



Dr. Vishwanath Karad
MIT WORLD PEACE
UNIVERSITY | PUNE
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

A

MINI PROJECT REPORT

Virtual Classroom

SUBMITTED BY

Ashutosh Mane (1132190016)

Akash Desai (1132190278)

Sujeet Patil (1132190058)

**IN PARTIAL FULFILLMENT OF
BACHELOR'S OF COMPUTER APPLICATIONS**

**THROUGH
FACULTY OF SCIENCE
SCHOOL OF COMPUTER SCIENCE
2020-2021
TO**

Dr. Vishwanath Karad MIT- World Peace University



Dr. Vishwanath Karad
MIT WORLD PEACE
UNIVERSITY | PUNE
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

Faculty of Science
School of Computer Science
Mini Project

CERTIFICATE

This is to certify that Mr. / Ms. /Mrs. **Ashutosh Mane** studying in S.Y MCA in MIT-WPU School of Computer Science has successfully completed the mini project work titled **Virtual Classroom** in partial fulfillment of requirement for the award of BCA prescribed by the MIT World Peace University, Pune, from 01-11-2020 to 20-01-2021.

This project is the record of authentic work carried out by him / her out during the academic year **2020-2021**.

Dr. Shankar Mali	Dr. Rajeshree Khande	Dr. C. H. Patil	Dr. Shubhalaxmi Joshi
Internal Project Guide	AHOS	Head of School	Associate Dean
Faculty of Science	School Of Computer	Faculty of Science	Faculty of Science



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Dr. Shankar Mali
Internal Project
Guide
Faculty of Science

Dr. Rajeshree Khande
AHOS
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Head of School
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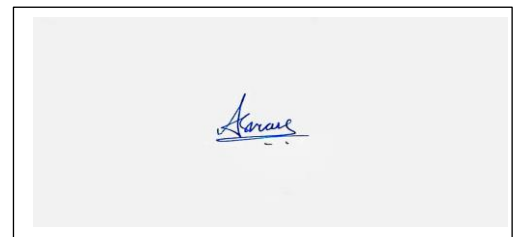


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CERTIFICATE OF COMPLETION

This is to certify that Mr. / Ms. /Mrs. **Ashutosh Mane** studying in S.Y MCA in MIT-WPU School of Computer Science has successfully completed the project work titled **Virtual Classroom.**

This project is the record of authentic work carried out by him / her out during the academic year **2020– 2021.**

A rectangular box containing a handwritten signature in blue ink, which appears to be 'Karad', over a light gray rectangular stamp.

Authorized signature with stamp



Dr. Vishwanath Karad

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Authorized signature with stamp



Dr. Vishwanath Karad

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CERTIFICATE OF COMPLETION

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This project is the record of authentic work carried out by him / her out during the academic year **2020--2021.**

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DECLARATION

I, Mr. / Ms. / Mrs. **Ashutosh Mane** hereby declare that this project is the record of authentic work carried out by me during the academic year 2020-2021. This project is plagiarism-free and has not been submitted to any other University or Institute towards the award of any degree.

A rectangular box containing a handwritten signature in blue ink. The signature appears to be 'Ashutosh Mane'.

Signature of the student


(SYMCA)

PRN of the student

(1132190016)

DECLARATION

I, Mr. / Ms. / Mrs. **Akash Desai** hereby declare that this project is the record of authentic work carried out by me during the academic year 2020-2021. This project is plagiarism-free and has not been submitted to any other University or Institute towards the award of any degree.

A rectangular box containing a handwritten signature in black ink. The signature appears to be 'Akash Desai' written in a cursive, flowing style.

Signature of the student

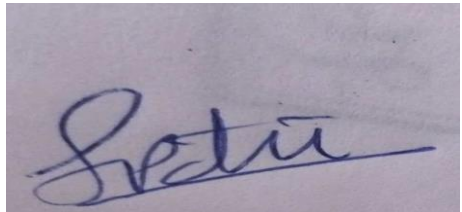
(SYMCA)

PRN of the student

(1132190278)

DECLARATION

I, Mr. / Ms. / Mrs. **Sujeet Patil** hereby declare that this project is the record of authentic work carried out by me during the academic year 2020-2021. This project is plagiarism-free and has not been submitted to any other University or Institute towards the award of any degree.



Signature of the student

(SYMCA)

PRN of the student

(1132190058)


ACKNOWLEDGEMENT

I wish to express my deep sense of gratitude and honor towards the faculty for giving us a chance and platform to work on such projects.

I wish to thank everyone in the organization that helped me during project development from time to time. I also express my honor and gratitude to **Dr. Shankar Mali** and constant encouragement for completing my project work successfully.

I also express my honor and gratitude to **Dr. RajeshreeKhande** for giving us this opportunity.

I also want to thank **Dr. C. H. Patil** for constant encouragement and help for completing my project work successfully. And last but not the least, I express my gratitude towards **Dr. Shubhalaxmi Joshi**, for always being there as our guide.



Student Signature

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INTRODUCTION

This Virtual Classroom System is an online based framework that is made of PHP, JavaScript, Bootstrap layouts, JQuery and MYSQL database. This framework is exceptionally useful most particularly in the event that you are going to make online exercises, exercises and furthermore make tests. Utilizing this framework, the educator can unreservedly set exercises dependent on the exercise that he transferred whether it's a pdf document or a video. When the understudy as of now has a record on this framework, he would now be able to take the tests arranged by the instructor and even view the exercises. That is the means by which simple it is for them to get to the framework. Look at the accompanying highlights beneath to find out about the framework.

EXISTING SYSTEM

1. An existing system can provide manually paper work.
2. The student can learn and gain knowledge from home saving the travelling time.
3. Student can solve the exercises based on the ppts and videos uploaded by teachers to test their knowledge.
4. In the existing system you cannot provide feedback of the user to the admin online.

NEED OF THE SYSTEM

1. The new system is totally computerized system.
2. This system show students the ppts and videos uploaded by the teachers,
3. This system provides students the facility to solve the exercises given by teachers realted to the ppts and videos.
4. Students can download the ppts and videos for further references.
5. It is the most software application for managing virtual classroom.

PURPOSE OF THE SYSTEM

The purpose of the system is to give education to the students from home so that they can save the travelling time and also due to Covid-19 colleges and schools are closed so virtual classroom will not stop the education of students.

SCOPE OF WORK

As this is a generic software it can be used to monitor the performance of the students by observing the score/marks obtained by them in the exercises.

OPERATING ENVIRONMENT- HARDWARE AND SOFTWARE

- **System Interfaces:**

The system interfaces used are user friendly and flexible so that it can store the data efficiently. MySQL is used for databases to store the data. The system interface uses end to end security.

- **User Interfaces:**

User interfaces are the mobiles, personal computers, laptops from which they use a browser to access a website.

- **Hardware Interfaces:**

Hardware interfaces include the mobiles and laptops with minimum 2gb RAM and minimum 8gb memory.

DESCRIPTION OF TECHNOLOGY USED

Hardware Requirements:

Processor: Intel i3 or above

Memory: 2 GB RAM or above

Cache Memory: 1 MB or above

Hard Disk: 32 GB or above

Software Requirements:

Operating System: Windows xp,7,8,10 or any Linux platform or MAC OS

Back-End Tools: PHP

Front-End Tools: Html, CSS, JavaScript

Browser: Google Chrome or Mozilla Firefox

PROPOSED SYSTEM

In the proposed Virtual classroom, we use the internet to provide the student to download and view the ppts and videos uploaded by teachers from home. The students can solve the exercises uploaded by the teachers from our system. This project will also display the score of the student once the exercise/test is given by student. If a student wants to use the ppt and videos for further reference they have the feature to download. The information will be safe as it will need an ID and password to access the system.

OBJECTIVES OF SYSTEM

The main objective of building this system is to determine:

1. Enhance the quality of learning and teaching.
2. To improve access to advanced educational experiences by allowing students and instructors to participate in remote learning communities using personal computers.
3. Flexibility to engage learners in the learning process.

ANALYSIS OF SYSTEM

Project Description:

This Virtual Classroom System is an online based framework that is made of PHP, JavaScript, Bootstrap layouts, JQuery and MYSQL database. This framework is exceptionally useful most particularly in the event that you are going to make online exercises, exercises and furthermore make tests. Utilizing this framework, the educator can unreservedly set exercises dependent on the exercise that he transferred whether it's a pdf document or a video.

Capabilities of system:

The system will help students to watch the study material ppts and videos. It will allow the students to solve the exercises and get the score which will help them test their knowledge.

Benefits:

Increased Engagement & Participation.

Students can download the study material for further reference.

