUR ENGINEERING COLLEGE

A SYNOPSIS ON

Online e-Learning

(Web Based System)

Submitted to the

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA
(UNIVERSITY OF MADHYA PRADESH), BHOPAL

In partial fulfillment of the requirement for the award of the Degree of

MASTER OF COMPUTER APPLICATION

Submitted to

JABALPUR ENGINEERING COLLEGE

Jabalpur (M.P.)

Submitted To

Dr. Samar Upadhyay
Head of Department

Submitted by

Aditi Tiwari
0201CA181001

MCA SIXTH SEMESTER
SESSION 2021

TABLE OF CONTENTS

Sr. No.	Content	Page
1	About the project	3
2.	Objective of project	4
3.	Module	5
4.	DFD	8
5.	Hardware Requirement	9
6.	Software Requirement	10
7.	About Technology	11

About the Project

The "E-learning Management System" has been developed to override the problems. prevailing in the practicing manual system. This software is supported to eliminate and in some cases reduce the hardships faced by this existing system. Moreover this system is designed for the particular need of the company to carry out operations in a smooth and effective manner.

The application is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus by this all it proves it is user-friendly. E- Learning Management System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources.

Every organization, whether big or small, has challenges to overcome and managing the information of Student, Assignment, QUIZ, CLASS, and QUESTION. Every E-learning Management System has different Assignment needs, therefore we design exclusive employee management systems that are adapted to your managerial requirements. This is designed to assist in strategic planning, and will help you ensure that your organization is equipped with the right level of information and details for your future goals. Also, for those busy executive who are always on the go, our systems come with remote access features, which will allow you to manage your workforce anytime, at all times. These systems will ultimately allow you to better manage resources.

Objectives the Project

The main objective behind this project is to provide a user friendly environment to provide knowledge and give everyone a chance to learn, irrespective of where they are, provided they register themselves with the system.

The main features that the system provides can be made use of, once the registered people select their interested subject and take a starter test. This helps to establish incremental learning process. After taking this, based on their level of competence, they can take available tutorials, take online tests and also discuss an issue/topic by posting messages in the discussion forum. Along with this they can also take real time simulations of the most widely known competitive exams.

Project on E-learning Management System is to manage the details of Assignment, Student, TEACHER, QUIZ, QUESTION. It manages all the information about Assignment, CLASS, QUESTION, Assignment. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Assignment, Student, CLASS, TEACHER. It tracks all the details about the TEACHER, QUIZ, QUESTION.

Module

1. NORMAL USER

1.1 USER LOGIN

Description of feature

This feature used by the user to login into system. They are required to enter user id and password before they are allowed to enter the system .

The user id and password will be verified and if invalid id is there user is allowed to not enter the system.

- user id is provided when they register
- The system must only allow user with valid id and password to enter the system
- The system performs authorization process which decides what user level can acess to.
- The user must be able to logout after they finished using system.

1.2 REGISTER NEW USER

Description of feature

This feature can be performed by all users to register new user to create account.

Functional requirements

- System must be able to verify information
- System must be able to delete information if information is wrong

2. ADMIN

2.1 ADMIN LOGIN

Description of feature

This feature used by the user to login into system. They are required to enter user id and password before they are allowed to enter the system .

The user id and password will be verified and if invalid id is there user is allowed to not enter the system.

- The system must only allow user with valid id and password to enter the system
- The system performs authorization process which decides what user level can acess to.
- The user must be able to logout after they finished using system.

Focused Modules:

o Registration:-

In this, first the interested students get registered by selecting their desired username andpassword and by providing the necessary details. Then each user profile will be maintained which can be edited by the user when desired. Each person will register only one time. Details of each person along with their username and password is saved permanently in the database.

o Login:-

After providing the correct username and password, the user log's in to the e-Learning system's homepage. There the user can select the available subjects to further learn about them. If user enter wrong username or password then they block their account temporary and after some security verification they will able to access their account.

o Homepage:-

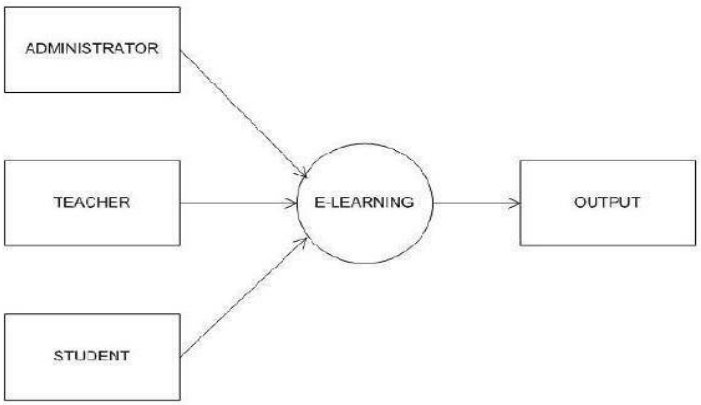
After providing the correct username and password, the user log's in to the e-Learning system's homepage. Here at the homepage there are many choice for user to learn different User can take following helps:-

1. Tutorials about the Lession.
2. View programs in the Lession.
3. Playing quiz about the Lession.
4. Download notes and programs.

o Quiz: -

user play the quiz on appropriate language and immediately take the result. On each question user get the marks, there is no negative marking in quiz.

1. DATA FLOW DIAGRAM



This shows the context level diagram of the system. The users of the system are administrator, teachers and students.

Hardware Requirement

Client Side

RAM	64 MB (Recommended)	
Fixed disk	200 MB free Space	
Pointing Device	Mouse or Compatible	
Connecting device	Modem or Phone(Recommended)	

Server Side

Computer	Intel® or Compatible Any Pentium Processor	
Memory (RAM)	1GB RAM minimum	
Hard Disk Space	Minimum Space for Software 80 GB Actual requirements will vary based on System configuration and the applications and features chosen to install as well as SQL Server Space Allocation	
External Stroage Device (Pen Drive)	Required for Installation	

Software Requirement

Client Side

Browser	Any Browser	

Server Side

Operating System	Windows XP SP2 or Above	
Front end	PHP 5.2.5 or Above	
Development Platform (IDE)	Visual Studio Code	
Backend	MySQL 5.0.51 or Above	
Server API	Apache/2.2.8 (Win32) DAV	

About Technology

The front end is designed using of html , Php ,css, Java script

- **HTML- Hyper Text Markup Languageis**
  the main markuplanguage for creating web pages and other information that can be displayed in a web browser.HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like <html>), within the web page content. HTML tags most commonly come in pairs like <h1> and </h1>, although some tags represent empty elements and so are unpaired, for example <img>. The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags web designers can add text, further tags, comments and other types of text-based content. The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages.

- **CSS- Cascading Style Sheets**
  is a style sheet language used fordescribing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL. CSS is a cornerstone specification of the web and almost all web pages use CSS style sheets to describe their presentation.CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts.

This separation can improve content accessibility, provide more flexibility and control in the specification. of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content (such as by allowing for table less web design)

.CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when14 read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. It can also be used to allow the web page to display differently depending on the screen size or device on which it is being viewed. While the author of a document typically links that document to a CSS file, readers can use a different style sheet, perhaps one on their own computer, to override the one the author has specified. However if the author or the reader did not link the document to a specific style sheet the default style of the browser will be applied.CSS specifies a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called cascade, priorities or weights are calculated and assigned to rules, so that the results are predictable.

- **js- JavaScript**

is a dynamic computer programminglanguage. It is most commonly used as part of web browsers, whose implementations allow client- side scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed. It is also being used in server-side programming, game development and the creation of desktop and mobile applications. JavaScript is a prototype-based scripting language with dynamic typing and has first-class functions. Its syntax was influenced by C. JavaScript copies many names and naming conventions from Java, but the two languages are otherwise unrelated and have very different semantics. The key design principles within JavaScript are taken from the Self and Scheme programming languages. It is a multi- paradigm language, supporting object-oriented, imperative, and functional programming styles. The application of JavaScript to use outside of web pages—for example, in PDF documents, site-specific browsers, and desktop widgets—is also significant. Newer and faster JavaScript VMs and platforms built upon them (notably Node.js) have also increased the popularity of JavaScript for server-side web applications. On the client side, JavaScript was traditionally implemented as an interpreted language but just-in-time compilation is now performed by recent (post-2012) browsers.

- ## PHP – Hypertext PreProcessor

  PHP a server-side scripting language designed for webdevelopment but also used as a general-purpose programming language. PHP is now installed on more than 244 million websites and 2.1 million web servers. Originally created by Rasmus Lerdorf in 1995, Rasmus Lerdorf in 1995, the reference implementation of PHP is now produced by The PHP Group. While PHP originally stood for Personal Home Page, it now stands for PHP: HypertextPreprocessor, a recursive backronym.PHP code is interpreted by a webserver with a PHP processor module, which generates the resulting web page: PHP commands can be embedded directly into an HTML source document rather than calling an external file to process data. It has also evolved to include a command-line interface capability and can be used in standalone graphical applications. PHP is free software released under the PHP License. PHP can be deployed on most web servers and also as a standalone shell on almost every operating system and platform, free of charge.

- ## MySQL DataBase

  ("My S-Q-L", officially, but also called "My Sequel") is (as ofJuly 2013) the world's second most widely used open-source relational database management system (RDBMS). It is named after co-founder Michael Widenius daughter, My. The SQL phrase stands for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation .MySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack (and other 'AMP' stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python." Free-software-open source projects that require a full-featured database management system often use MySQL. For commercial use, several paid editions are available, and offer additional functionality. Applications which use MySQL databases

  include: TYPO3, MODx, Joomla, WordPress, phpBB, MyBB, Drupal and other software. MySQL is also used in many high-profile, large-scale websites, including Wikipedia, Google (though not for searches), Facebook, Twitter, Flickr, and YouTube

Online E-Learning

AN ISO 9001 TO 2015
C/No : 19ZEZAO210Q

Wap Institute

AN INTERNATIONAL BRAND OF SOFTWARE ENGINEERING EDUCATION

ACCREDITED BY UNITED ACCREDITATION FOUNDATION

CERTIFICATION IN SHORT TERM COURSE

This is to certify that Mr./Miss/Mrs ..... Aditi Tiwari .....

S/o, D/o, W/o ..... Angad Tiwari ..... has successfully

completed & passed the online training entitled ..... PHP with project .....

..... E Learning Portal ..... conducted from ... 10.01.2021 ...

to ... 10-06-2021 ..... his/her per[illegible] has been grade ..... A .....

Reg/No : ..... WP46265426 .....

S/No : ..... WP_SE_WD/230 .....

WAP INSTITUTE
AN ISO 9001 TO 2015
POWERED BY- SWEETU'S MEDIA

QUALITY CERTIFICATION BMG

This certificate is intellectual property of Wap Institute and can be maintained through surveillance and renewal audits.

Certificate should be returned to Wap Institute in case of non compliance of certification procedure.

Authenticity & status of this certificate can be verified at **www.wapinstitute.com**

UNITED ACCREDITATION FOUNDATION UAF

nand vihar colony, mithanpur, muzaffarpur
bihar 842001 cell : +91 8889426143

AN ISO 9001 TO 2015
C/No : 19ZEZAO210Q

Wap Institute

AN INTERNATIONAL BRAND OF SOFTWARE ENGINEERING EDUCATION

ACCREDITED BY UNITED ACCREDITATION FOUNDATION

INTERNSHIP ACCEPTANCE LETTER

This is to certify that Mr./Miss/Mrs ..... Aditi Tiwari .....

S/o, D/o, W/o .....Angad Tiwari..... has started

industrial Internship as a WEb Developer Intern from the date of ..10.01.2021.

in out Organization. Your futies and assignments for this position are as

developer on project titled .....E-Learning Portal.....

Reg/No : .....WP46265426.....

S/No : .....WP_SE_WD/230.....

WAP INSTITUTE
AN ISO 9001 TO 2015
POWERED BY- SWEETU'S MEDIA

QUALITY CERTIFICATION BMG

This certificate is intellectual property of Wap Institute and can be maintained through surveillance and renewal audits.

Certificate should be returned to Wap Institute in case of non compliance of certification procedure.

Authenticity & status of this certificate can be verified at **www.wapinstitute.com**

UNITED ACCREDITATION FOUNDATION UAF

nand vihar colony, mithanpur, muzaffarpur
bihar 842001 cell : +91 8889426143

Online e-Learning

(Web Based System)

A Major Project Report submitted to

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

in partial fulfillment of the requirements for the award of

Degree of

MASTER OF COMPUTER APPLICATION

in

JABALPUR ENGINEERING COLLEGE

by

Aditi Tiwari (0201CA181001)

Under the guidance of

Mr. Rajkumar Parihar

(WAP Institute)

MCA Sixth Semester

Session: 2020-2021

Department of Computer Science & Engineering

Jabalpur Engineering College, Jabalpur

(Madhya Pradesh)

JABALPUR ENGINEERING COLLEGE

DECLARATION

Student is by declare that this Project Report tittled

Online e-Learning

(Web Based System)

Submitted in partial fulfillment for the award of "MASTER of COMPUTER APPLICATION" is a result of authentic analysis and the research undertaken by us. This same will be used only and only for the academic purpose and noting other than this.

Aditi Tiwari
0201CA181001

JABALPUR ENGINEERING COLLEGE

ACKNOWLEDGEMENT

The completion of any interdisciplinary project depends upon co-operation, co-ordination and combined effort of several sources of knowledge, energy and time. Hence we approach this matter of acknowledgement through these lines trying our best to give credit wherever it is due.

We are extremely thankful to Dr. Samar Upadhyay [HOD] it would be impossible for us to carry out this project without their continuous guidance and support.

We should also like to extend our thanks to other teachers for helping us to understand the basic system.

It is our proud privilege to express our hear full gratitude and renewable, regard for their abounding and aable guidance inspiration and contractive criticism the tenure of project work,

Submitted by:
Aditi Tiwari
0201CA181001

JABALPUR ENGINEERING COLLEGE

CERTIFICATE

This is to certify that student of Master of Computer Application at **JABALPUR ENGINEERING COLLEGE** as has completed the project entitled.

Online e-Learning

(Web Based System)

We are submitting the project in partial fulfillment of the Degree of MASTER OF COMPUTER APPLICATION from **JABALPUR ENGINEERING COLLEGE** for academic year **2020-21.**

(Internal Examiner)

(External Examiner)

JABALPUR ENGINEERING COLLEGE

CERTIFICATE

This is to certify that student of Master of Computer Application at **JABALPUR ENGINEERING COLLEGE** as has completed the project entitled.

Online e-Learning

(Web Based System)

We are submitting the project in partial fulfillment of the Degree of MASTER OF COMPUTER APPLICATION from **JABALPUR ENGINEERING COLLEGE** for academic year **2020-21.**

Dr. Samar Upadhayay
(Head of the Department)

TABLE OF CONTENTS

CONTENTS	Page No.
Title Page	I
Declaration	II
Acknowledgement	III
Certificates	IV
Chapter-1	
Introduction of the Project E-learning Management System	9
1.1. Abstract of the Project……	10
1.2 Scope of the Project……	11
1.3 Reports of the E-Learning……	12
1.4 Modules of the E-Learning……	13
1.5 Objective……	14
Chapter-2	
Requirement Engineering	15
2.1 Software Requirement Specification ……	15
2.2 Requirements of the Project……	15
Chapter-3	
Analysis & Design	16
3.1 System Design of E-learning ……	16
3.2 General task involved in the design process ……	16
3.3 Project Category……	21
3.4 Project Planning……	22
3.5 Steps for successful software project……	23
3.6 Project Scheduling……	24
3.7 Project Profile……	25
3.8 Use Case Model of the Project……	26

3.9 Dataflow Diagram……	28
3.10 E-R Diagram……	30
Chapter-4	
Construction	32
4.1 Implementation and Software Specification Testing……	32
4.2 Programming and testing……	32
4.3 Steps of software testing……	34
4.4 System Testing……	35
4.5 Existing System of E-learning……	36
4.6 Proposed System of E-learning……	36
4.7 Description of Technology Used……	37
4.8 Tools And Platform……	40
Chapter-5	
Conclusion & Future Works	41
5.1 Conclusion of the Project E-learning ……	41
5.2 Future Scope of the Project ……	42
Chapter-6	
Snapshots	43
6.2 Snapshots of the project ……	43
References	58
Notes	59

Chapter-1
Introduction of the Project E-learning Management System

The "E-learning Management System" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and in some cases reduce the hardships faced by this existing system. Moreover this system is designed for the particular need of the company to carry out operations in a smooth and effective manner.