Access to coursework from anywhere at any time

USER REQUIREMENTS

➤ HARDWARE REQUIREMENT

- **Client side:**

RAM	512 MB
Hard disk	10 GB
Processor	1.0 GHz

- **Server side:**

RAM	1 GB
Hard disk	20 GB
Processor	2.0 GHz

➤ Software Requirements

- **Client side:**

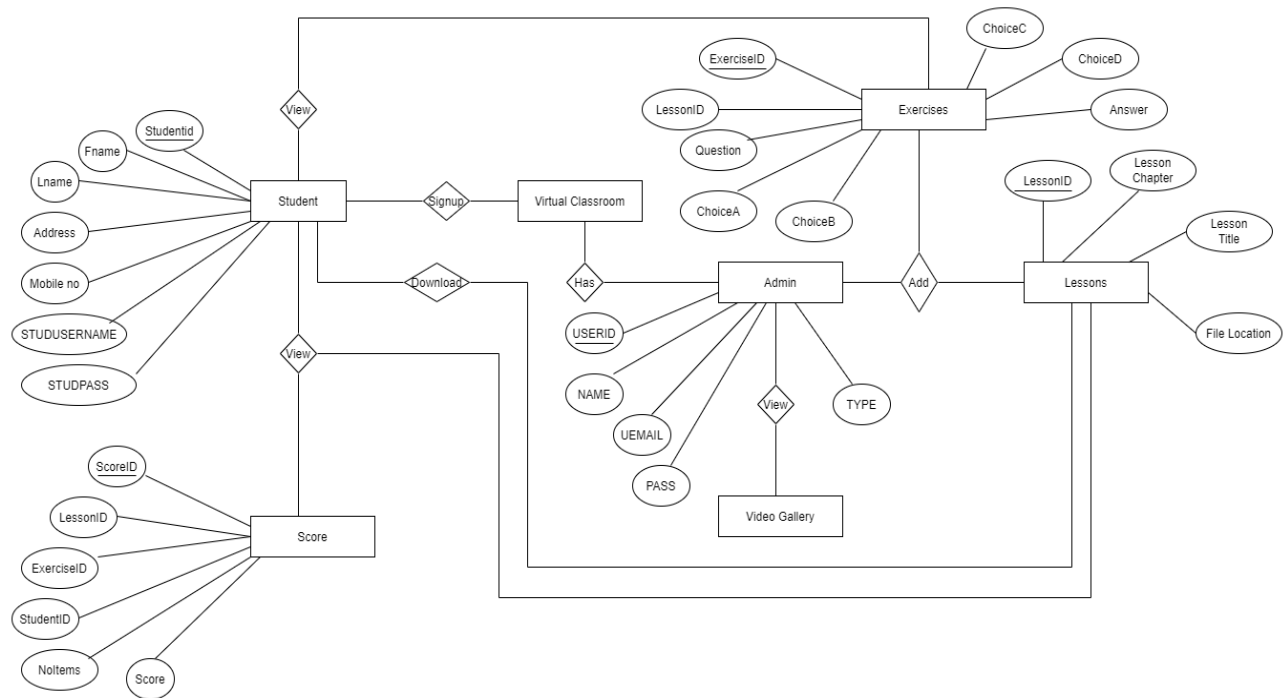
Web Browser	Google Chrome or any compatible browser
Operating System	Windows or any equivalent OS

- **Server side:**

Web Server	APACHE
Server side Language	PHP
Database Server	MYSQL
Web Browser	Google Chrome or any compatible browser
Operating System	Windows or any equivalent OS

ANALYSIS & DESIGN

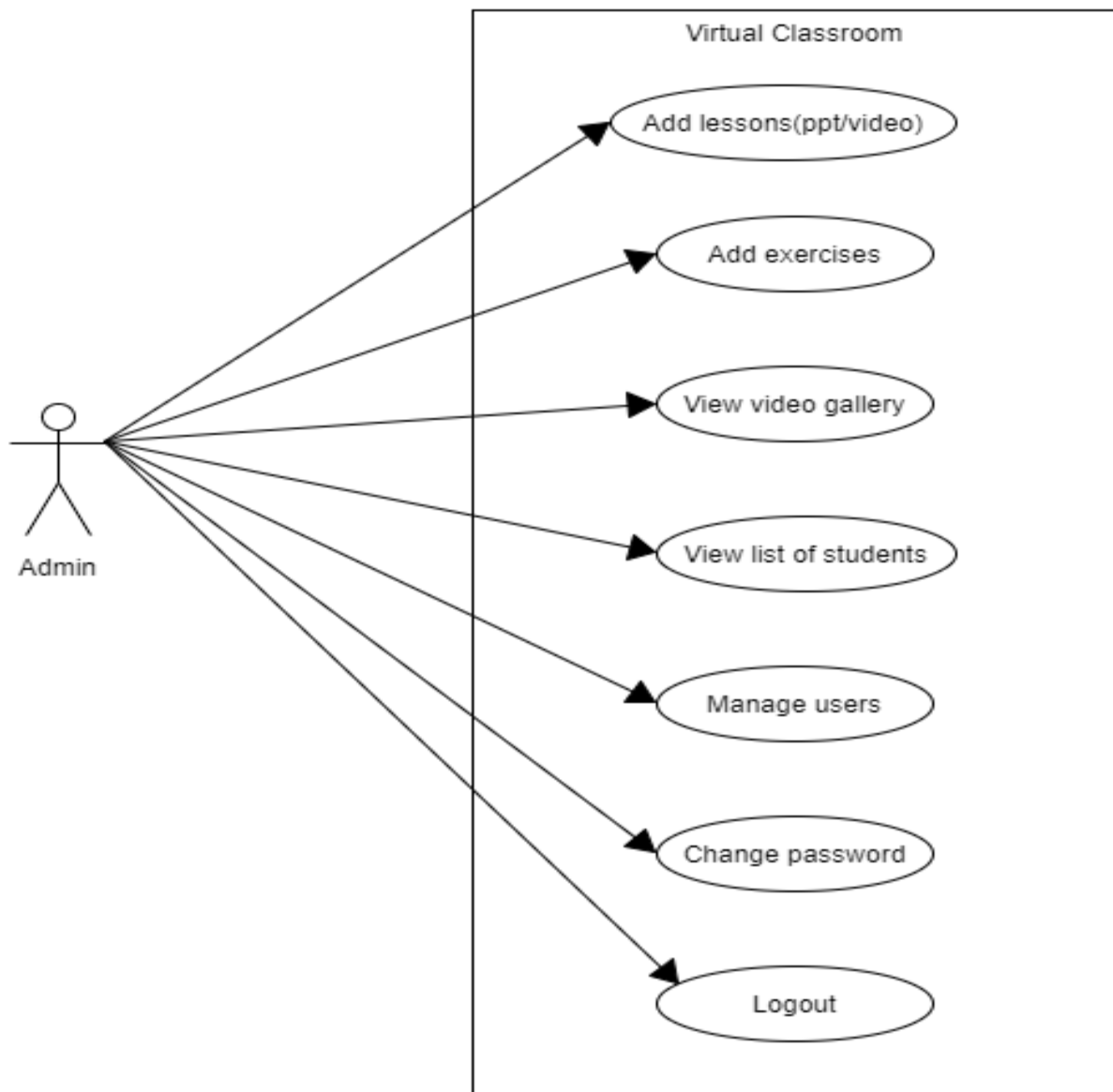
ENTITY RELATIONSHIP DIAGRAM



UML DIAGRAMS:

USE CASE DIAGRAM

➤ Use Case diagram for Admin

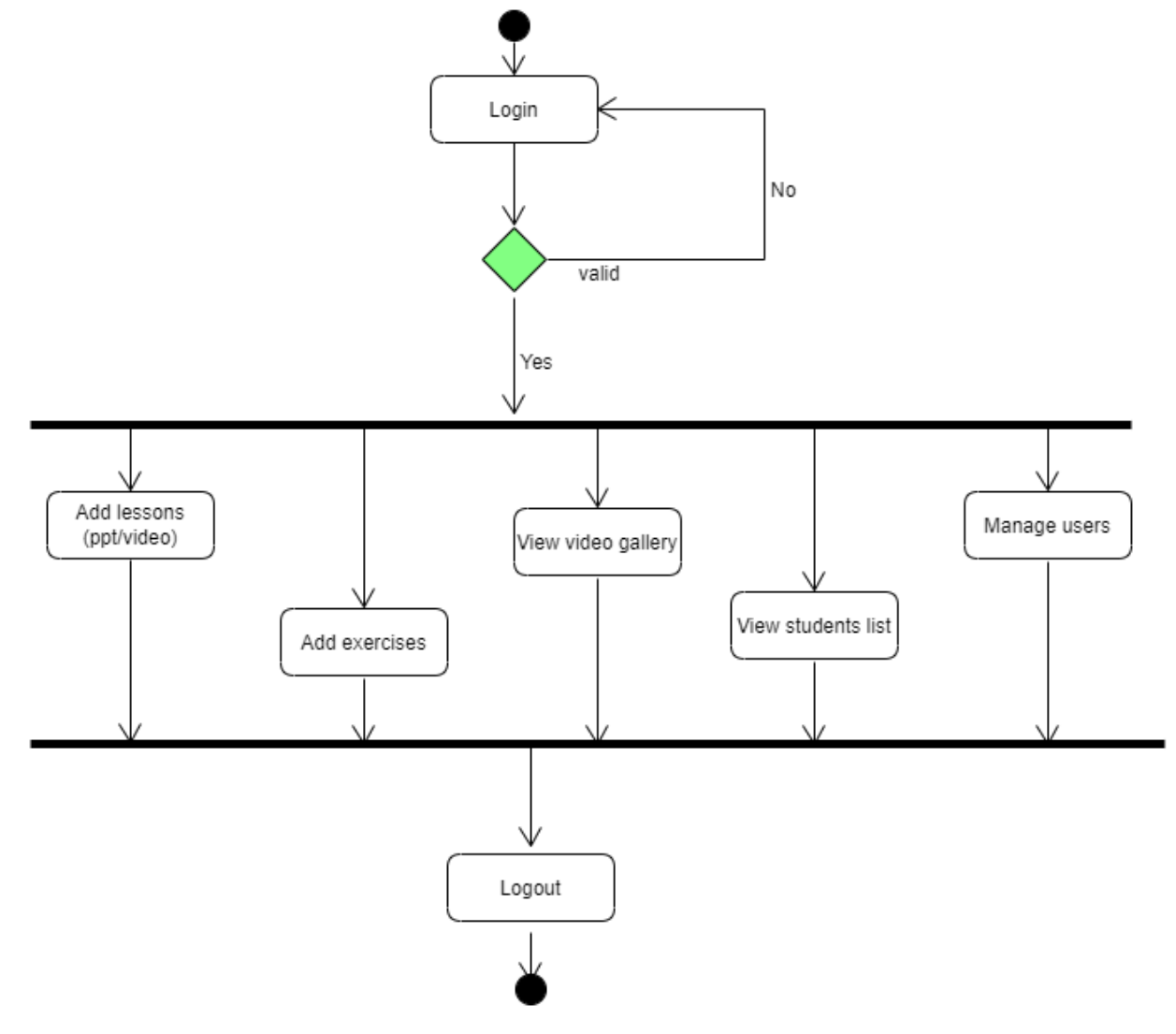


➤ **Use Case diagram for Student**

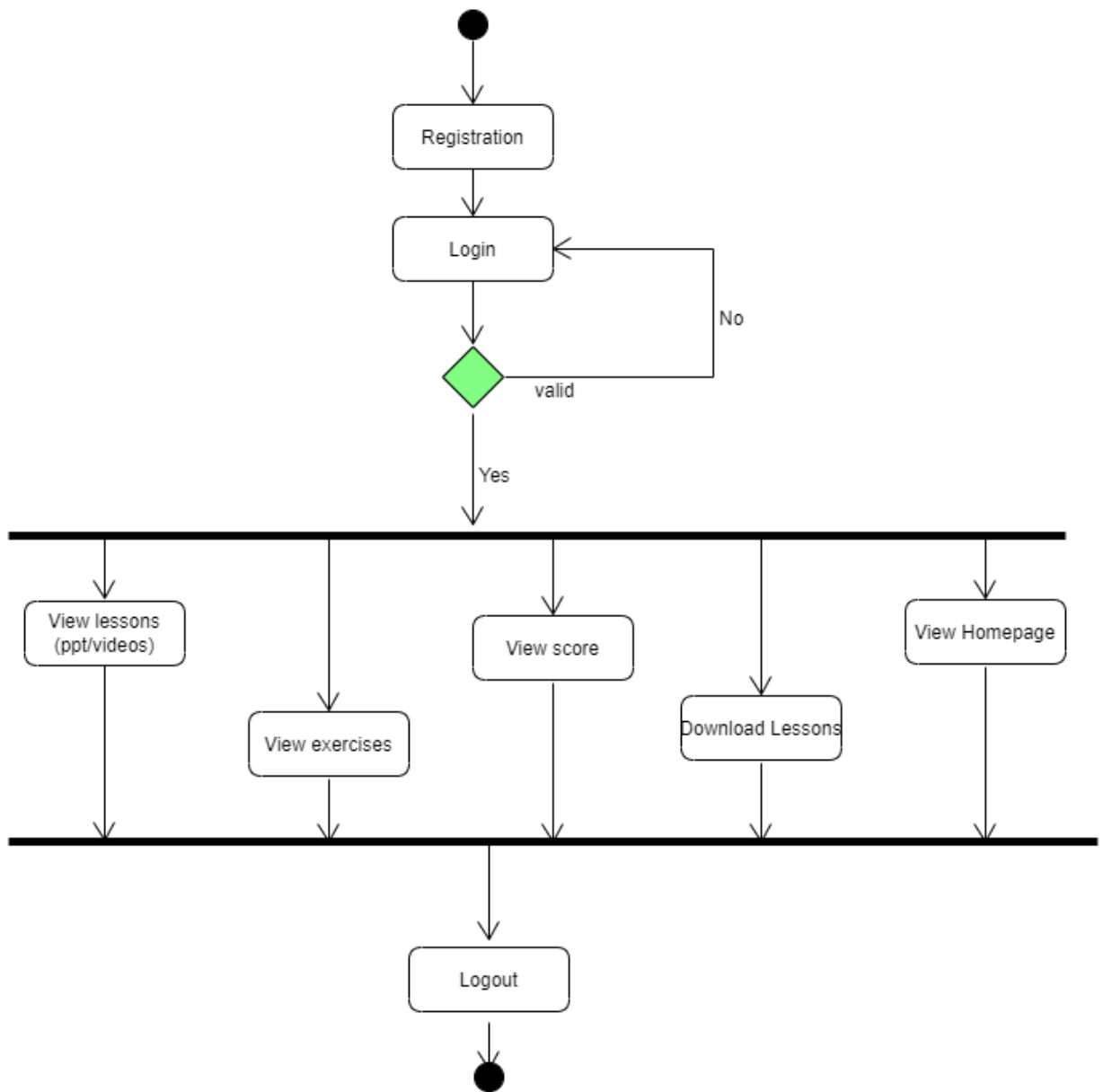


ACTIVITY DIAGRAM

Admin Activity:

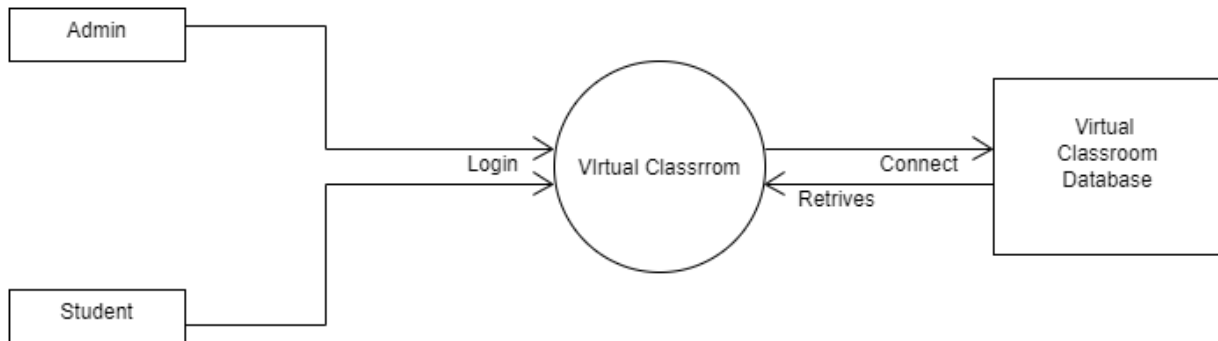


Student Activity:



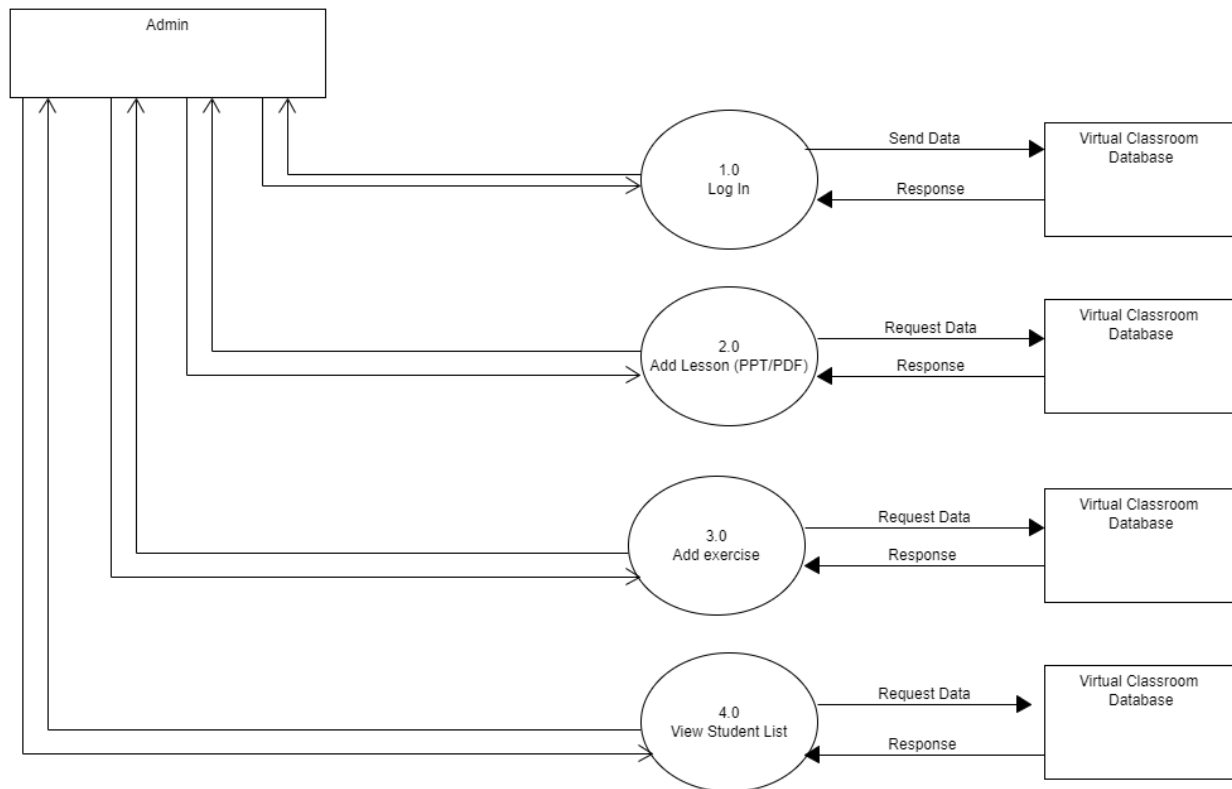
DATA FLOW DIAGRAM

➤ Context level DFD:



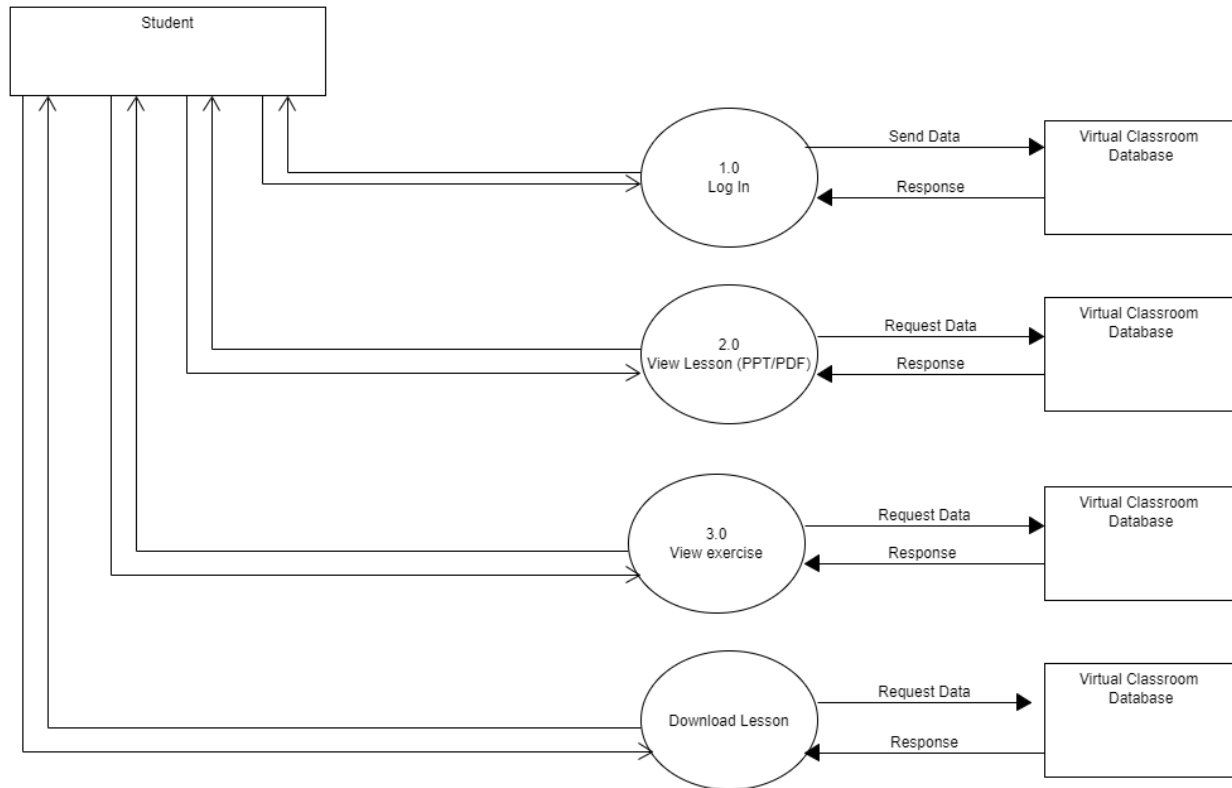
Admin side:

➤ Level 1 DFD:



Student side

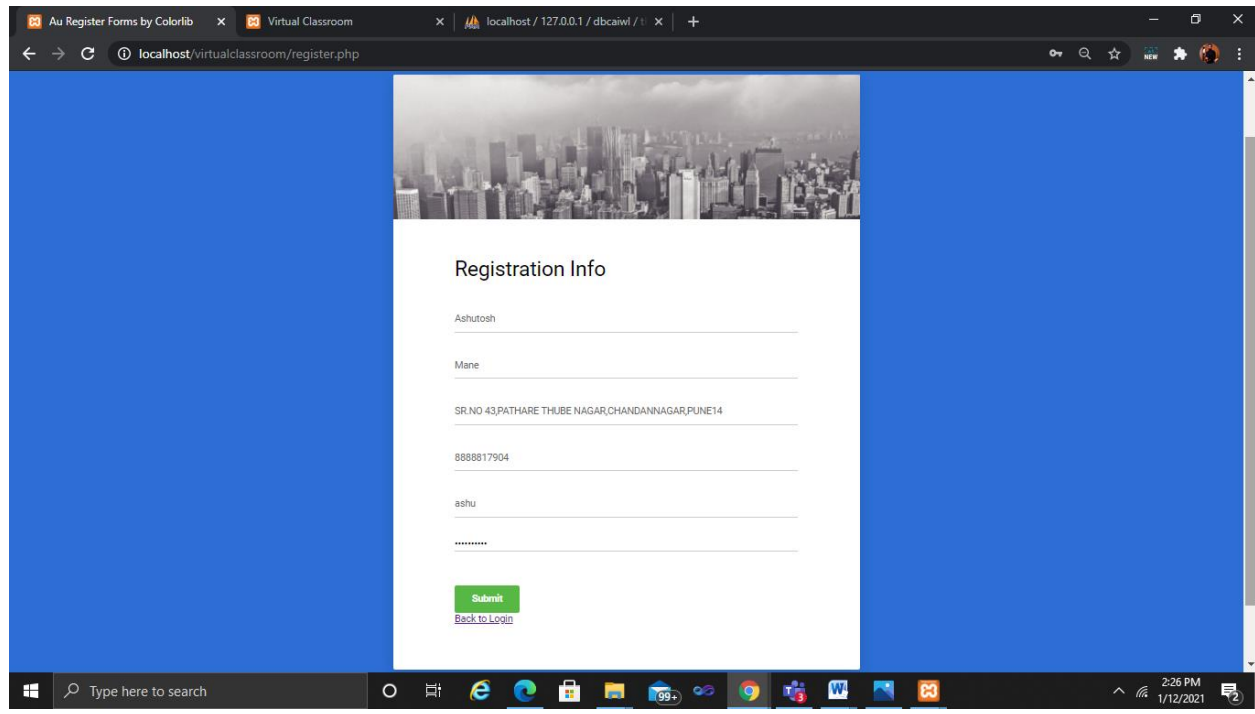
➤ Level 1 DFD:



SCREENSHOTS

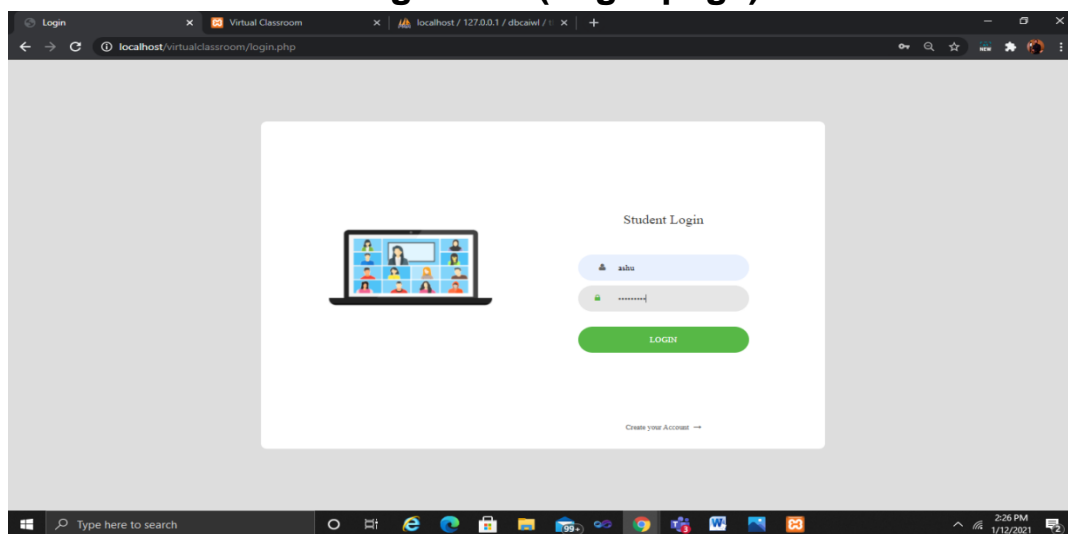
Student side

Image No: 1(Registration page)



A screenshot of a web browser displaying the registration page of a virtual classroom. The browser's address bar shows the URL `localhost/virtualclassroom/register.php`. The page has a blue sidebar on the left and a main content area with a cityscape background image. The registration form is titled "Registration Info" and contains the following fields: "Ashutosh" (first name), "Mane" (last name), "SR.NO 43,PATHARE THUBE NAGAR,CHANDANNAGAR,PUNE14" (address), "8888817904" (phone number), "ashu" (email), and a password field with masked characters. Below the fields are a green "Submit" button and a blue "Back to Login" link. The Windows taskbar at the bottom shows the time as 2:26 PM on 1/12/2021.

Image No:2 (Login page)



A screenshot of a web browser displaying the login page of a virtual classroom. The browser's address bar shows the URL `localhost/virtualclassroom/login.php`. The page has a light gray background. The login form is titled "Student Login" and contains the following fields: a username field with the text "ashu", a password field with masked characters, and a green "LOGIN" button. Below the login fields is a link that says "Create your Account". To the left of the login form is an illustration of a laptop displaying a video conference with multiple participants. The Windows taskbar at the bottom shows the time as 2:26 PM on 1/12/2021.

Image No:3(index.php)

Mandate

The Capiz State University (CAPSU) primarily provides advance instruction and professional training in agriculture, fishery and forestry, science and technology, arts and humanities, education and other related fields. It shall also undertake research, extension services and production activities and provide progressive leadership in its areas of specialization.

Vision

Center of Academic Excellence Delivering Quality Service to all.

Mission

Capiz State University is committed to provide advanced knowledge and innovation; develop skills, talents and values; undertake relevant research, development and extension services; promote entrepreneurship and environmental consciousness; and enhance industry collaboration & linkages with partner agencies.

Goals

1. Globally competitive graduates
2. Institutionalize research culture
3. Responsive and sustainable extension services
4. Maximized profit of variable agro-industrial business ventures
5. Effective and efficient administration

Objectives

1. Create an environment of shared leadership and responsibilities with competent administrator.
2. Provide relevant trainings and seminar to faculty, staff, and student.
3. Produce highly competitive graduates.
4. Conduct relevant and updated researches
5. Extend financial support and manpower for outreach activities.

Guiding Principles

- Academic Freedom
- Responsibility
- Academic Standards

Core Values

- God-Centered
- Excellence
- Integrity
- Transparency and Accountability
- Dedication to Quality Service

Quality Policy

1. CAPSU is committed to be the center of academic excellence delivering quality service to all by:
2. Continuing innovations and quality improvement cultivating an efficient and effective and environment for maximum clientele satisfaction;
3. Adhering to laws and regulations, global standards, and environmental change requirements;
4. Participating in sustainable development projects for inclusive economic for inclusive economic growth;
5. Showcasing quality outputs; and,
6. Upholding values and integrity and nurturing talents and skills for global competitiveness.

Image No:4(View Lesson)

Lesson

PDF

#	Chapter	Title	Action
1		Php	View File
2		Digital marketing	View File

VIDEO

#	Decription	Action
	Digital marketing	Play Video

Image No:4(view Lesson documents)

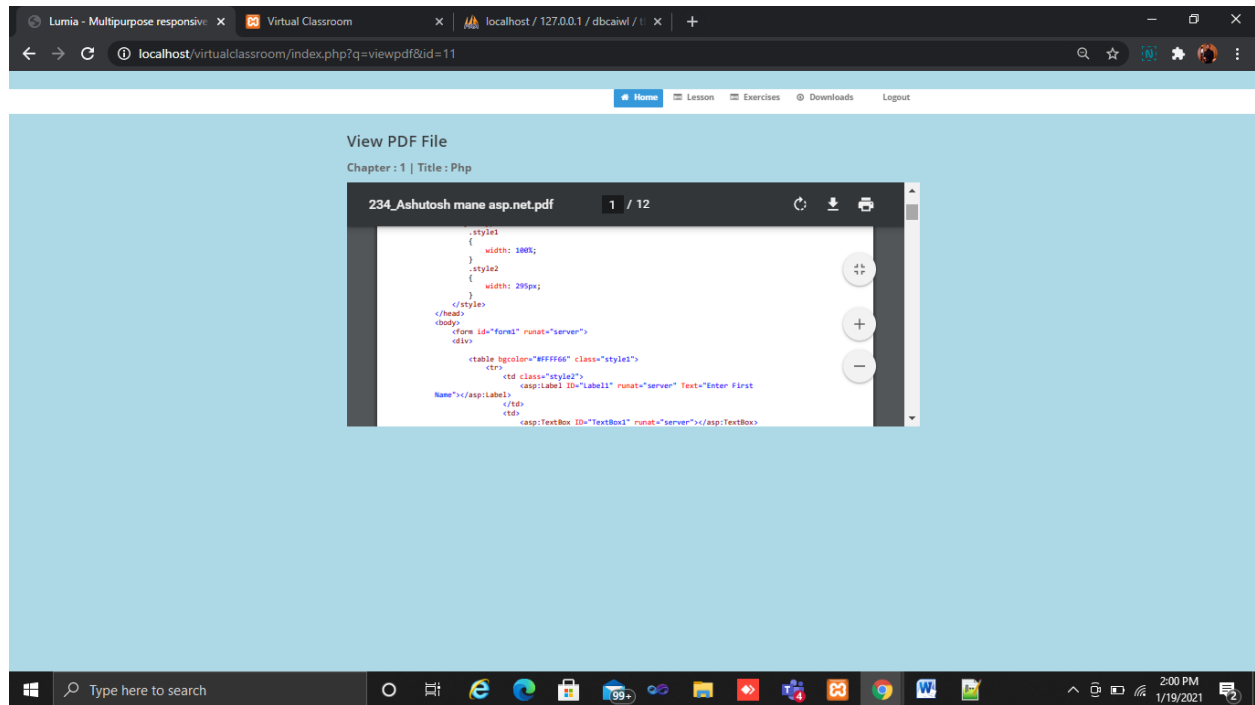


Image No:4(View lessons videos)

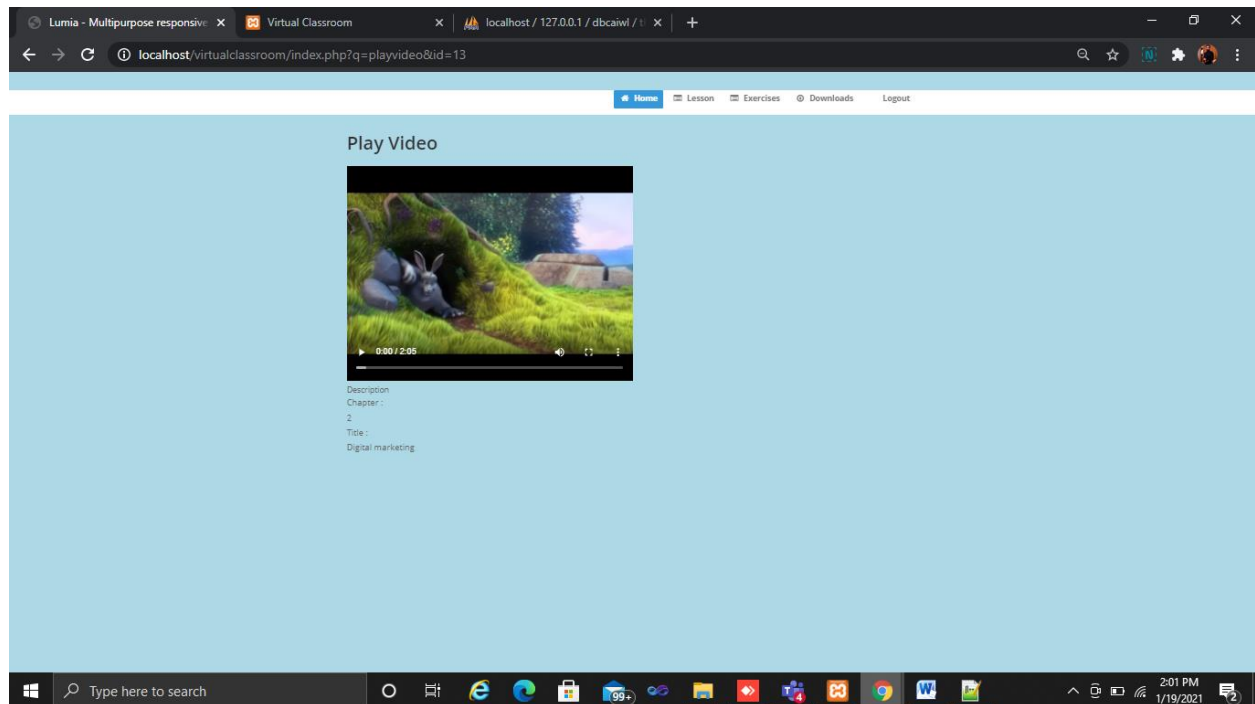


Image No:4(View Exercises)

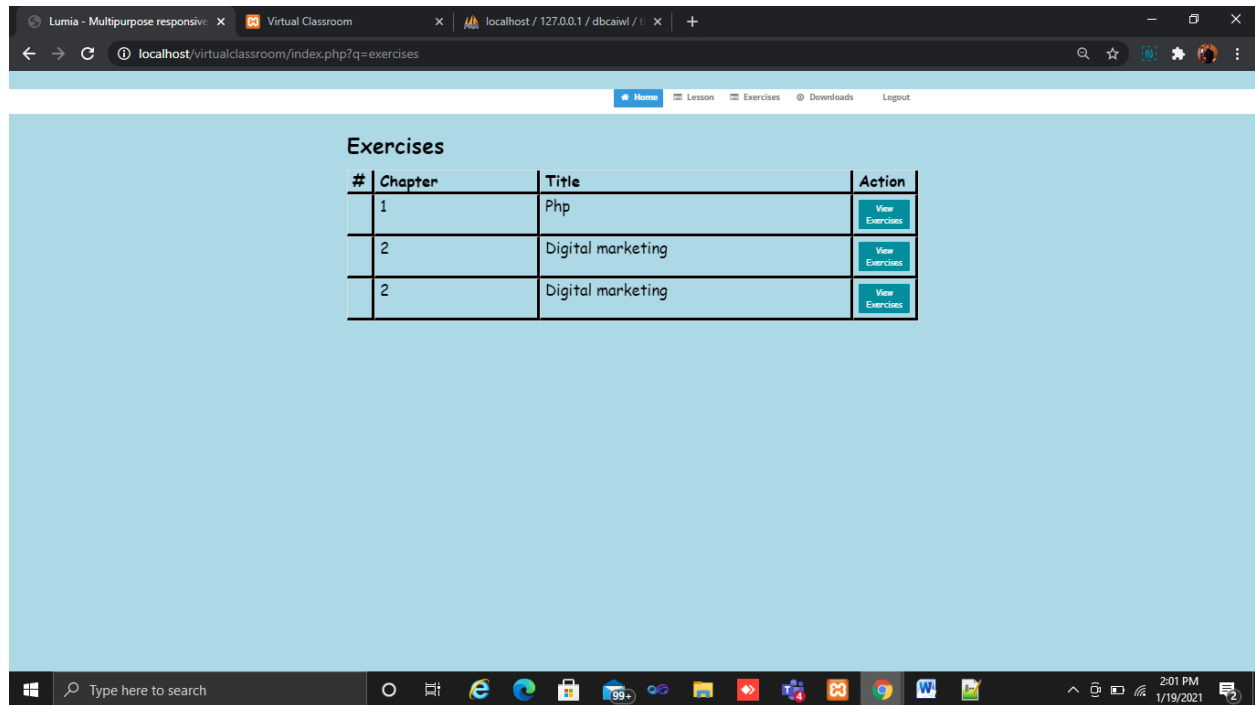


Image No:4(Exercise questions)