The application is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus by this all it proves it is user-friendly. E- Learning Management System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources.

Every organization, whether big or small, has challenges to overcome and managing the information of Student, Assignment, QUIZ, CLASS, and QUESTION. Every E-learning Management System has different Assignment needs, therefore we design exclusive employee management systems that are adapted to your managerial requirements. This is designed to assist in strategic planning, and will help you ensure that your organization is equipped with the right level of information and details for your future goals. Also, for those busy executive who are always on the go, our systems come with remote access features, which will allow you to manage your workforce anytime, at all times. These systems will ultimately allow you to better manage resources.

1.1 Abstract of the Project E-learning Management System:

The purpose of E-learning Management System is to automate the existing manual system by the help of computerized equipment's and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with. E-learning Management System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information**.**

Functionalities provided by E-learning Management System:

- Provides the searching facilities based on various factors. Such as Assignment, TEACHER, QUIZ, QUESTION.
- E-learning Management System also manage the CLASS details online for QUIZ details, QUESTION details, Assignment.
- It tracks all the information of Student, CLASS, and QUIZ etc
- Manage the information of Student.
- Shows the information and description of the Assignment, TEACHER
- To increase efficiency of managing the Assignment, Student.
- It deals with monitoring the information and transactions of QUIZ.
- Manage the information of Assignment
- Editing, adding and updating of Records is improved which results in proper resource management of Assignment data.
- Manage the information of QUIZ
- Integration of all records of QUESTION.

1.2 Scope of the project E-learning Management System:

It may help collecting perfect management in details. In a very short time, the collection will be obvious, simple and sensible. It will help a person to know the management of passed year perfectly and vividly. It also helps in current all works relative to E-learning Management System. It will be also reduced the cost of collecting the management & collection procedure will go on smoothly.

Our project aims at Business process automation, i.e. we have tried to computerize various processes of E-learning Management System.

- In computer system the person has to fill the various forms & number of copies of the forms can be easily generated at a time.
- In computer system, it is not necessary to create the manifest but we can directly print it, which saves our time.
- To assist the staff in capturing the effort spent on their respective working areas.
- To utilize resources in an efficient manner by increasing their productivity through automation.
- The system generates types of information that can be used for various purposes.
- It satisfy the user requirement
- Be easy to understand by the user and operator
- Be easy to operate Have a good user interface
- Be expandable
- Delivered on schedule within the budget.

1.3 Reports of E-learning Management System:

- It generates the report on Assignment, Student, and CLASS
- Provide filter reports on TEACHER, QUIZ, and QUESTION
- You can easily export PDF for the Assignment, CLASS, and QUIZ
- Application also provides excel export for Student, TEACHER, QUESTION
- You can also export the report into csv format for Assignment, Student, and QUESTION.

1.4 Modules E-learning Management System:

- Assignment Management Module: Used for managing the Assignment details.
- QUESTION Module: Used for managing the details of QUESTION
- CLASS Module: Used for managing the details of CLASS
- Student Management Module: Used for managing the information and details of the Student.
- TEACHER Module: Used for managing the TEACHER details
- QUIZ Module: Used for managing the QUIZ information’s
- Login Module: Used for managing the login details
- Users Module: Used for managing the users of the system

Focused Modules:

- **Registration:-**

In this, first the interested students get registered by selecting their desired username and password and by providing the necessary details.

Then each user profile will be maintained which can be edited by the user when desired. Each person will register only one time. Details of each person along with their username and password is saved permanently in the database.

- **Login:-**

After providing the correct username and password, the user log's in to the e-Learning system's homepage. There the user can select the available subjects to further learn about them. If user enter wrong username or password then they block their account temporary and after some security verification they will able to access their account.

- **Homepage:-**

After providing the correct username and password, the user log's in to the e-Learning system's homepage. Here at the homepage there are many choice for user to learn different Lession and Exercises line languages like C, C++ ,Java etc.

User can take following helps:-

1. Tutorials about the Lession.
2. View programs in the Lession.
3. Playing quiz about the Lession.
4. Download notes and programs.

- **Quiz: -** user play the quiz on appropriate language and immediately take the result. On each question user get the marks, there is no negative marking in quiz.

1.5 Objective

The main objective behind this project is to provide a user friendly environment to provide knowledge and give everyone a chance to learn, irrespective of where they are, provided they register themselves with the system.

The main features that the system provides can be made use of, once the registered people select their interested subject and take a starter test. This helps to establish incremental learning process. After taking this, based on their level of competence, they can take available tutorials, take online tests and also discuss an issue/topic by posting messages in the discussion forum. Along with this they can also take real time simulations of the most widely known competitive exams.

Project on E-learning Management System is to manage the details of Assignment, Student, TEACHER, QUIZ, QUESTION. It manages all the information about Assignment, CLASS, QUESTION, Assignment. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Assignment, Student, CLASS, TEACHER. It tracks all the details about the TEACHER, QUIZ, QUESTION.

Chapter-2
Requirement Engineering

2.1 Software Requirement Specification

The Software Requirements Specification is produced at the culmination of the analysis task. The function and performance allocated to software as part of system engineering are refined by establishing a complete information description, a detailed functional and behavioral description, an indication of performance requirements and design constraints, appropriate validation criteria, and other data pertinent to requirements.

2.2 The proposed system has following requirements:

- System needs store information about new entry of Assignment.
- System needs to help the internal staff to keep information of Student and find them as per various queries.
- System need to maintain quantity record.
- System need to keep the record of TEACHER.
- System need to update and delete the record.
- System also needs a search area.
- It also needs a security system to prevent data.

Chapter-3
Analysis & Design

3.1 System Design of E-learning Management System

In this phase, a logical system is built which fulfils the given requirements. Design phase of software development deals with transforming the client's requirements into a logically working system. Normally, design is performed in the following in the following two steps:

1. **Primary Design Phase:**

In this phase, the system is designed at block level. The blocks are created on the basis of analysis done in the problem identification phase. Different blocks are created for different functions emphasis is put on minimizing the information flow between blocks. Thus, all activities which require more interaction are kept in one block.

2. **Secondary Design Phase:**

In the secondary phase the detailed design of every block is performed.

3.2 General task involved in the design process are following:

A. Design various blocks for overall system processes.

B. Design smaller, compact and workable modules in each block.

C. Design various database structures.

D. Specify details of programs to achieve desired functionality.

E. Design the form of inputs, and outputs of the system.

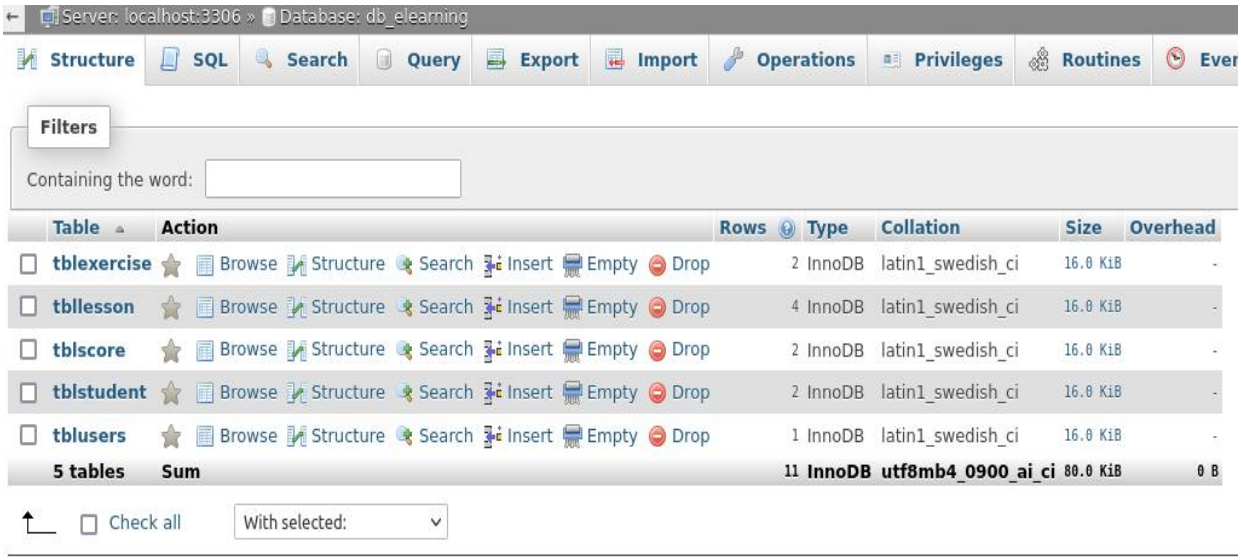
F. Perform documentation of the design.

G. System reviews.

VARIOUS TABELS TO MAINTAIN INFORMATION

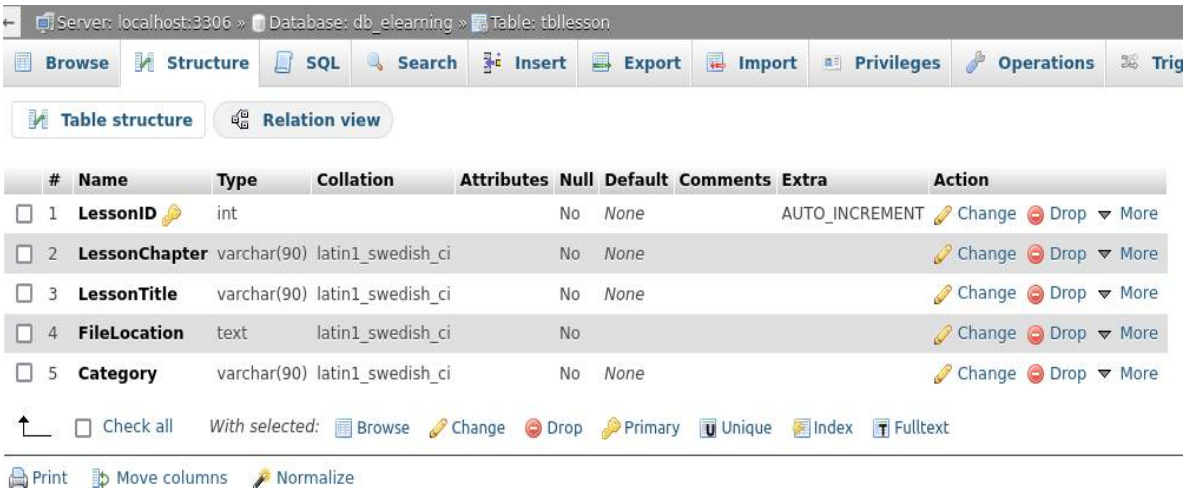
Tables_in_db_elearning

- tblexercise
- tbllesson
- tblscore
- tblstudent
- tblusers

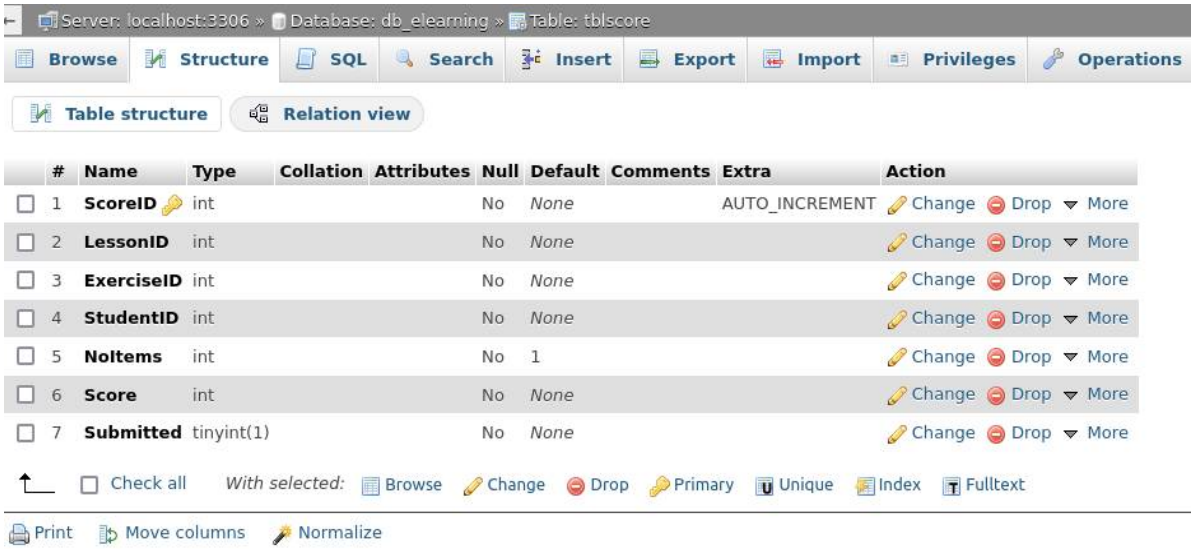


- **Exercise** Table from Database

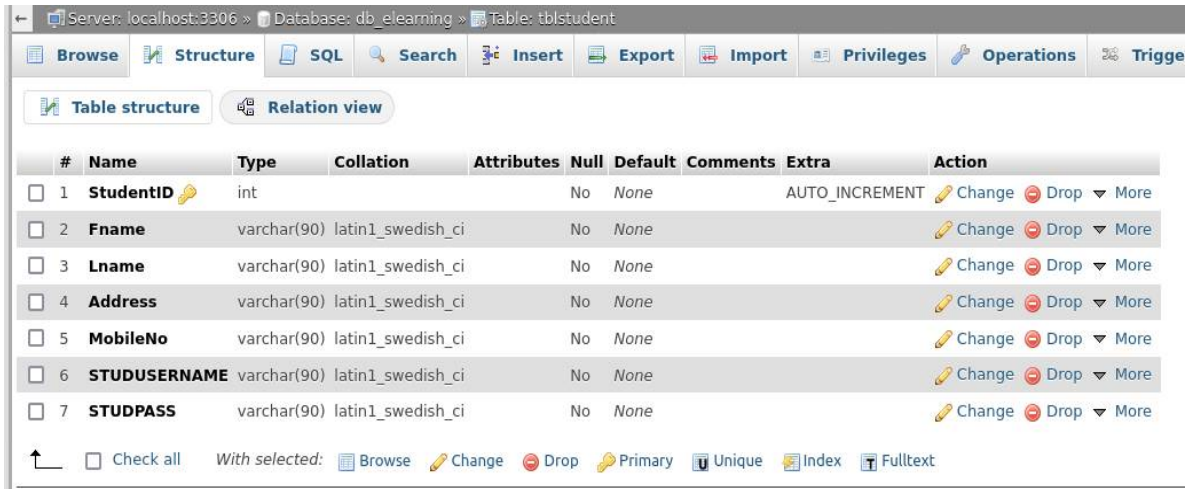
- **Lession** from Database



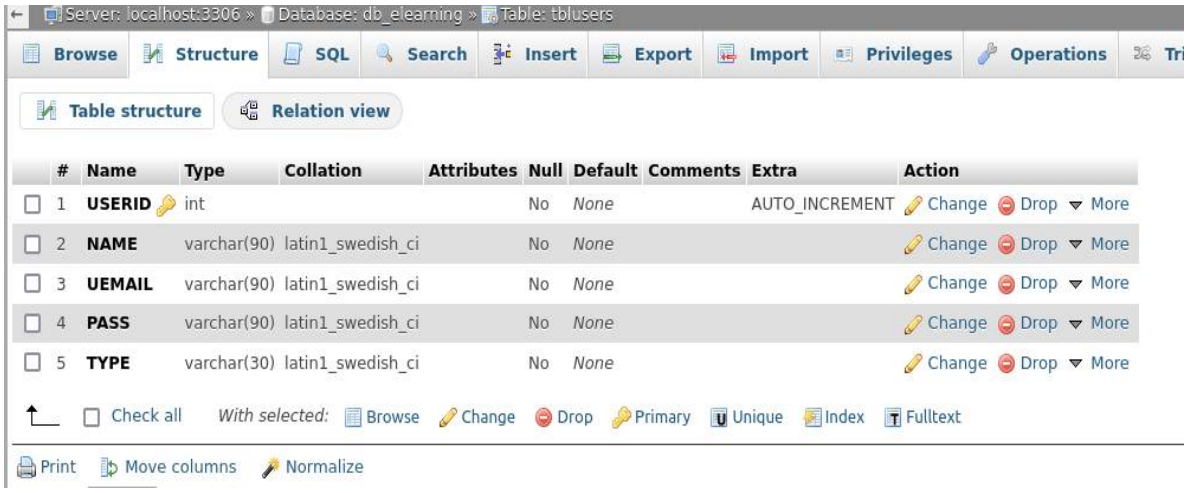
- **Score** Table from Database



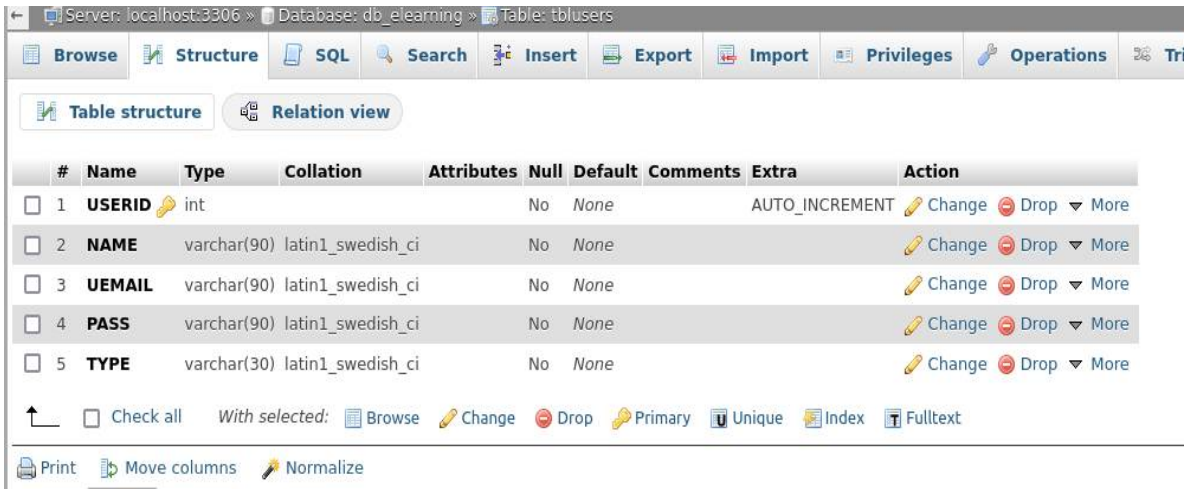
- **Student** from Database



- **Admin** Table from Database



- **Users (Teachers)** from Database



3.3 Project Category

- **Relational Database Management System (RDBMS):** This is an RDBMS based project which is currently using MySQL for all the transaction statements. MySQL is an open source RDBMS System.

- **Brief introduction about RDBMS:**

A relational database management system (RDBMS) is a database management system (DBMS) that is based on the relational model as invented by E. F. Codd, of IBM's San Jose Research Laboratory. Many popular databases currently in use are based on the relational database model. RDBMSs have become a predominant choice for the storage of information in new databases used for financial records, manufacturing and logistical information, personnel data, and much more since the 1980s. Relational databases have often replaced legacy hierarchical databases and network databases because they are easier to understand and use. However, relational databases have been challenged by object databases, which were introduced in an attempt to address the object-relational impedance mismatch in relational database, and XML databases.

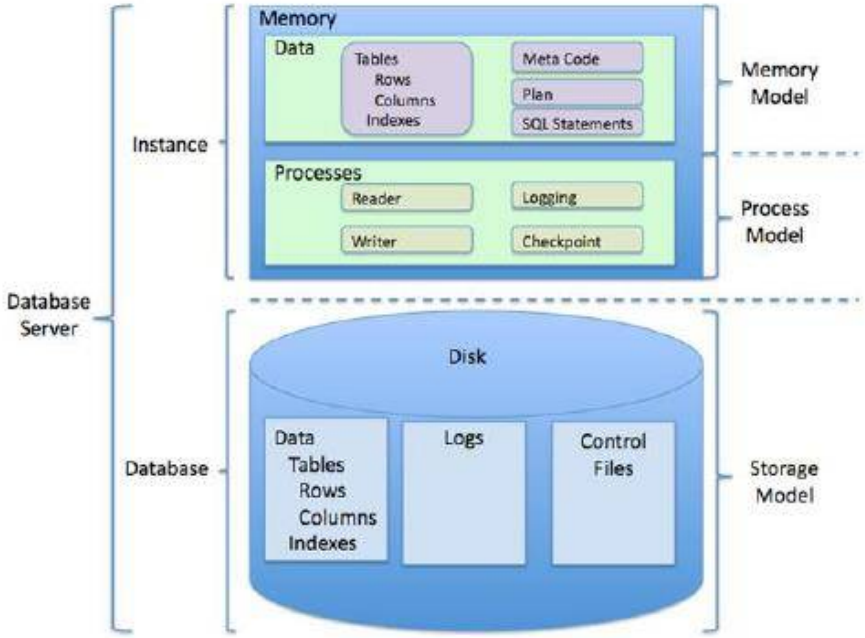


Figure 1 Database Server Architecture

3.4 Project Planning:

Software project plan can be viewed as the following:

1) **Within the organization:** How the project is to be implemented? What are various constraints (time, cost, and staff)? What is market strategy?

2) **With respect to the customer:** weekly or timely meetings with the customer with presentation on status reports. Customer's feedback is also taken and further modification and developments are done. Project milestones and deliverables are also presented to the customer.

3.5 **For a successful software project the following steps can be followed:**

- Select a project

  Identifying project's aims and objectives.

  Understanding requirements and specification

  Methods Of analysis, design and implementation

  Testing techniques

  Documentation

- Project milestones and deliverables
- Budget allocation
  - Exceeding limits within control
- Project Estimates
  - Cost
  - Time
  - Size of code
  - Duration
- Resource Allocation
  - Hardware
  - Software
  - Previous relevant project information
  - Digital Library
- Risk Management
  - Risk avoidance
  - Risk detection

3.6 Project Scheduling:

An elementary Gantt chart or Timeline chart for the development plan is given below. The plan explains the tasks versus the time (in weeks) they will take to complete.

Table 1 Project Schedule

	January				February				March			
Requirement Gathering												
Analysis												
Design												
Coding												
Testing												
Implement												
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4

W*i*'s are weeks of the months, for i =1, 2, 3, 4

3.7 Project Profile

There has been continuous effort to develop tools, which can ease the process of software development. But, with the evolving trend of different programming paradigms today's software developers are really challenged to deal with the changing technology. Among other issues, software re-engineering is being regarded as an important process in the software development industry. One of the major tasks here is to understand software systems that are already developed and to transform them to a different software environment. Generally, this requires a lot of manual effort in going through a program that might have been developed by another programmer.

This project makes a novel attempt to address the issue of program analysis and generation of diagrams, which can depict the structure of a program in a better way. Today, UML is being considered as an industrial standard for software engineering design process. It essential provides several diagramming tools that can express different aspects/ characteristics of program such as

Use cases: Elicit requirement from users in meaningful chunks. Construction planning is built around delivering some use cases n each interaction basis for system testing.

Class diagrams: shows static structure of concepts, types and class. Concepts how users think about the world; type shows interfaces of software components; classes shows implementation of software components.

State diagram: show how single object behaves across many use cases.

Activity Diagram: shows behavior with control structure. Can show many objects over many uses, many object in single use case, or implementation methods encourage parallel behavior etc. The end-product of this project is a comprehensive tool that can parse any vb.net program and extract most of the object oriented features inherent in the program such as polymorphism, inheritance, encapsulation and abstraction.

- **What is UML?**

UML stands for Unified Modeling Language is the successor to the wave of Object Oriented Analysis and Design (OOA&D) methods that appeared in the late 80's. It most directly unifies the methods of Booch, Rumbaugh (OMT) and Jacobson. The UML is called a modeling language, not a method. Most methods consist at least in principle, of both a modeling language and a process. The Modeling language is that notation that methods used to express design.

- **Class-Diagram:**

The class diagram technique has become truly central within object- oriented methods. Virtually every method has included some variation on this technique. Class diagram is also subject to the greatest range of modeling concept. Although the basic elements are needed by everyone, advanced concepts are used less often.

A class diagram describes the types of objects in the system and the various kinds of static relationship that exist among them. There are two principal kinds of static relationship:

- Association
- Subtype

Class diagram also show the attributes and operations of a class and the constraints that apply to the way objects are connected.

3.8 Use Case Model of the Project:

- The use case model for any system consists of "use cases". Use cases represent different ways In which the system can be used by the user. A simple way to find all the use case of a system is to ask the questions "What the user can do using the system?" The use cases partition the system behavior into transactions such that each transaction performs some useful action from the users' point of view.

- The purpose of the use case to define a piece of coherent behavior Without revealing the internal structure of the system. An use case typically represents a sequence of interaction between the user and the system. These interactions consists of one main line sequence is represent the normal interaction between the user and the system. The use case model is an important analysis and design artifact (task).Use cases can be represented by drawing a use case diagram and writing an accompany text elaborating the drawing.

- In the use case diagram each use case is represented by an ellipse with the name of use case written inside the ellipse. All the ellipses of the system are enclosed with in a rectangle which represents the system boundary. The name of the system being module appears inside the rectangle. The different users of the system are represented by using stick person icon. The stick person icon is normally referred to as an Actor. The line connecting the actor and the use cases is called the communication relationship. When a stick person icon represents an external system it is annotated by the stereo system>>.

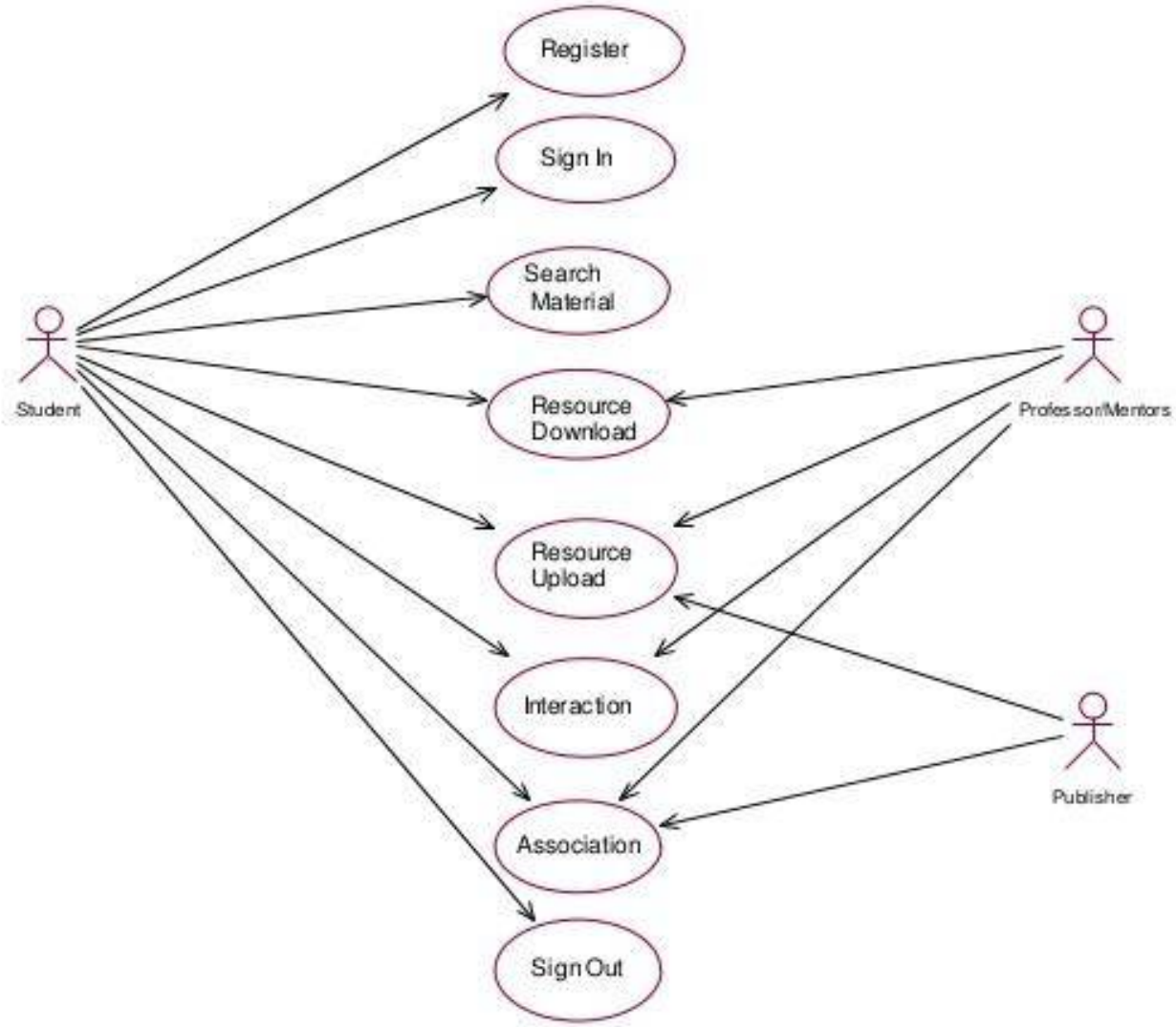


Figure 2 : Use Case Diagram

3.9 Dataflow Diagram:

Data flow diagram IS the starting point of the design phase that functionally decomposes the requirements specification. A DFD consists of a series of bubbles joined by lines. The bubbles represent data transformation and the lines represent data flows in the system. A DFD describes what data flow rather than how they are processed, so it does not hardware, software and data structure.

A data-flow diagram (DFD) is a graphical representation of the "flow" of data through an DFDs can also be used for the of processing (structured design). A data flow diagram (DFD) is a significant modeling technique for analyzing and construct ng information processes. DFD literally means an illustration that explains the course or movement of information in a process. DFD illustrates this flow of Information in a process based on the inputs and outputs. A DFD can be referred to as a Process Model. The data flow diagram is a graphical description of a system's data and how to Process transform the data is known as Data Flow Diagram (DFD). Unlike details flow chart, DFDs don't supply detail descriptions of modules that graphically describe a system's data and how the data interact with the system. Data flow diagram number of symbols and the following symbols are of by DeMarco.

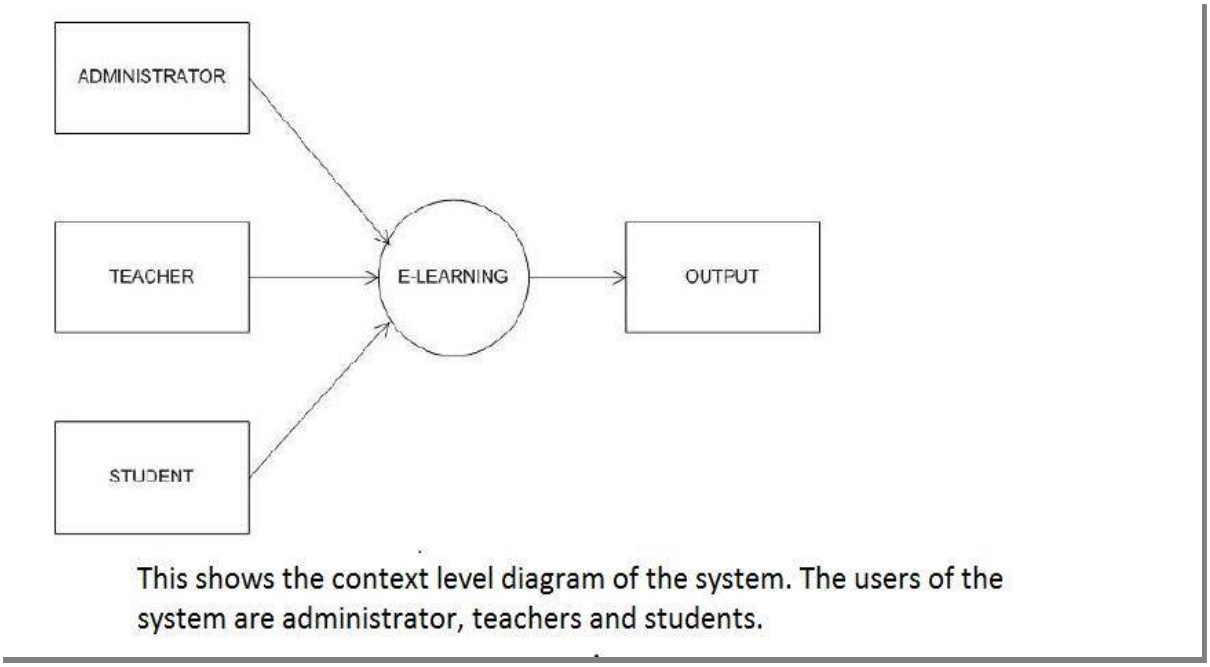


Figure 3 Data Flow Diagram

This basic DFD can be then disintegrated to a lower level diagram demonstrating smaller steps exhibiting details of the system that IS being modeled. On a DFD, data Items flow from an external data source or an internal data store to an internal data store or an external data sink, via an internal process. It is common practice to draw a mntext-level data flow diagram first, which shows the interaction between the system and external agents, which act as data sources and data sinks. On the context diagram (also known as the Level O DFD'), the system's Interactions With the outside world are modeled purely in terms of data flows across the system boundary. The context diagram shows the entire system as a Single process, and gives no clues as to its internal organization.