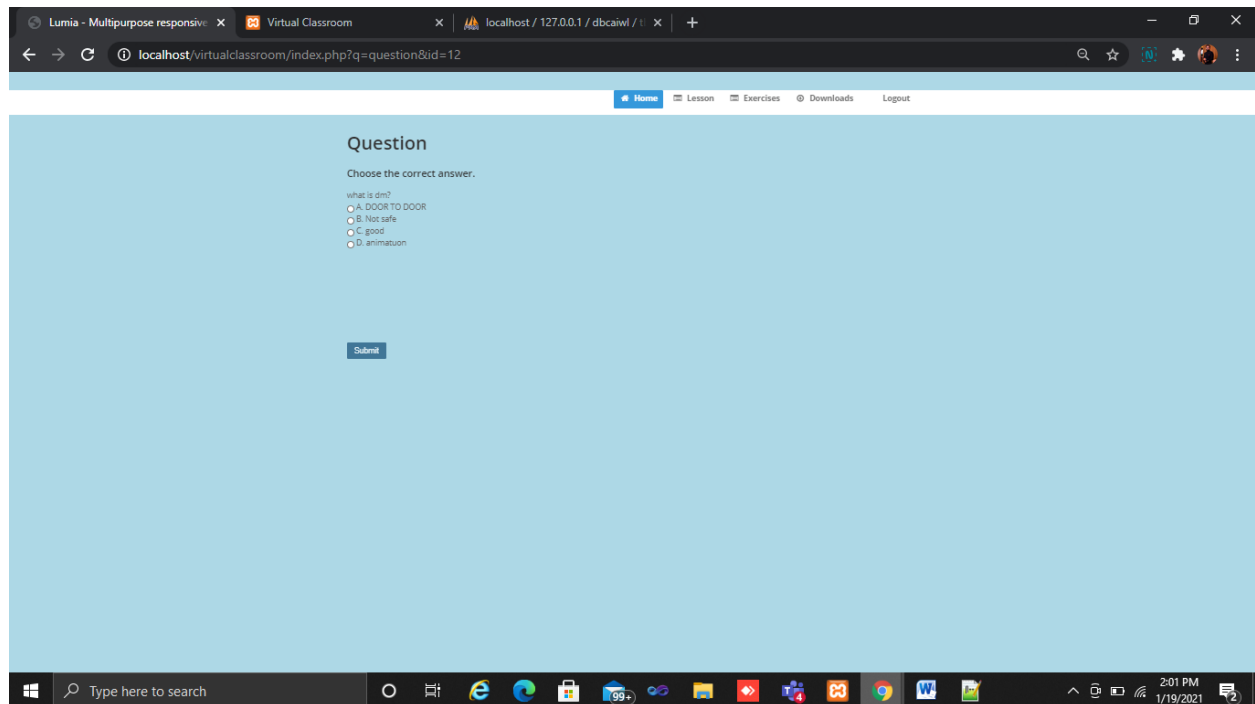


Image No:4(View Score)

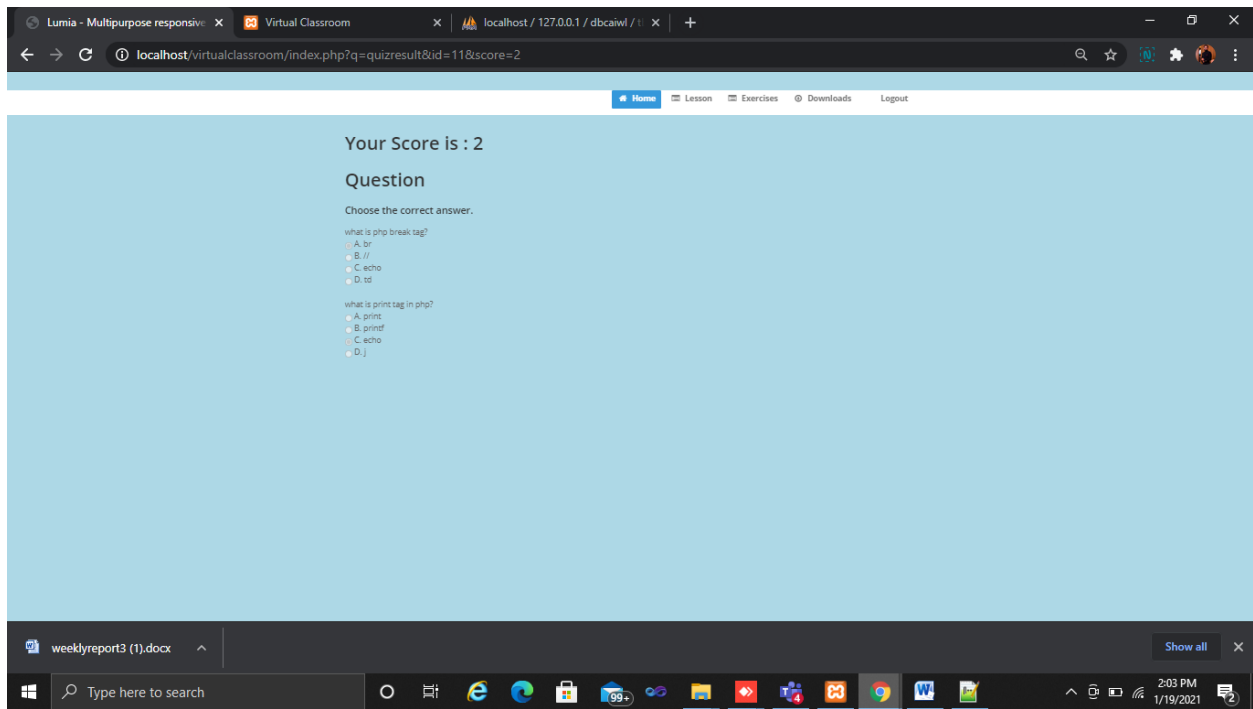
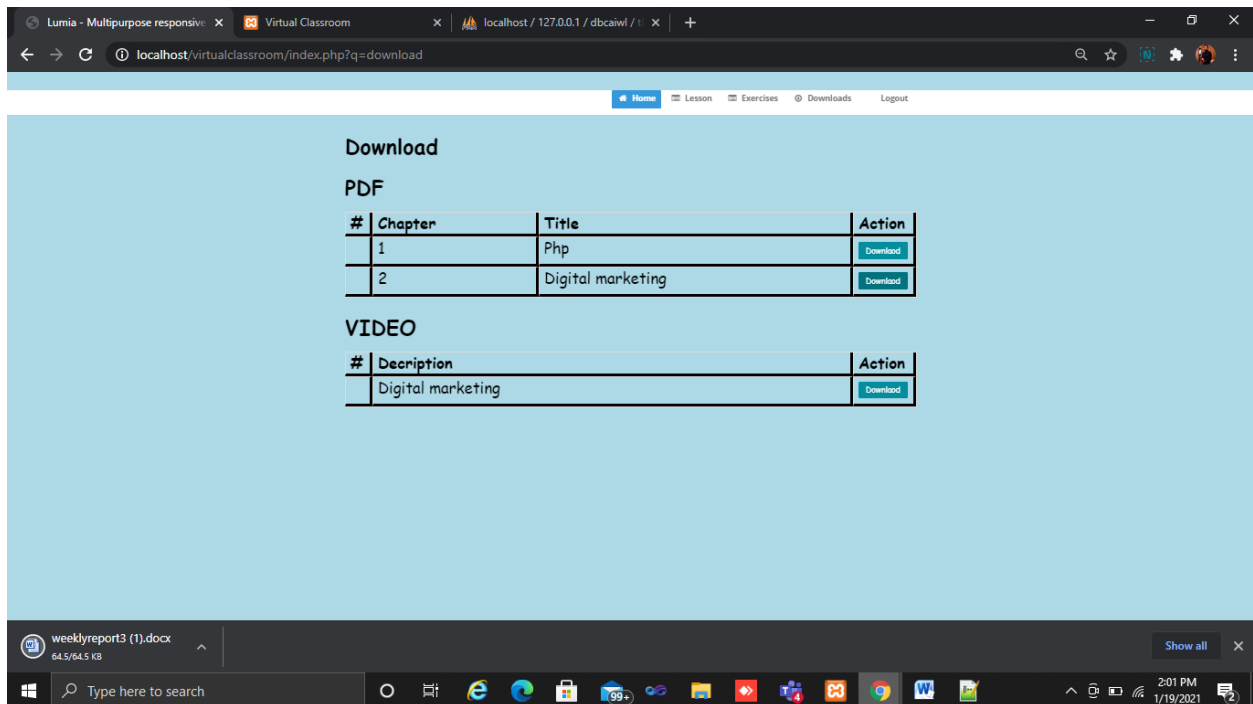


Image No:4(Download lessons)



Admin side

Image No:4(Admin login)