This context-level DFD is next "exploded", to produce a Level 1 DFD that shows some of the detail of the system being modeled. The Level 1 DFD shows how the system is divided into sub-systems (processes), each of which deals with one or more of the data flows to or from an external agent, and which together provide all of the functionality of the system as a whole. The level 1 DFD is further speeded and split into more descriptive and detailed description about the project as level 2 DFD. The level 2 DFD can be a number of data flows which will finally show the entire description of the software project.

3.10 About ER Diagram:

Entity Relationship Diagram: E-R Model is a popular high level conceptual data model. This model and its variations are frequently used for the conceptual design of database application and many database design tools employ its concept.

A database that to an E-R diagram can be represented by a collecton of tables in the relational system. The mapping of E-R diagram to the entities are:

- Attributes
- Relations
    - Many-to-many
    - Many-to-one
    - One-to-many
    - One-to-one
- Weak entities
- Sub-type and super-type

2

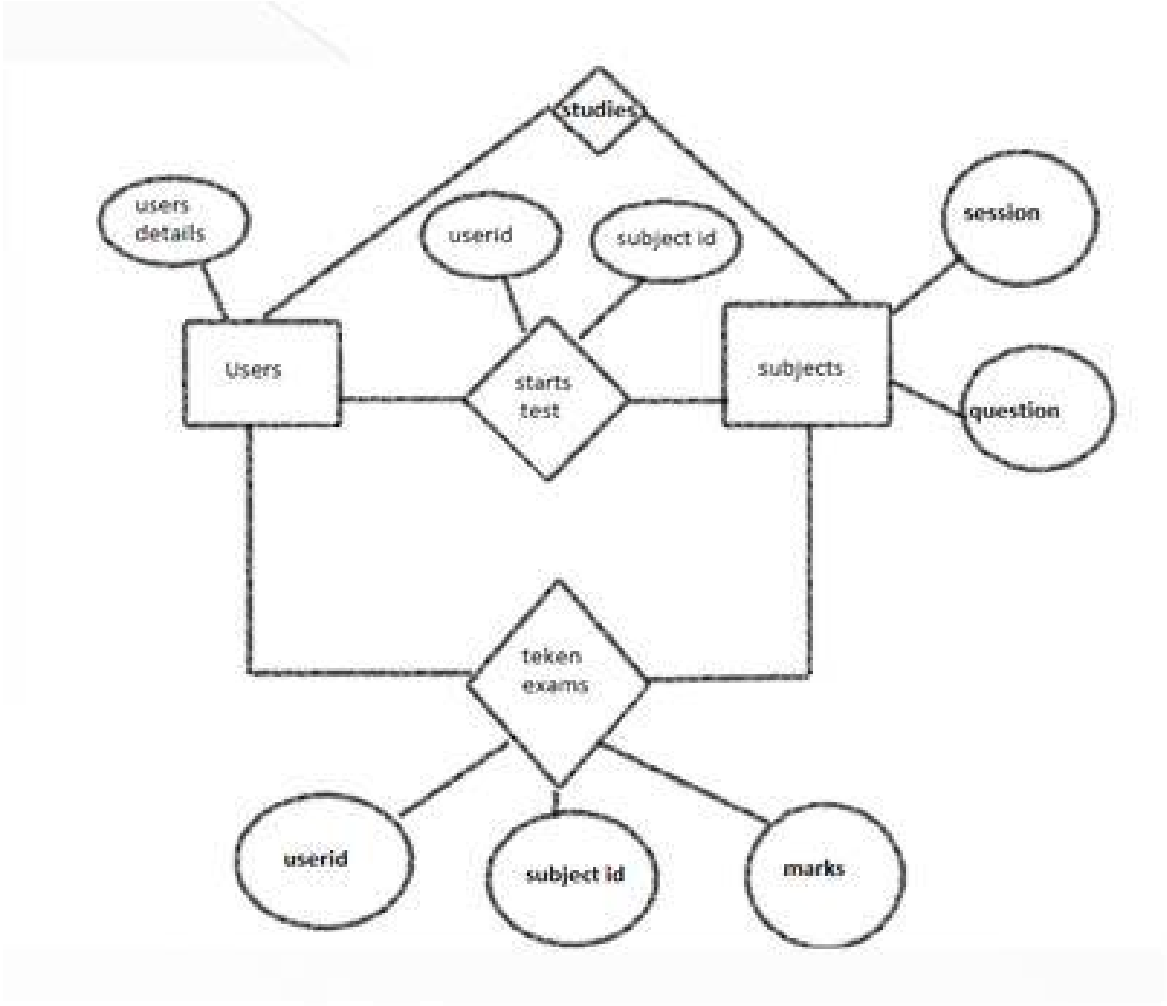


Figure 4: E-R Diagram

Chapter-4
Construction

4.1 Implementation and Software Specification Testing

Detailed Design of Implementation: This phase of the systems development life cycle refines hardware and software specifications, establishes programming plans, trains users and implements extensive testing procedures, to evaluate design and operating specifications and/or provide the basis for further modification.

- **Technical Design**: This activity builds upon specifications produced during new system design, adding detailed technical specifications and documentation.

- **Test Specifications and Planning**: This activity prepares detailed test specifications for individual modules and programs, job streams, subsystems, and for the system as a whole.

4.2 Programming And Testing

This activity encompasses actual development, writing, and testing of program units or modules.

User Training

This activity encompasses writing user procedure manuals, materials, conducting training programs, and testing procedures.

- **Acceptance Test**

A final procedural review to demonstrate a system and secure user approval before a system becomes operational.

- **Installation phase**

In this phase the new Computerized system is installed, the conversion to new procedures is fully implemented, and the potential of the new system is explored.

- **System Installation**

The process of starting the actual use of a system and training user personnel in its operation.

- **Review Phase**

This phase evaluates the successes and failures during a systems development project, and to measure the results of a new Computerized Transystem in terms of benefits and savings projected at the start of the project.

- **Development Recap**

A review of a project immediately after completion to find successes and potential problems in future work.

- **Post-Implementation Review**

A review, conducted after a new system has been in operation for some time, to evaluate actual system performance against original expectations and projections for cost-benefit improvements. Also identifies maintenance projects to enhance or improve the system.

4.3 THE STEPS IN THE SOFTWARE TESTING

The steps involved during Unit testing are as follows:

a) Preparation of the test cases.

b) Preparation of the possible test data with all the validation checks.

c) Complete code review of the module.

d) Actual testing done manually.

e) Modifications done for the errors found during testing.

f) Prepared the test result scripts.

- **The unit testing done included the testing of the following items:**

1. Functionality of the entire module/forms.

2. Validations for user input.

3. Checking of the Coding standards to be maintained during coding.

4. Testing the module with all the possible test data.

5. Testing of the functionality involving all type of calculations etc.

6. Commenting standard in the source files.

After completing the Unit testing of all the modules, the whole system is integrated with all its dependencies in that module. While System Integration, We integrated the modules one by one and tested the system at each step. This helped in reduction of errors at the time of the system testing.

- **The steps involved during System testing are as follows:**

  Integration of all the modules/forms in the system.

  Preparation of the test cases.

  Preparation of the possible test data with all the validation checks.

  Actual testing done manually.

  Recording of all the reproduced errors.

  Modifications done for the errors found during testing.

  Prepared the test result scripts after rectification of the errors.

4.4 The System Testing done included the testing of the following items:

1. Functionality of the entire system as a whole.
2. User Interface of the system.
3. Testing the dependent modules together with all the possible test data scripts.
4. Verification and Validation testing.
5. Testing the reports with all its functionality.

.

4.5 Existing System of E-learning Management System:

In the existing system the exams are done only manually but in proposed system we have to computerize the exams using this application.

Lack of security of data.

More man power.

Time consuming.

Consumes large volume of pare work.

Needs manual calculations.

No direct role for the higher officials

4.6 Proposed System of E-learning Management System:

The aim of proposed system is to develop a system of improved facilities. The proposed system can overcome all the limitations of the existing system. The system provides proper security and reduces the manual work.

Security of data.

Ensure data accuracy's.

Proper control of the higher officials.

Minimize manual data entry.

Minimum time needed for the various processing.

Greater efficiency.

Better service.

User friendliness and interactive.

Minimum time required.

4.7 Description of Technology Used:-

The front end is designed using of html , Php ,css, Java script

- **HTML- Hyper Text Markup Languageis**

  the main markuplanguage for creating web pages and other information that can be displayed in a web browser.HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like <html>), within the web page content. HTML tags most commonly come in pairs like <h1> and </h1>, although some tags represent empty elements and so are unpaired, for example <img>. The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags web designers can add text, further tags, comments and other types of text-based content. The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages.

- **CSS- Cascading Style Sheets**

  is a style sheet language used fordescribing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML

document, including plain XML, SVG and XUL. CSS is a cornerstone specification of the web and almost all web pages use CSS style sheets to describe their presentation.CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification. of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content (such as by allowing for table less web design)

.CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when14 read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. It can also be used to allow the web page to display differently depending on the screen size or device on which it is being viewed. While the author of a document typically links that document to a CSS file, readers can use a different style sheet, perhaps one on their own computer, to override the one the author has specified. However if the author or the reader did not link the document to a specific style sheet the default style of the browser will be applied.CSS specifies a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called cascade, priorities or weights are calculated and assigned to rules, so that the results are predictable.

- **js- JavaScript**

  is a dynamic computer programminglanguage. It is most commonly used as part of web browsers, whose implementations allow client- side scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed. It is also being used in server-side programming, game development and the creation of desktop and mobile applications. JavaScript is a prototype-based scripting language with dynamic typing and has first-class functions. Its syntax was influenced by C. JavaScript copies many names and naming conventions from Java, but the two languages are otherwise unrelated and have very different semantics. The key design principles within JavaScript are taken from the Self and Scheme programming languages. It is a multi-paradigm language, supporting object-oriented, imperative, and functional programming styles. The application of JavaScript to use outside of web pages—for example, in PDF documents, site-specific browsers, and desktop widgets—is also significant. Newer and faster JavaScript VMs and platforms built upon them (notably Node.js) have also increased the popularity of JavaScript for server-side web applications. On the client side, JavaScript was traditionally implemented as an interpreted language but just-in-time compilation is now performed by recent (post-2012) browsers.

- **PHP – Hypertext PreProcessor**

  PHP a server-side scripting language designed for webdevelopment but also used as a general-purpose programming language. PHP is now installed on more than 244 million websites and 2.1 million web servers. Originally created by Rasmus Lerdorf in 1995, Rasmus Lerdorf in 1995, the reference implementation of PHP is now produced by The PHP Group. While PHP originally stood for Personal Home Page, it now stands for PHP: HypertextPreprocessor, a recursive backronym.PHP code is interpreted by a webserver with a PHP processor module, which generates the resulting web page: PHP commands can be embedded directly into an HTML source document rather than calling an external file to process data. It has also evolved to include a command-line interface capability and can be used in standalone graphical applications. PHP is free software released under the PHP License. PHP can be deployed on most web servers and also as a standalone shell on almost every operating system and platform, free of charge.

- **MySQL DataBase**

  ("My S-Q-L", officially, but also called "My Sequel") is (as ofJuly 2013) the world's second most widely used open-source relational database management system (RDBMS). It is named after co-founder Michael Widenius daughter, My. The SQL phrase stands for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation .MySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack (and other 'AMP' stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python." Free-software-open source projects that require a full-featured database management system often use MySQL. For commercial use, several paid editions are available, and offer additional functionality. Applications which use MySQL databases

  include: TYPO3, MODx, Joomla, WordPress, phpBB, MyBB, Drupal and other software. MySQL is also used in many high-profile, large-scale websites, including Wikipedia, Google (though not for searches), Facebook, Twitter, Flickr, and YouTube

- **3.8 Tools And Platform**

Processor	Intel Core Processor or Better Performance
Operating System	Windoes Vista, Windows 7, Windows 10, Ubuntu
Memory	1 GB RAM or More
Hard Disk Space	Minimum 3 GB for DataBase Usages for Future
DataBase	MySQL

Chapter-5
Conclusion & Future Works

5.1 Conclusion of the Project E-learning Management System:

Our project is only a humble venture to satisfy the needs to manage their project work. Several user friendly coding have also adopted. This package shall prove to be a powerful package in satisfying all the requirements of the school. The objective of software planning is to provide a frame work that enables the manger to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses.

At the end it is concluded that we have made effort on following points...

A description of the background and context of the project and its relation to work already done in the area.

Made statement of the aims and objectives of the project.

The description of Purpose, Scope, and applicability.

We &fine the problem on which we are working in the project.

We describe the requirement Specifications of the system and the actions that can be done on these things.

We understand the problem domain and produce a model of the system, which describes operations that can be performed on the system.

We included features and operations in detail, including screen layouts.

We designed user interface and security issues related to system.

Finally the system is implemented and tested according to test cases.

5.2 Future Scope of the Project:

In a nutshell, it can be summarized that the future scope of the project circles around maintaining information regarding:

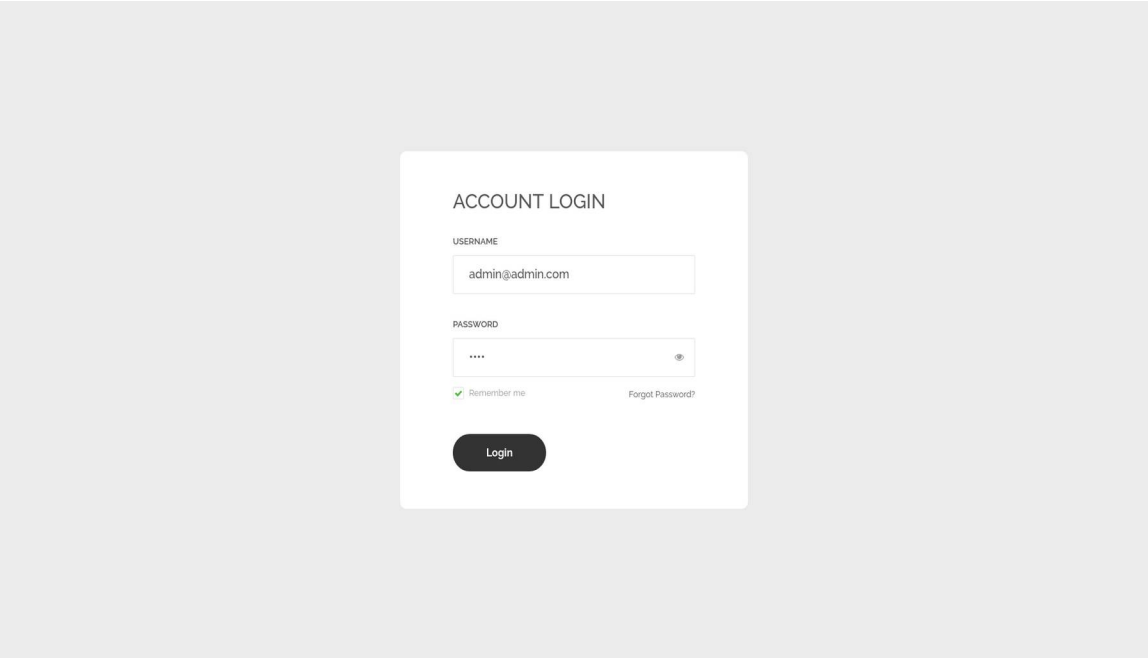
We can add printer in future.
We can give more advance software for E-learning Management System including more facilities
We will host the platform on online servers to make it accessible worldwide
Integrate multiple load balancers to distribute the loads of the system
Create the master and slave database structure to reduce the overload of the database queries
Implement the backup mechanism for taking backup of codebase and database on regular basis on different servers

The above mentioned points are the enhancements which can be done to increase the applicability and usage of this project. Here we can maintain the records of Assignment and Student. Also, as it can be seen that now-a-days the players are versatile, i.e. so there is a scope for introducing a method to maintain the E-learning Management System. Enhancements can be done to maintain all the Assignment, Student, TEACHER, QUIZ, QUESTION.

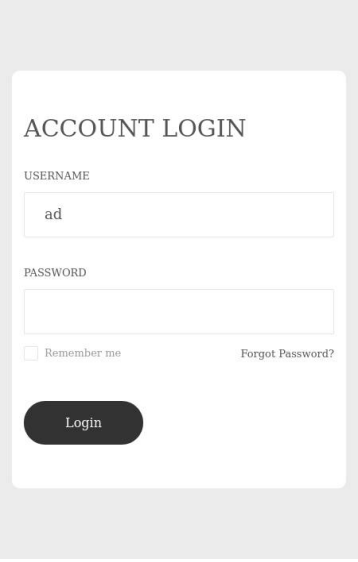
We have left all the options open so that if there is any other future requirement in the system by the user for the enhancement of the system then it is possible to implement them. ln the last we would like to thanks all the persons involved in the development of the system directly or indirectly. We hope that the project will serve its purpose for which it is develop there by underlining success of process.

6.2 Appendix A
<<Snapshots of the project>>

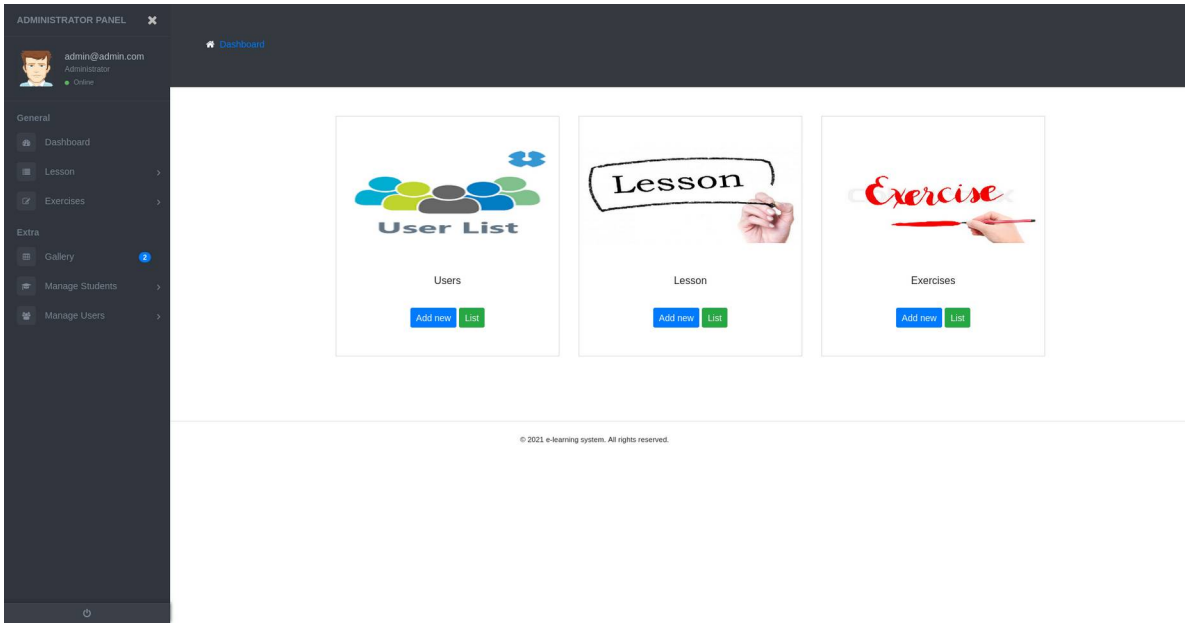
- Screenshot for **Login** (admin)



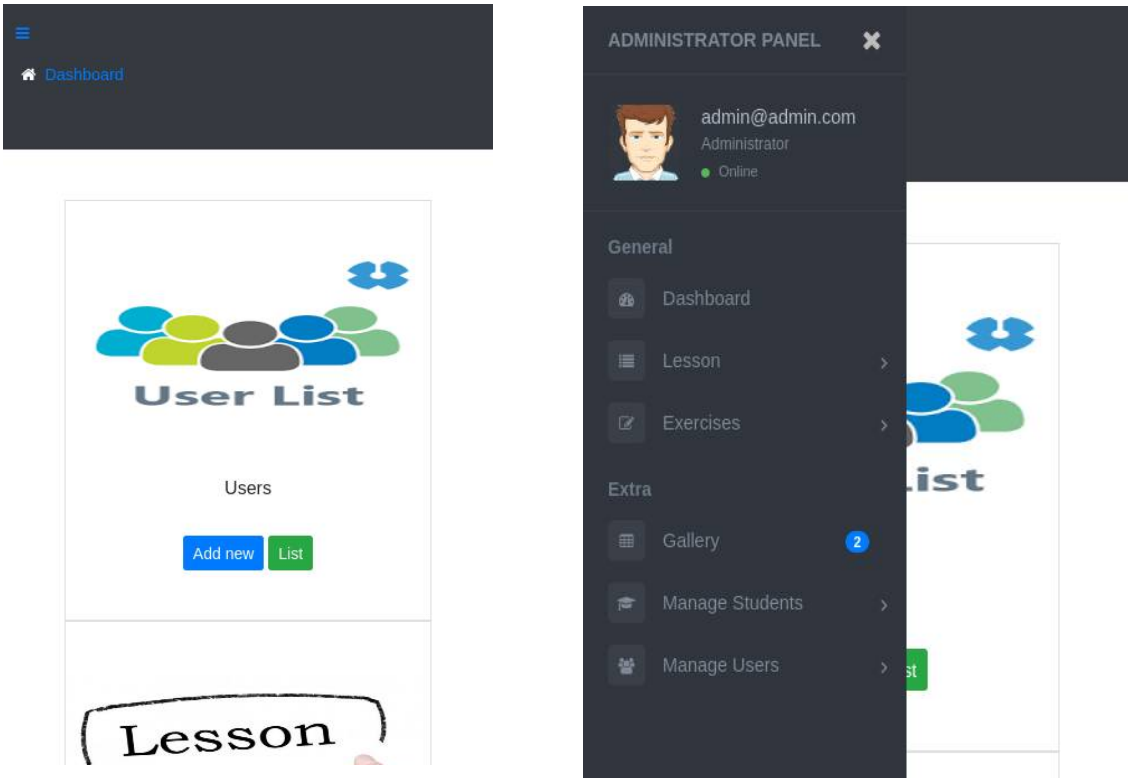
- Screenshot for **Login** on Phone (admin)



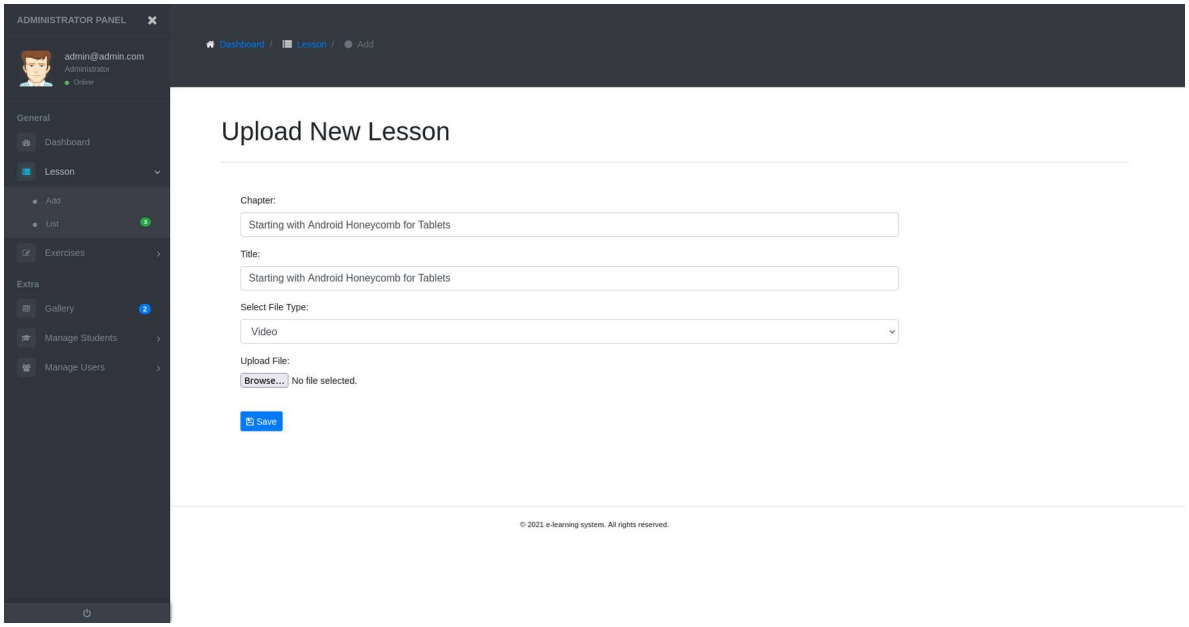
- Screenshot for **Login** (admin)



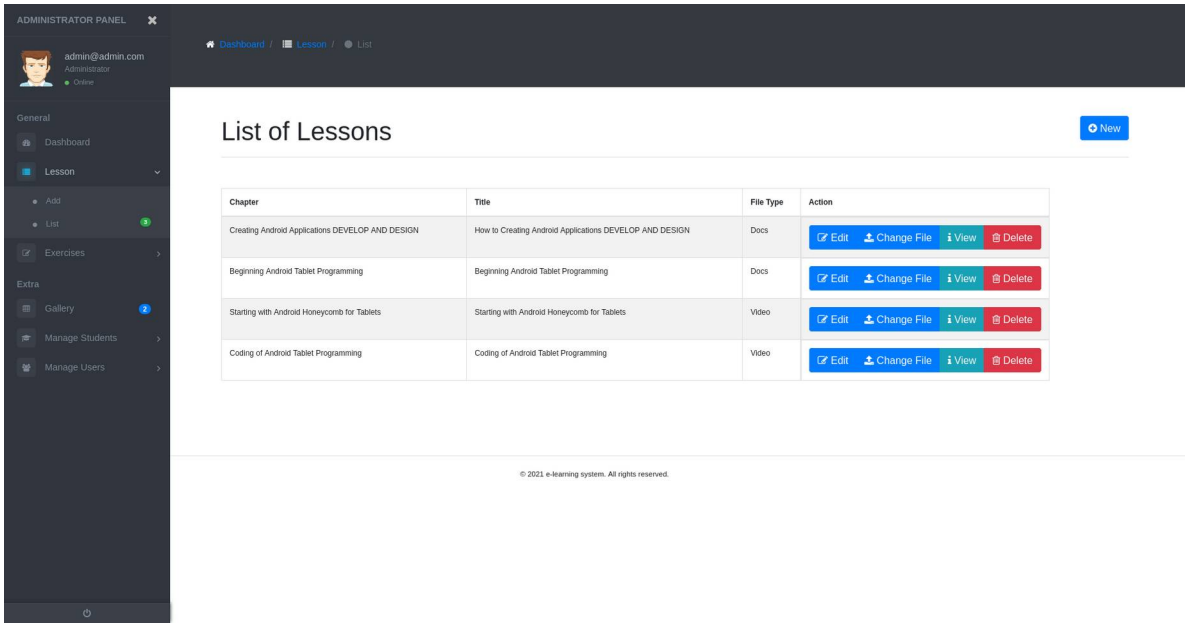
- Screenshot for **Dashboard** on Phone (admin)



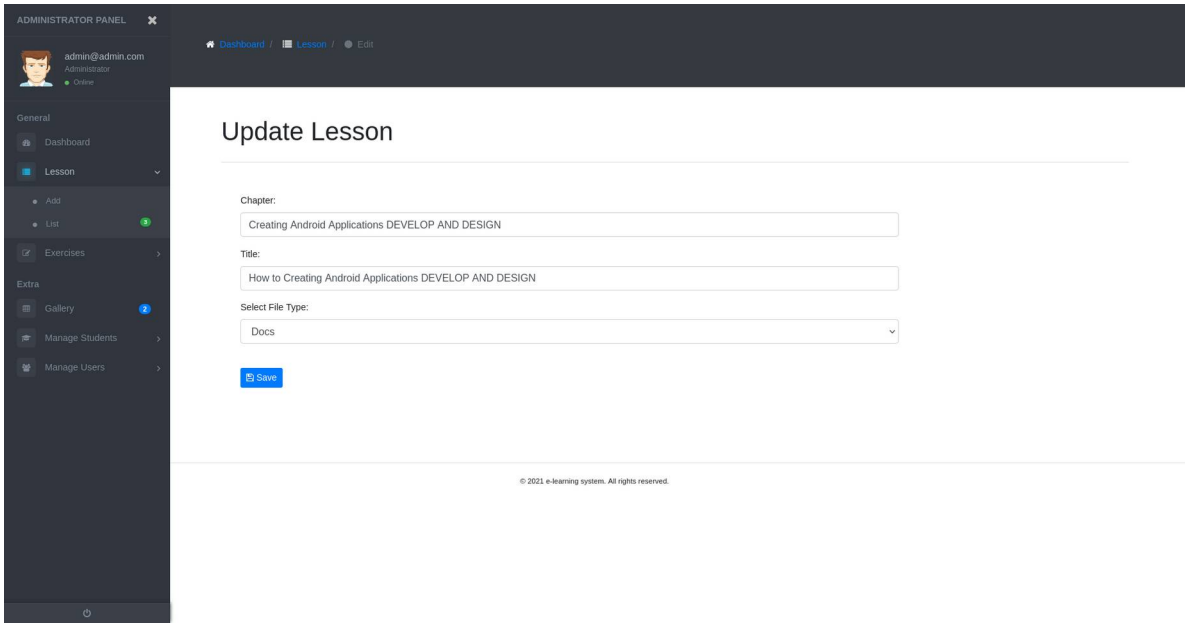
- Screenshot for **Login** (admin)



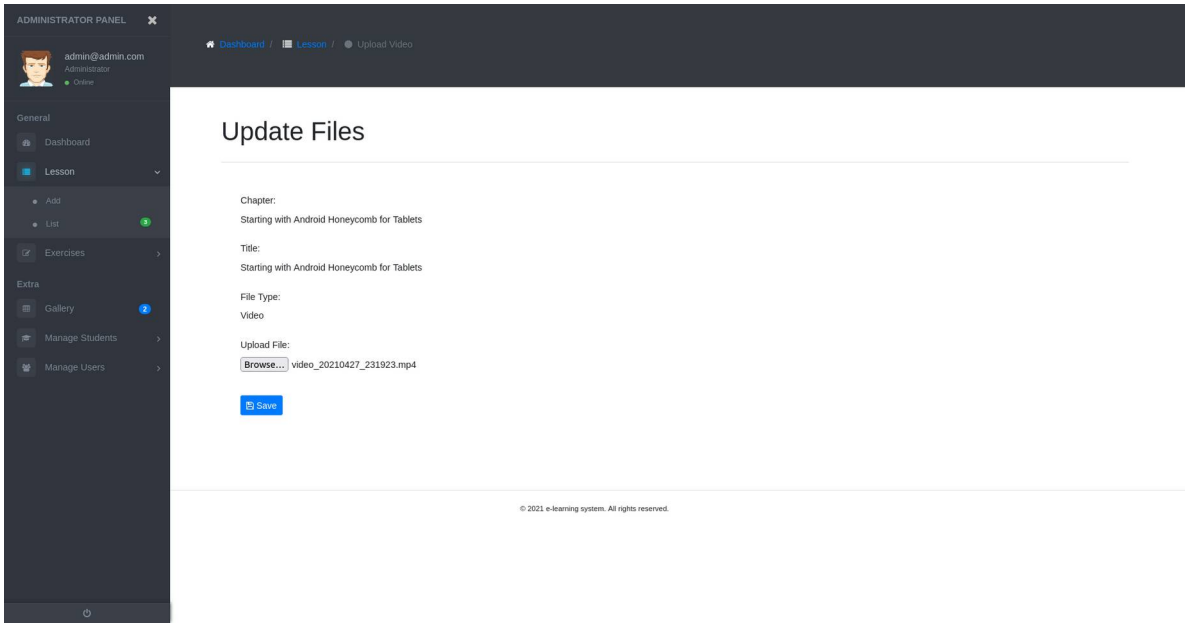
- Screenshot for **Dashboard** (admin)