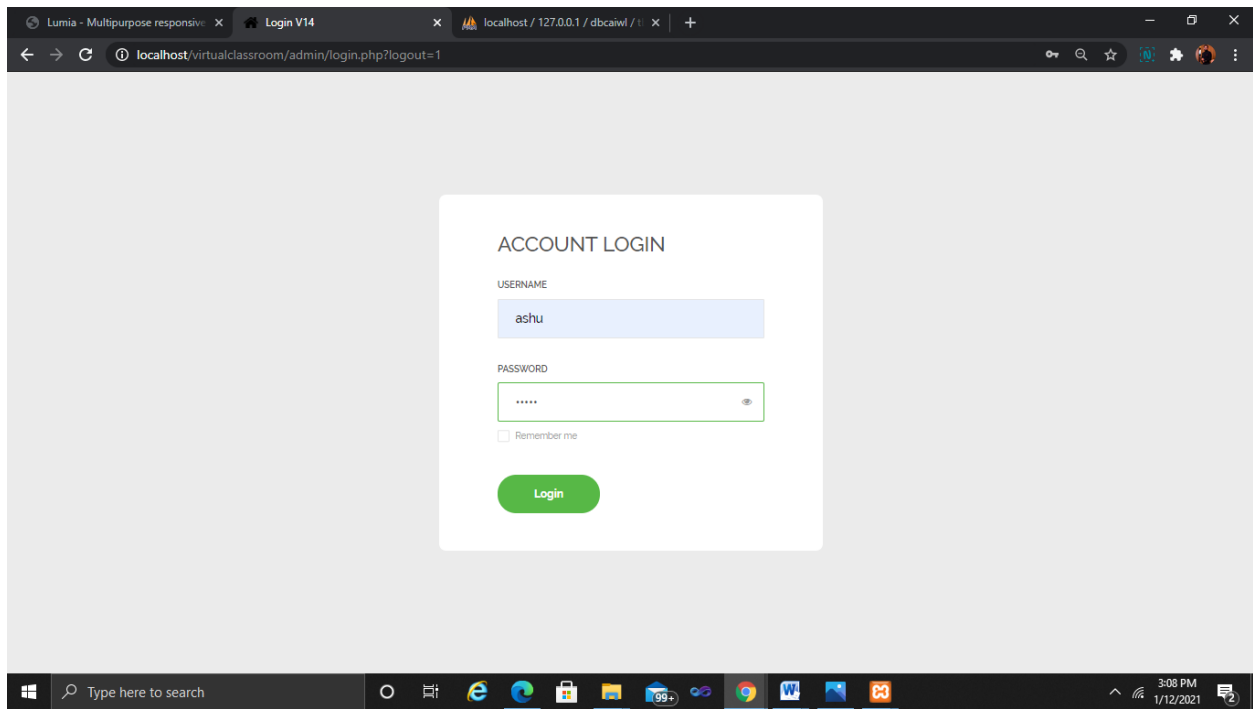


Image No:4(Dashboard)

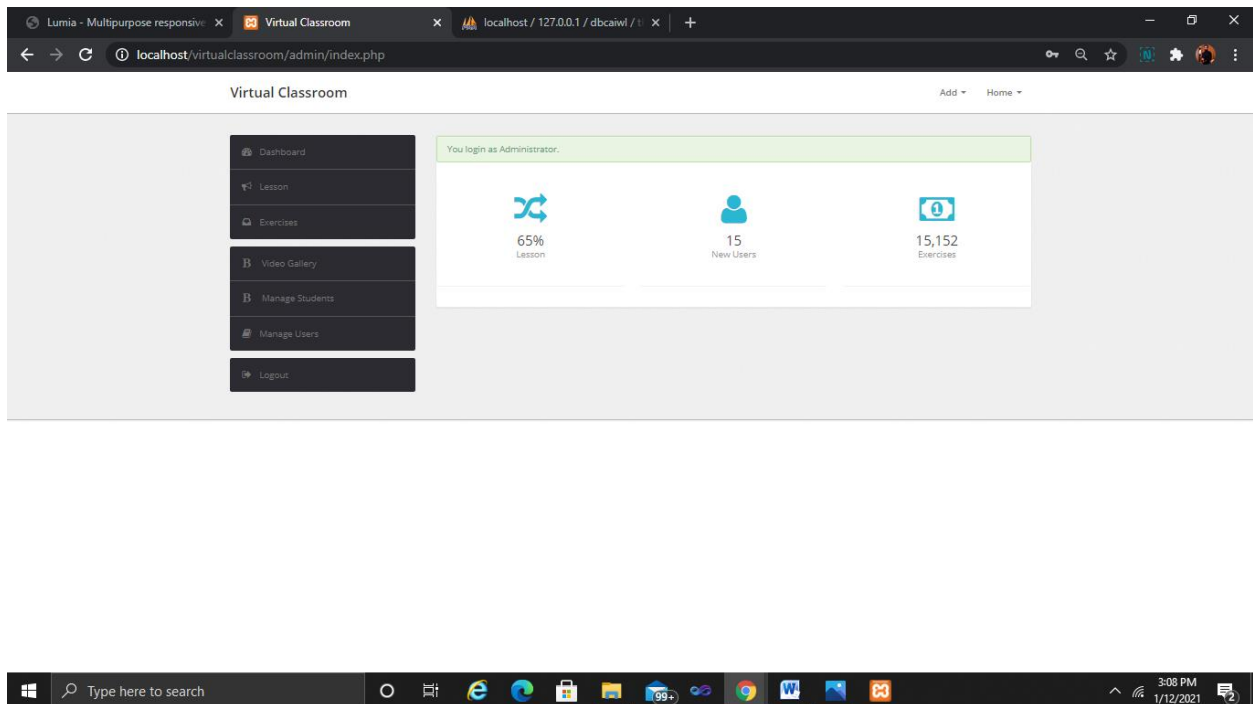


Image No:4(List of LessonS)

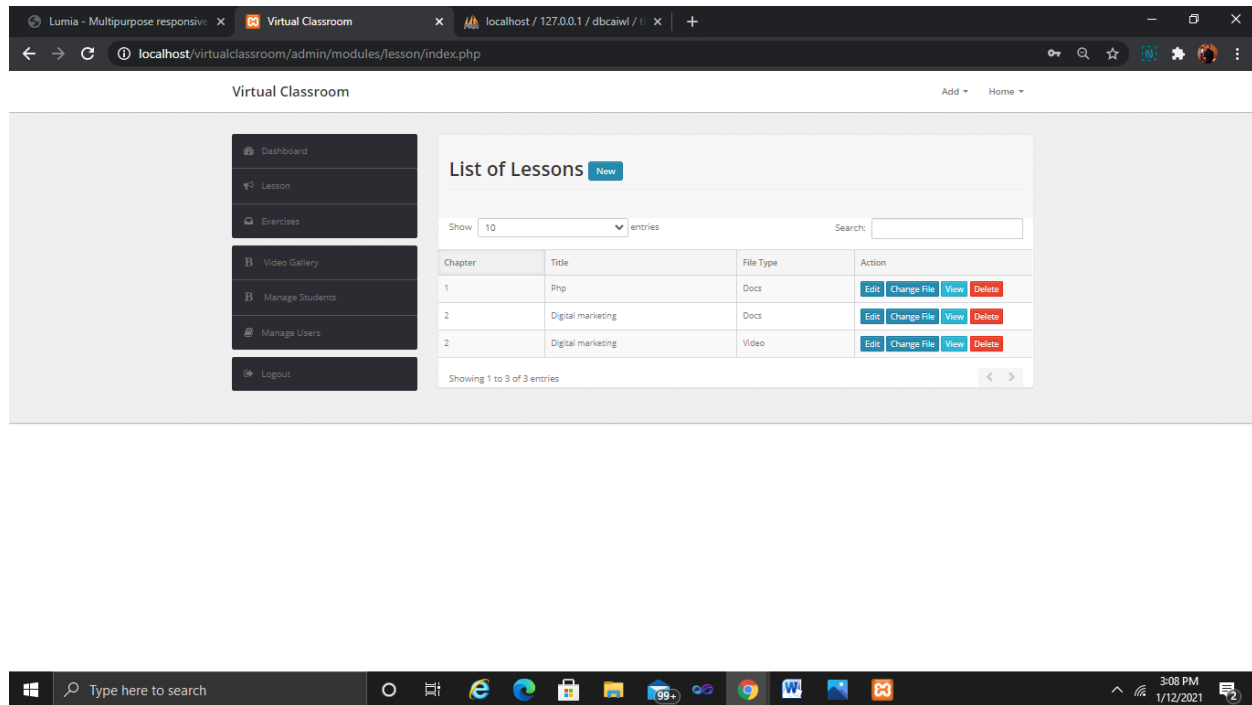


Image No:4(Upload new Lesson)

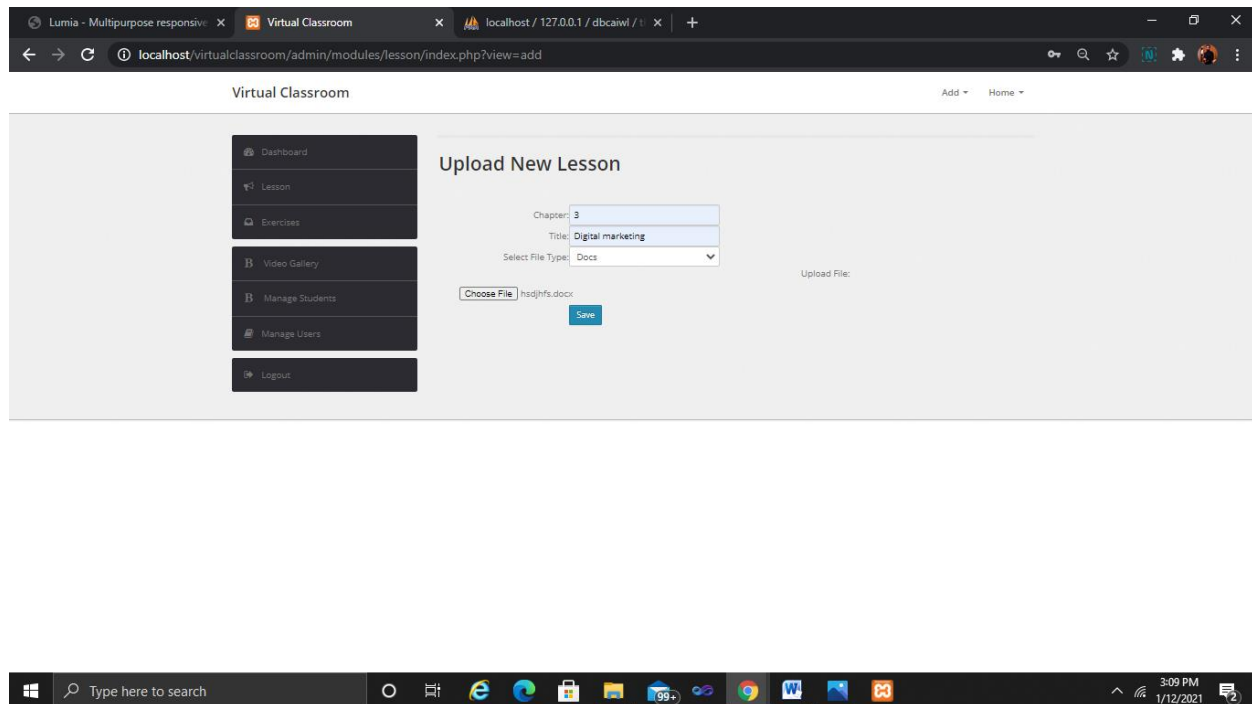


Image No:4(Update Lesson)