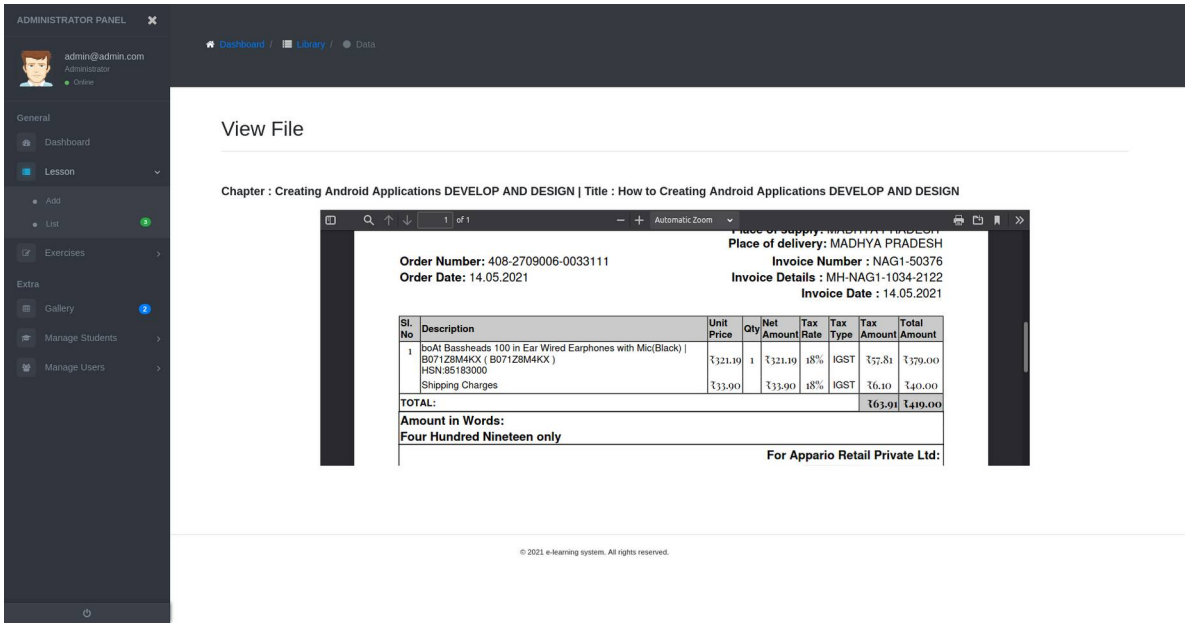
- Screenshot for **Login** (admin)



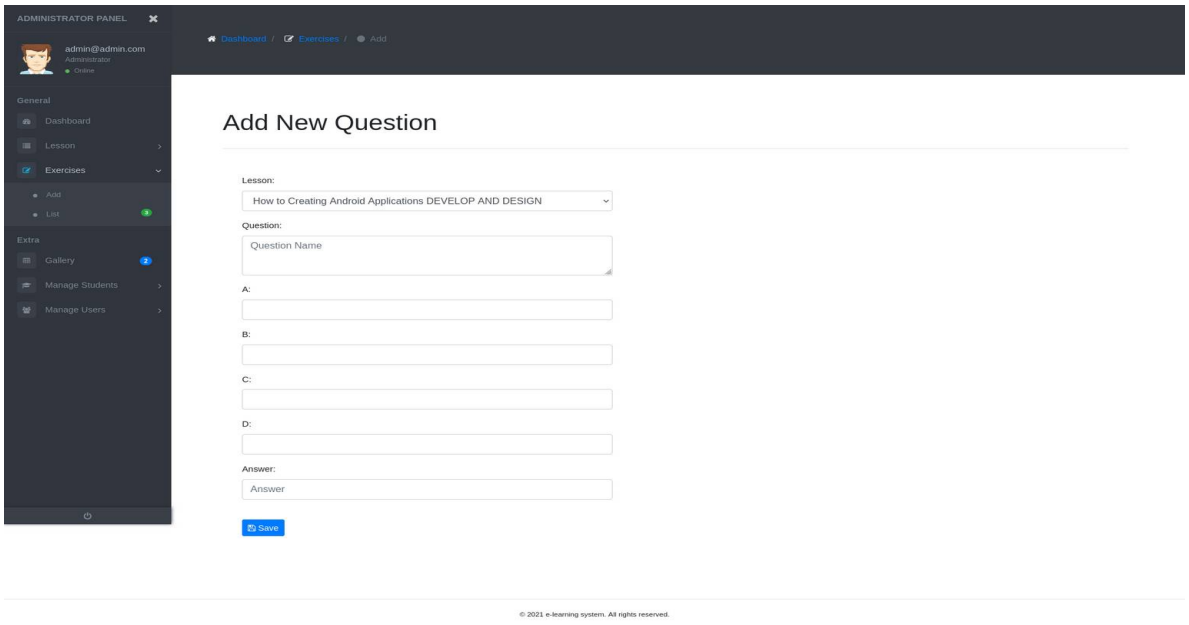
- Screenshot for **Dashboard** (admin)



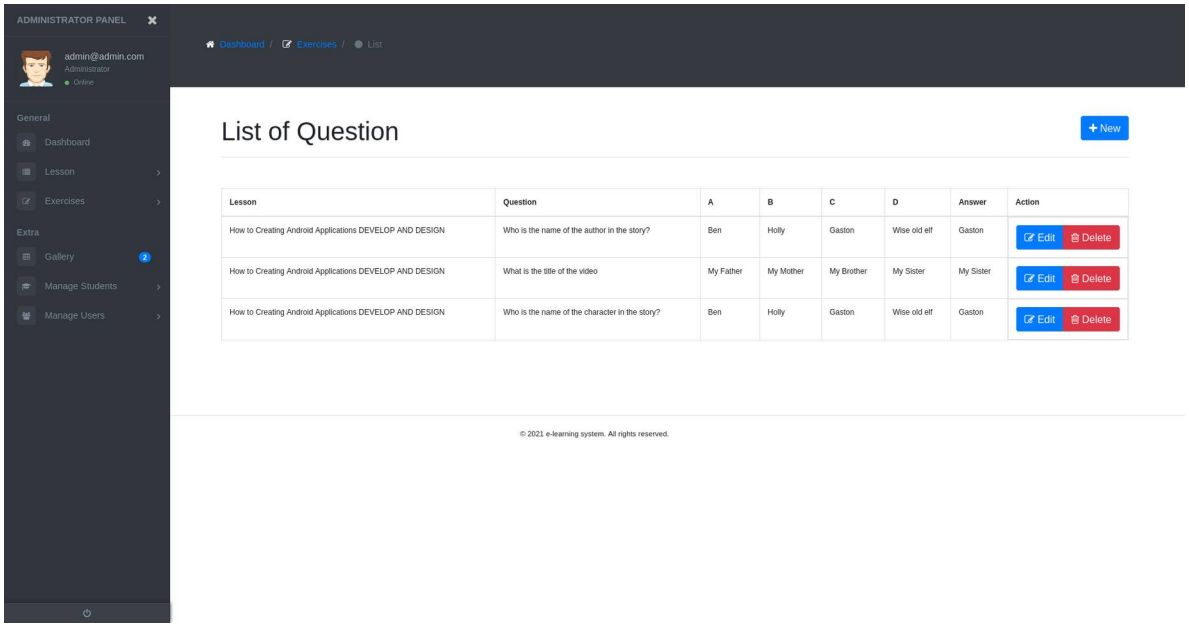
- Screenshot for **Login** (admin)



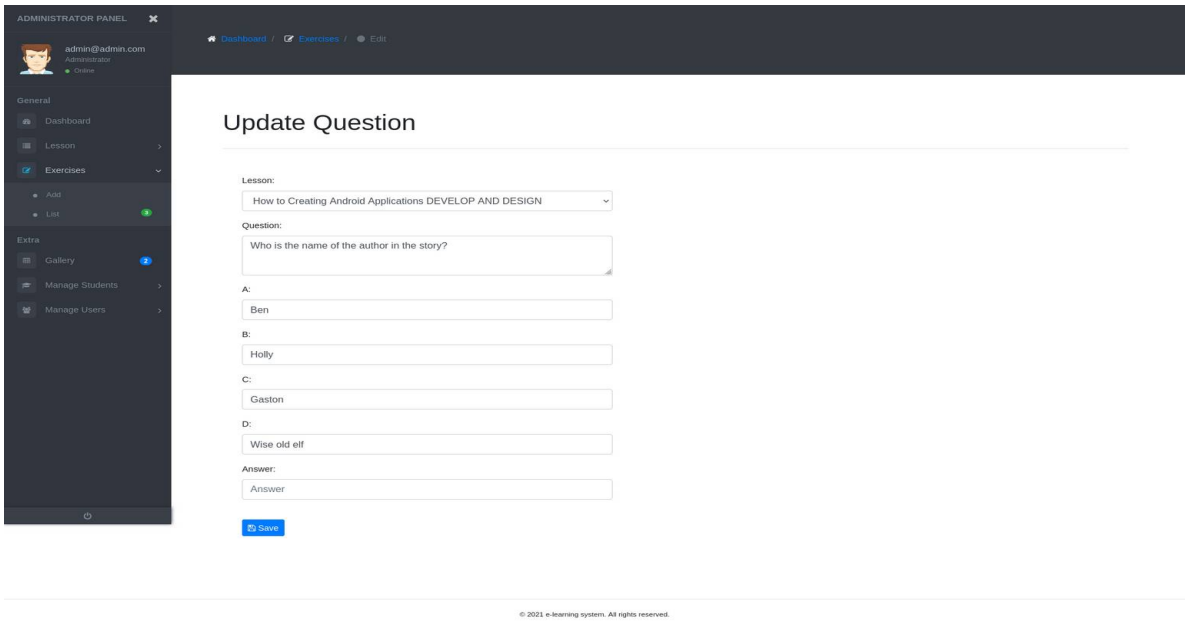
- Screenshot for **Dashboard** (admin)



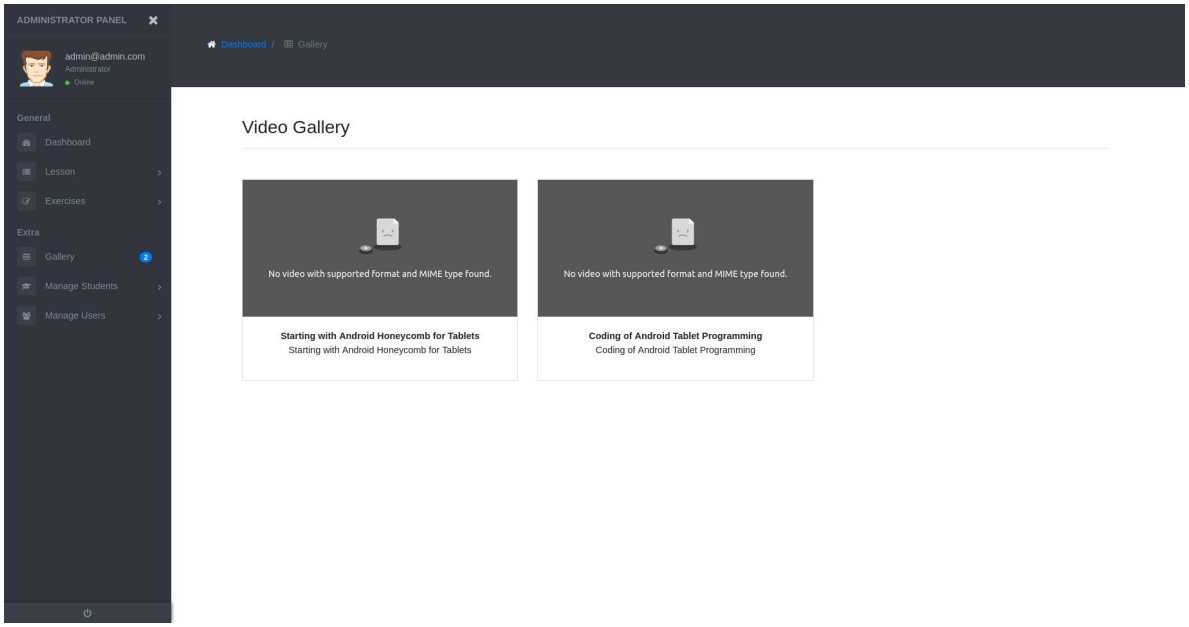
- Screenshot for **Login** (admin)



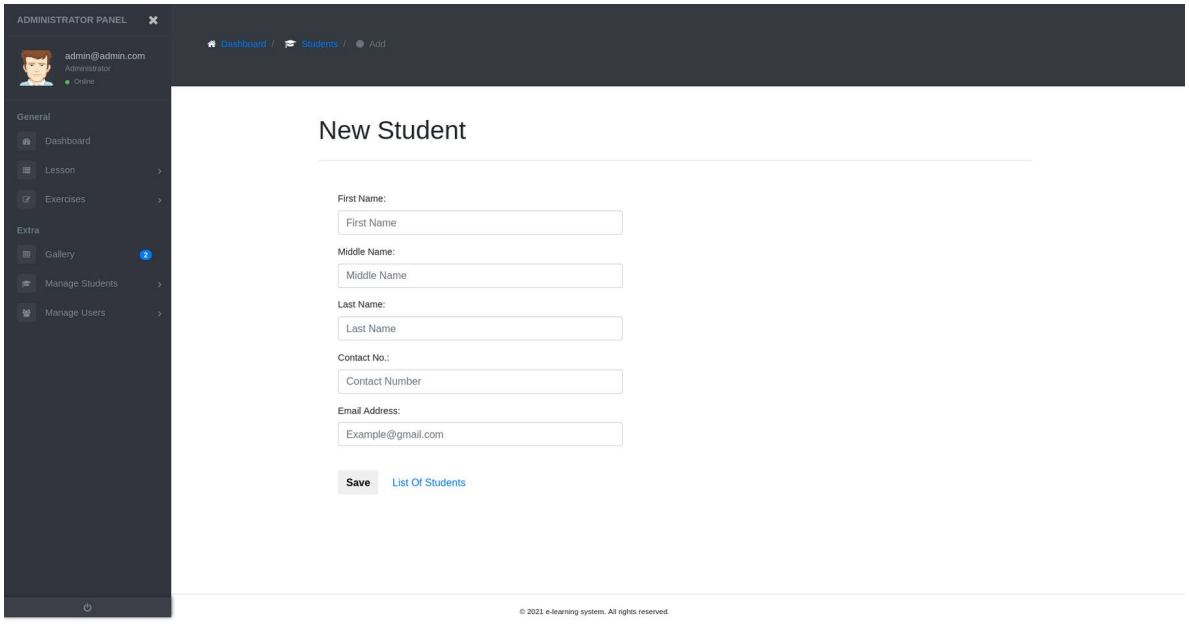
- Screenshot for **Dashboard** (admin)



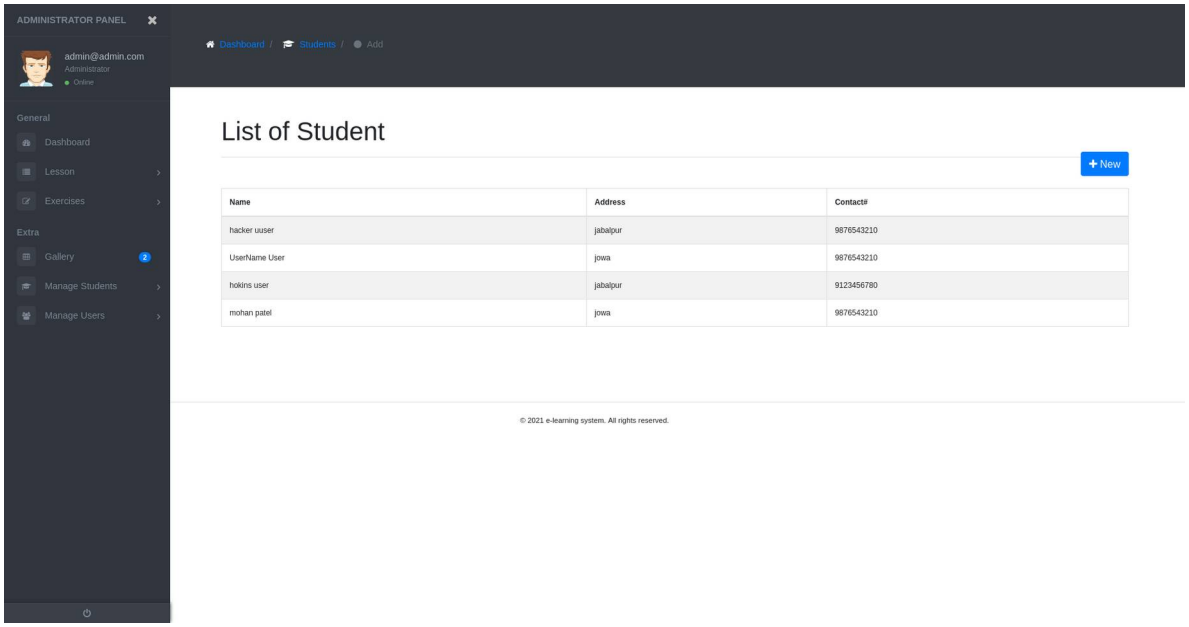
- Screenshot for **Login** (admin)



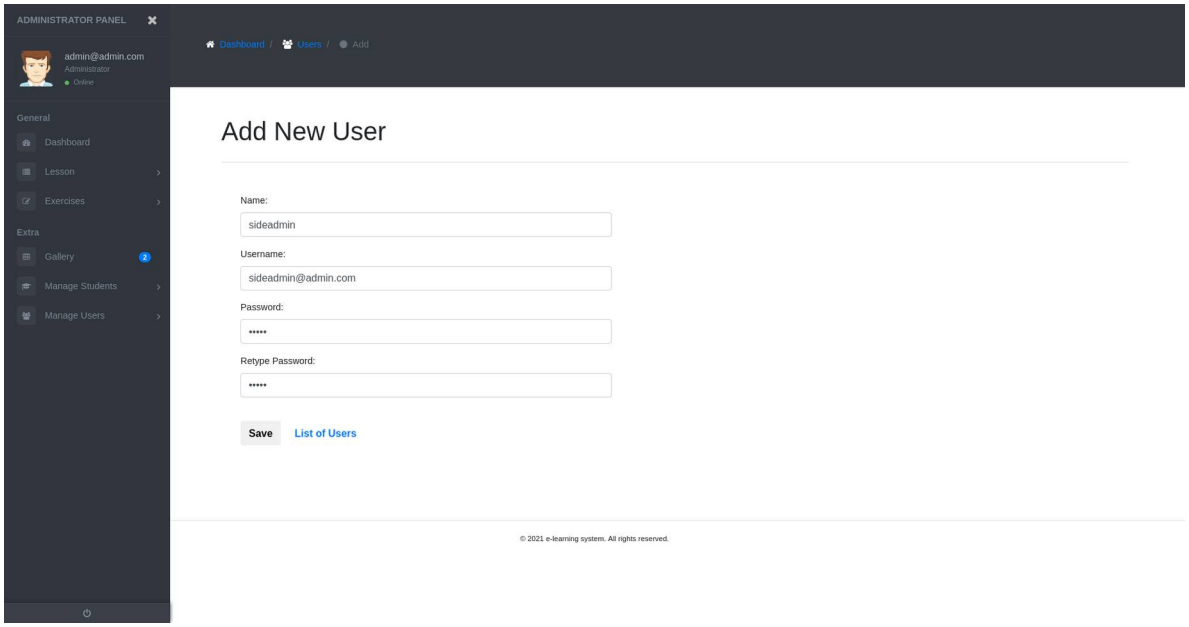
- Screenshot for **Dashboard** (admin)



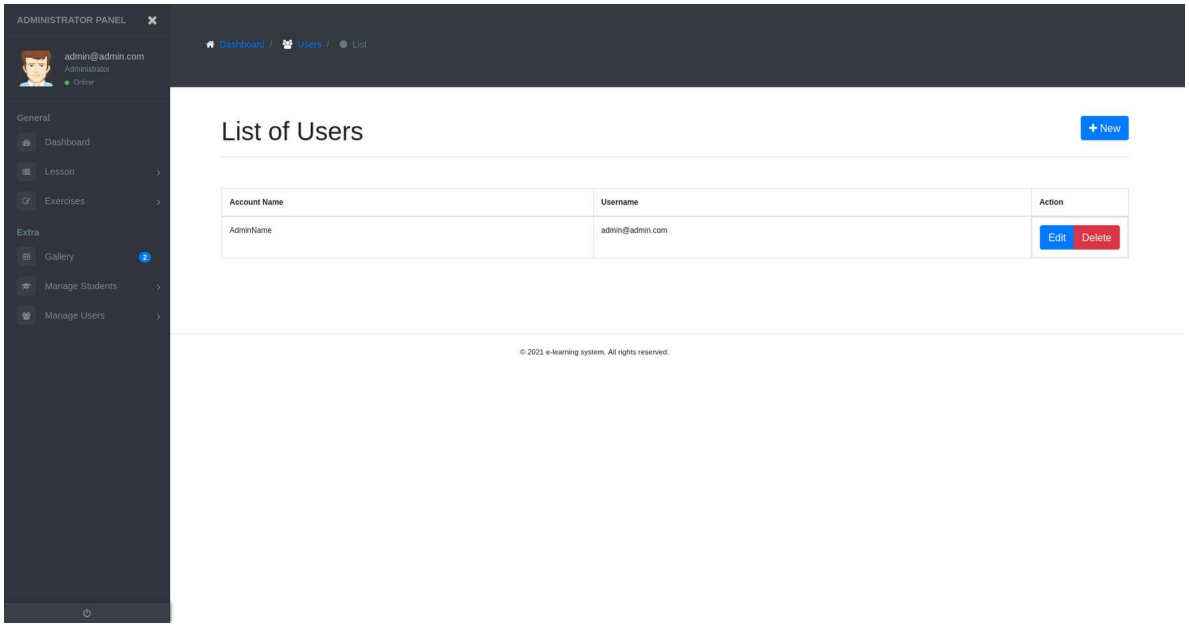
- Screenshot for **Login** (admin)



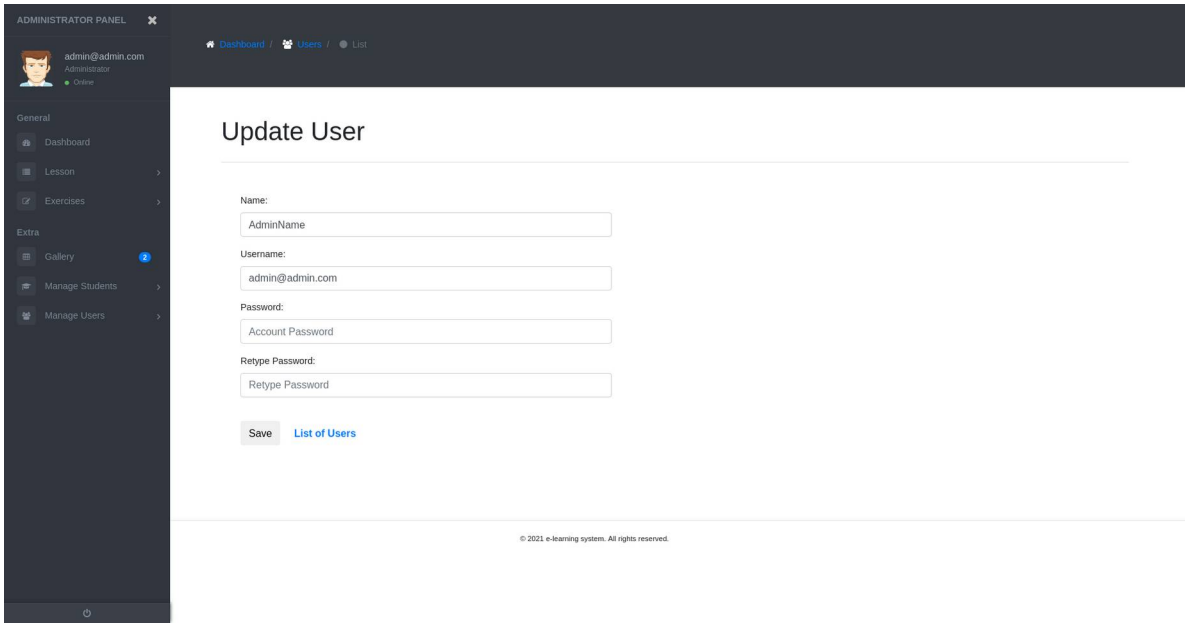
- Screenshot for **Dashboard** (admin)



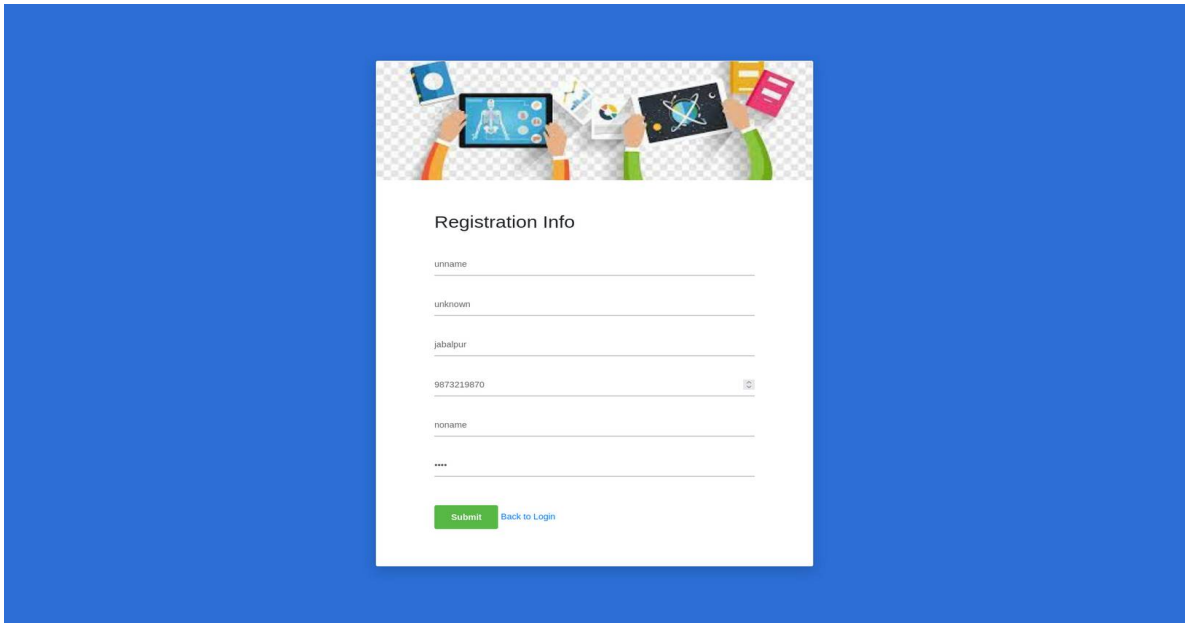
- Screenshot for **Login** (admin)



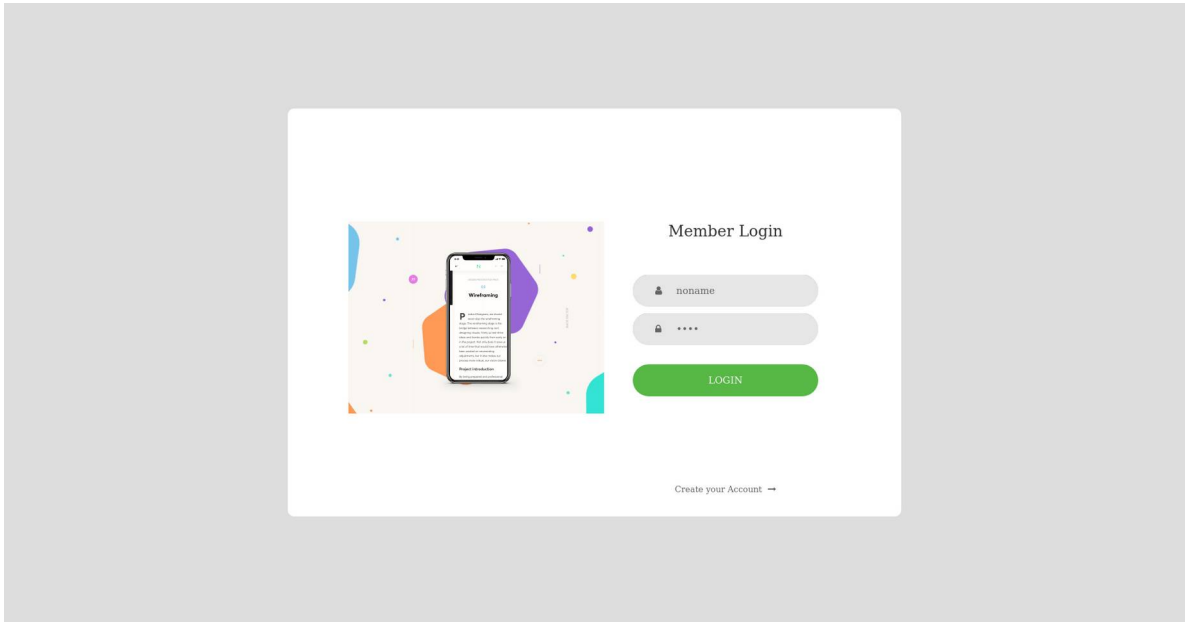
- Screenshot for **Dashboard** (admin)



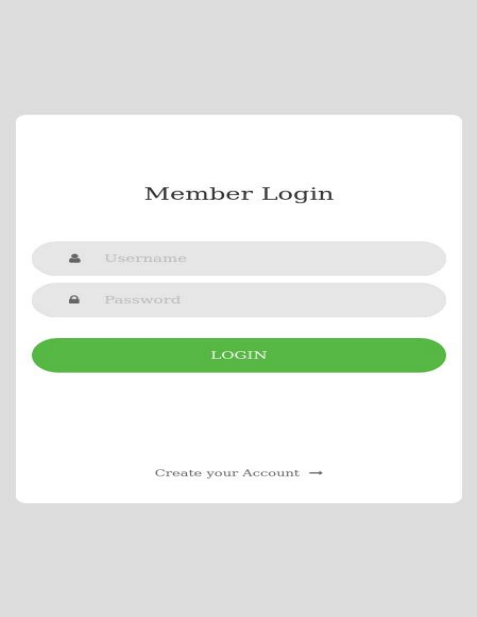
- Screenshot for **Login** (admin)



- Screenshot for **Dashboard** (admin)

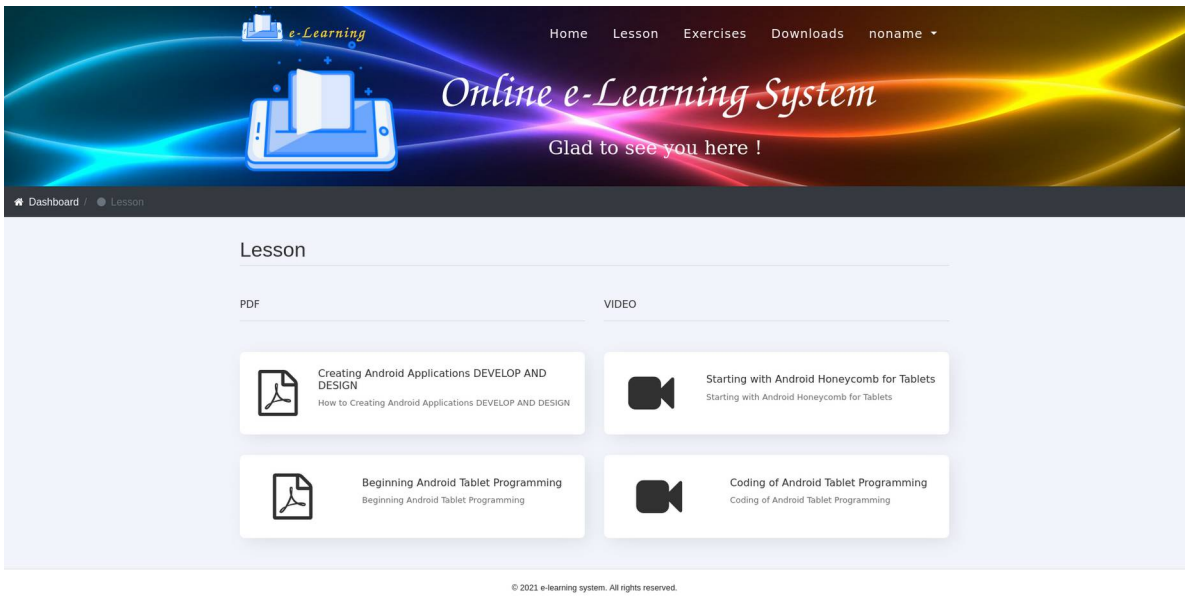


- Screenshot for **Login** (admin)

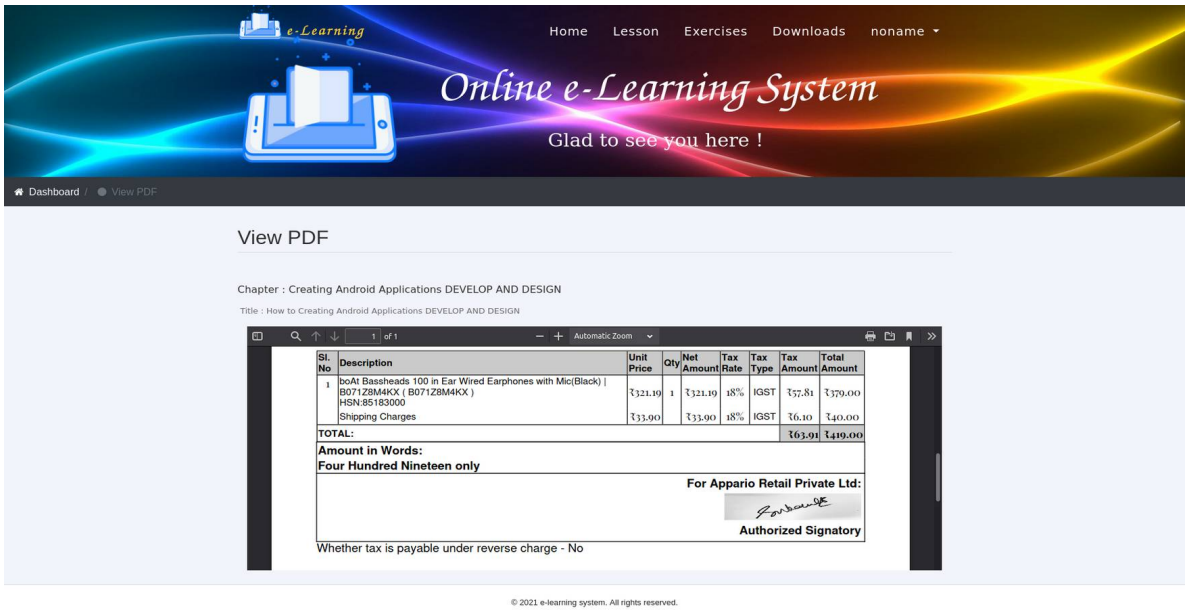


- Screenshot for **Dashboard** (admin)

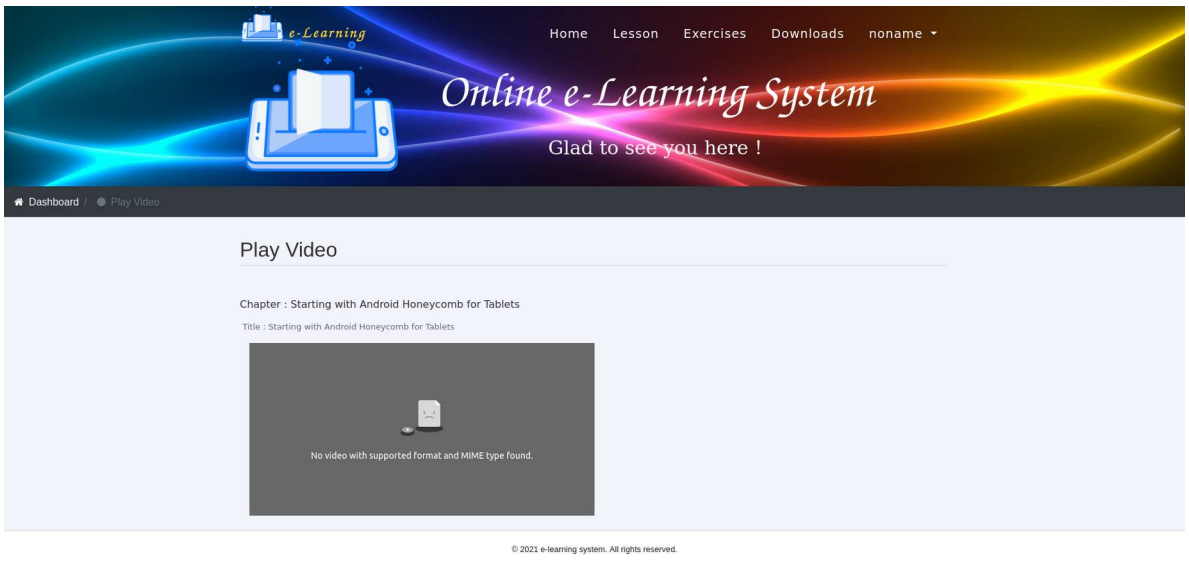
- Screenshot for **Login** (admin)



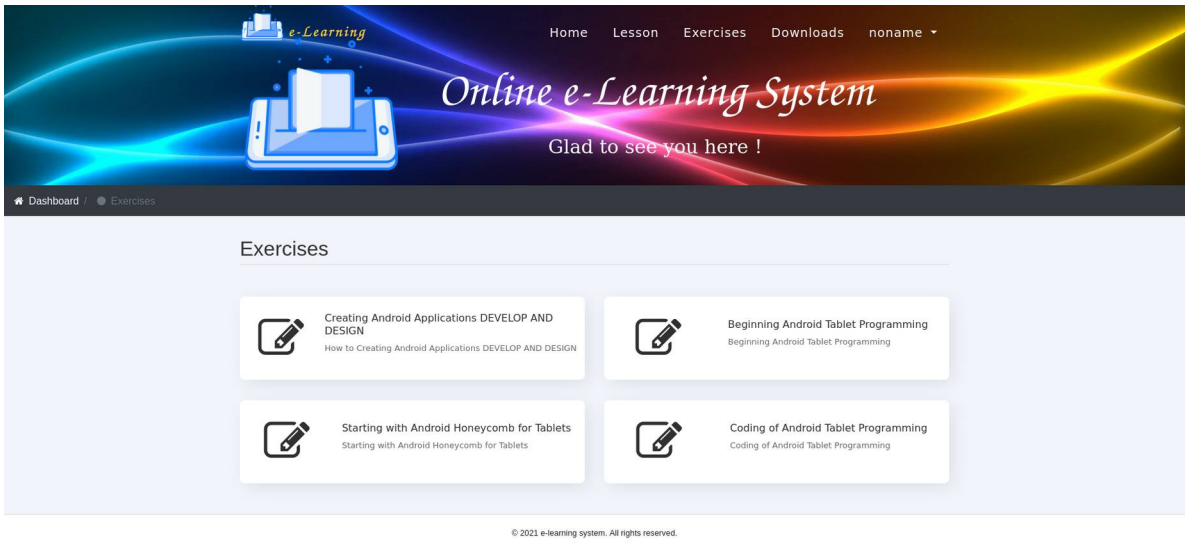
- Screenshot for **Dashboard** (admin)



- Screenshot for **Login** (admin)

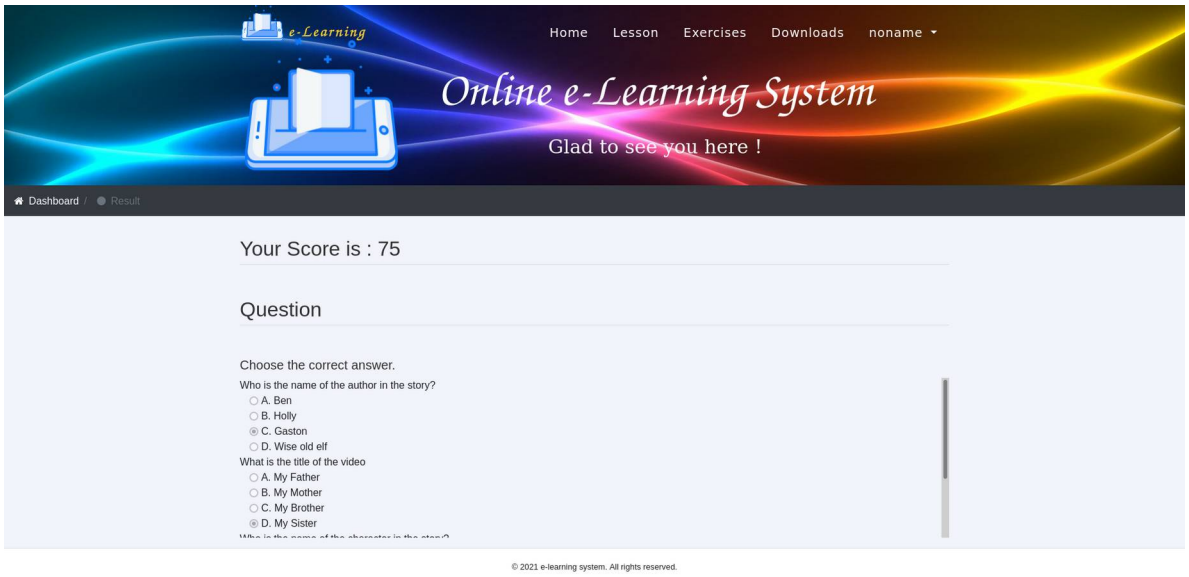


- Screenshot for **Dashboard** (admin)

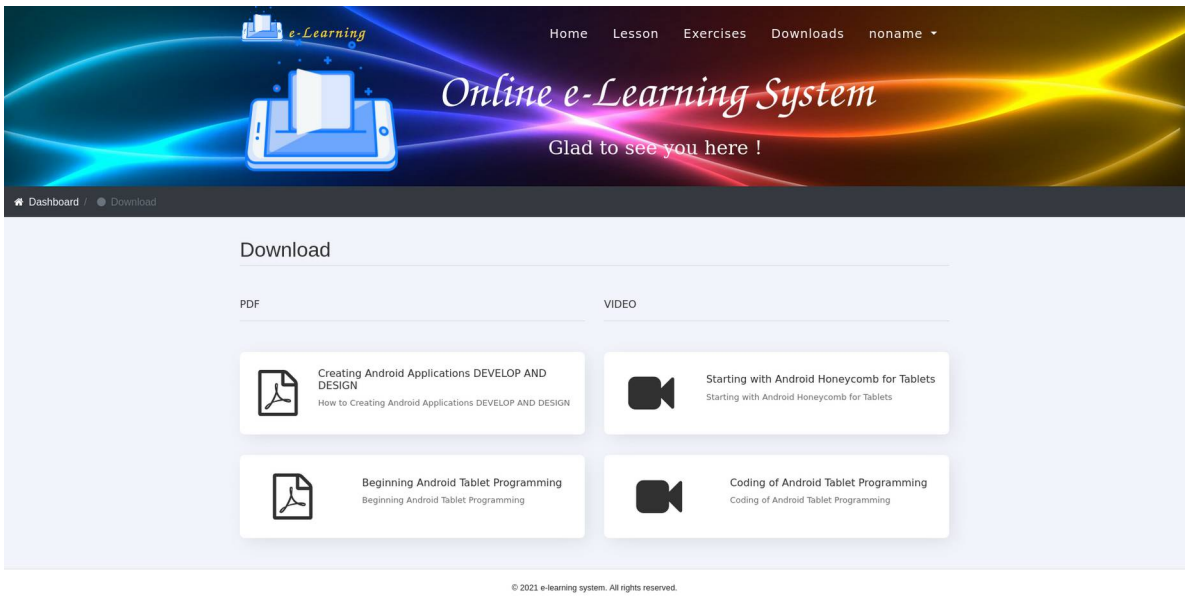


- Screenshot for **Login** (admin)

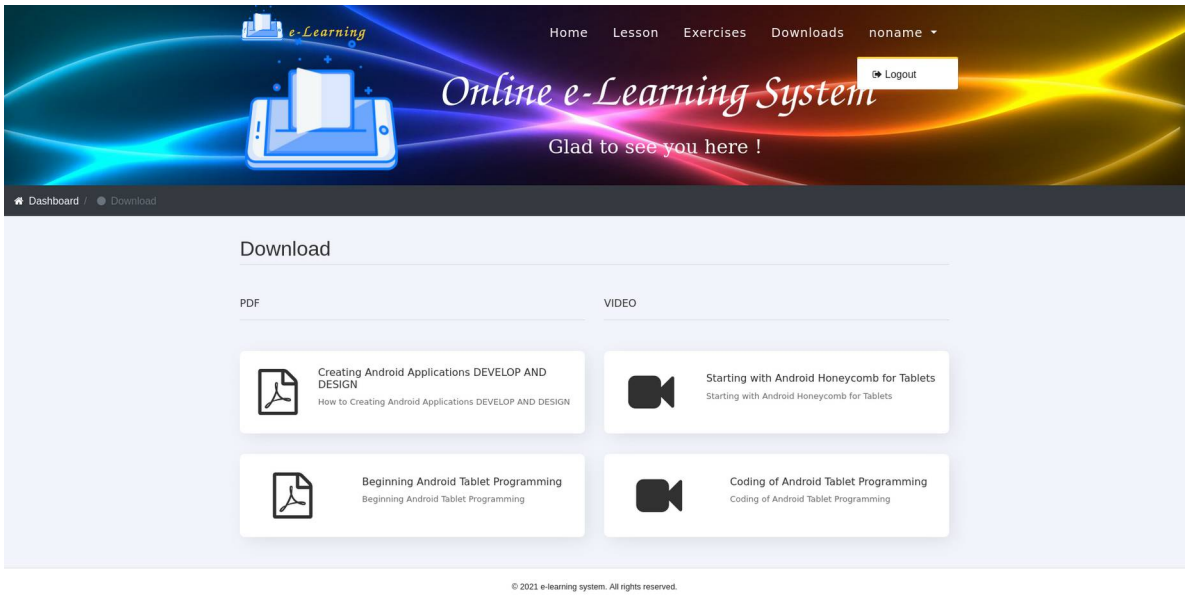
- Screenshot for **Dashboard** (admin)



- Screenshot for **Login** (admin)



- Screenshot for **Dashboard** (admin)



REFERENCES

- Nichols, M. (2007). "E-learning in context"
- Kalantzis, Mary and Bill Cope. 2015. "Learning and New Media." Pp. 373-387 in *The Sage Handbook of Learning,* edited by D. Scott and E. Hargreaves. Thousand Oaks CA: Sage. | download
- Cope, Bill and Mary Kalantzis. 2015. "Assessment and Pedagogy in the Era of Machine-Mediated Learning."
- Pp. 350-374 in *Education as Social Construction: Contributions to Theory, Research, and Practice,* edited by T. Dragonas, K. J. Gergen, and S. McNamee. Chagrin Falls OH: Worldshare Books. | download
- Cope, Bill and Mary Kalantzis. 2015. "Sources of Evidence-of-Learning: Learning and Assessment in the Era of Big Data." *Open Review of Educational Research* 2:194–217. | download
- Cope, Bill and Mary Kalantzis. 2015. "Interpreting Evidence-of-Learning: Educational Research in the Era of Big Data." *Open Review of Educational Research* 2:218–239. | download
- Cope, Bill and Mary Kalantzis. 2009. "Ubiquitous Learning: An Agenda for Educational Transformation." in *Ubiquitous Learning,* edited by B. Cope and M. Kalantzis. Champaign IL: University of Illinois Press. | in

NOTES