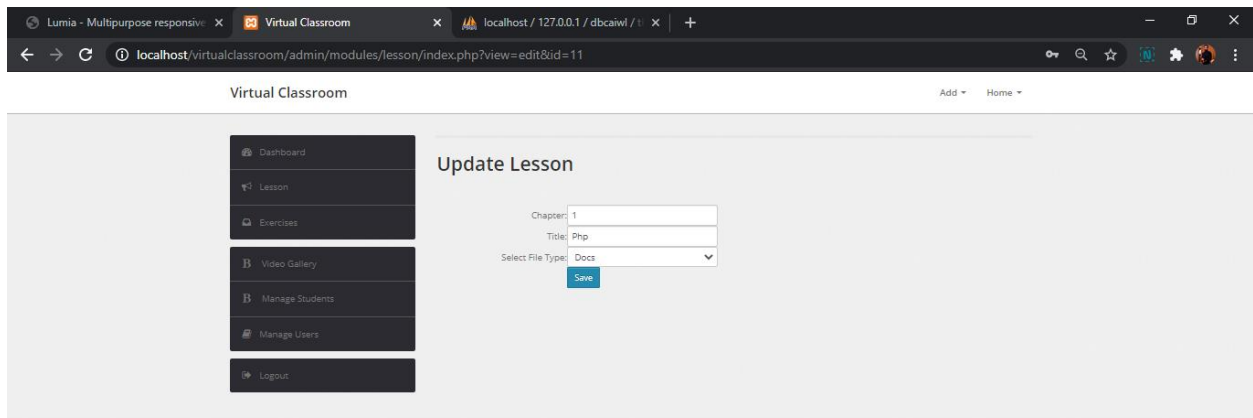


Image No:4(View File)

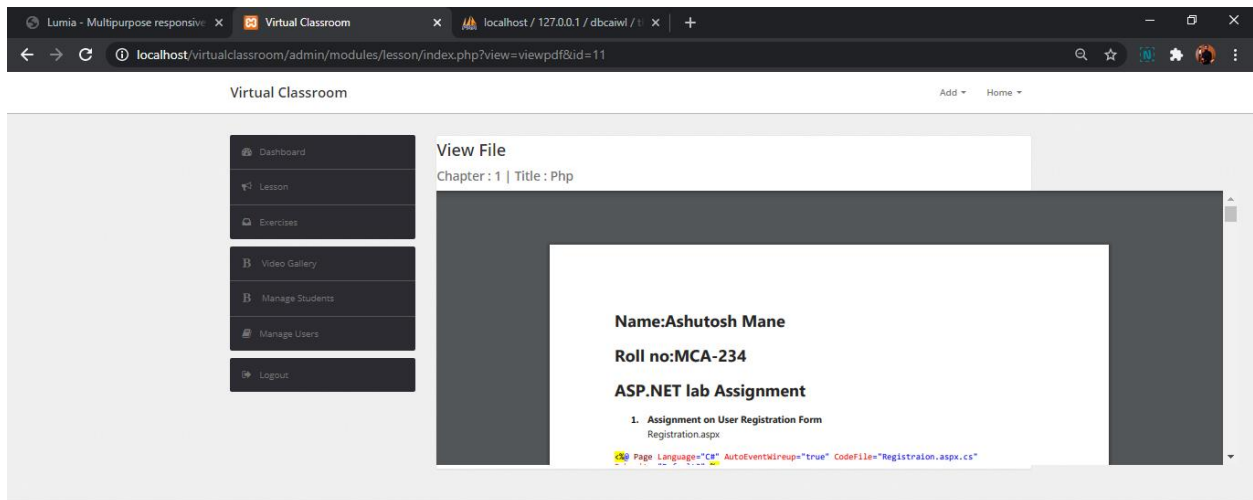


Image No:4(List of Question)

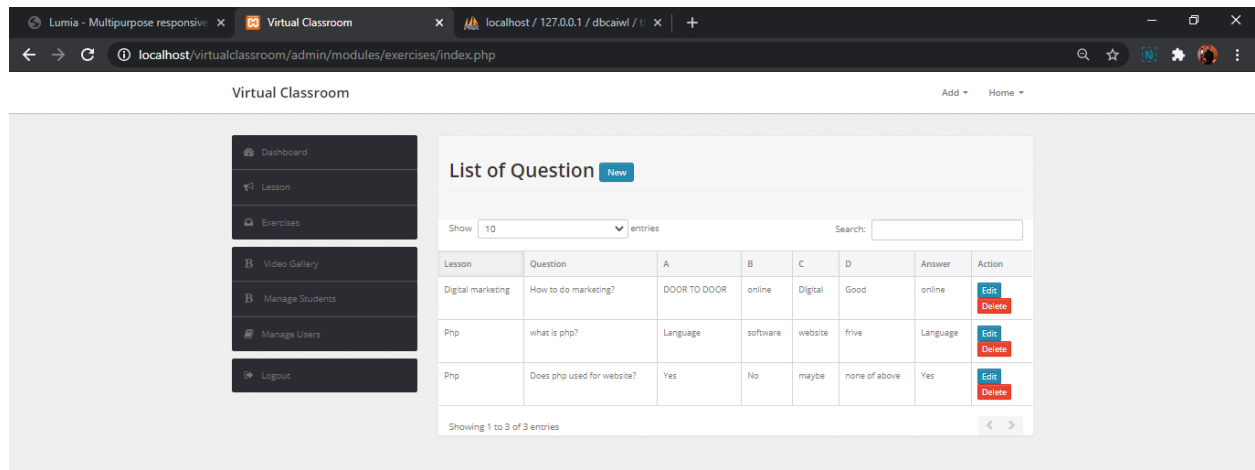


Image No:4(Add New Question)

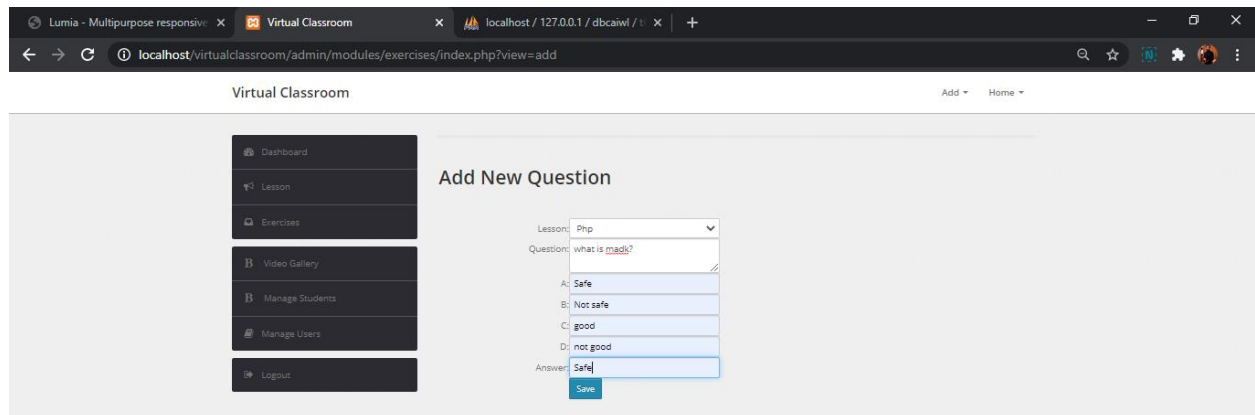


Image No:4(Update Question)

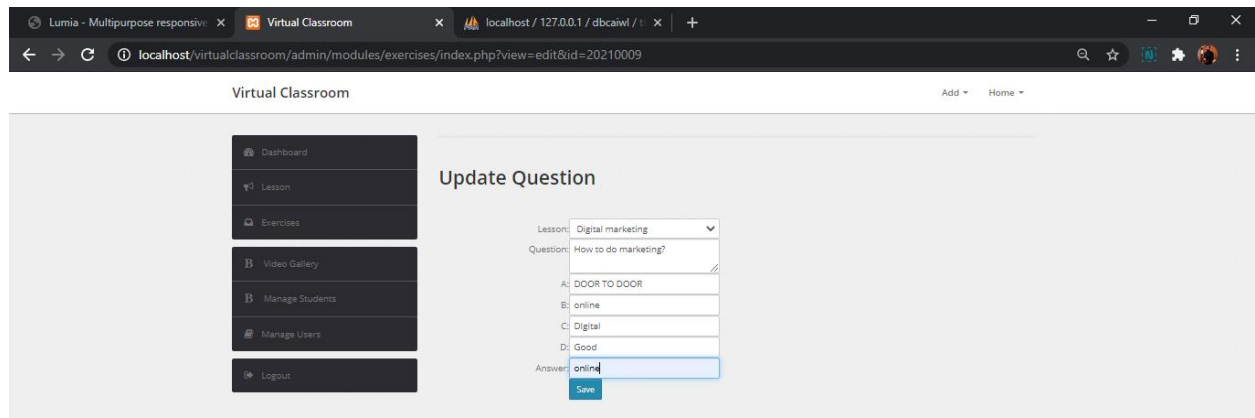


Image No:4(Video Gallery)

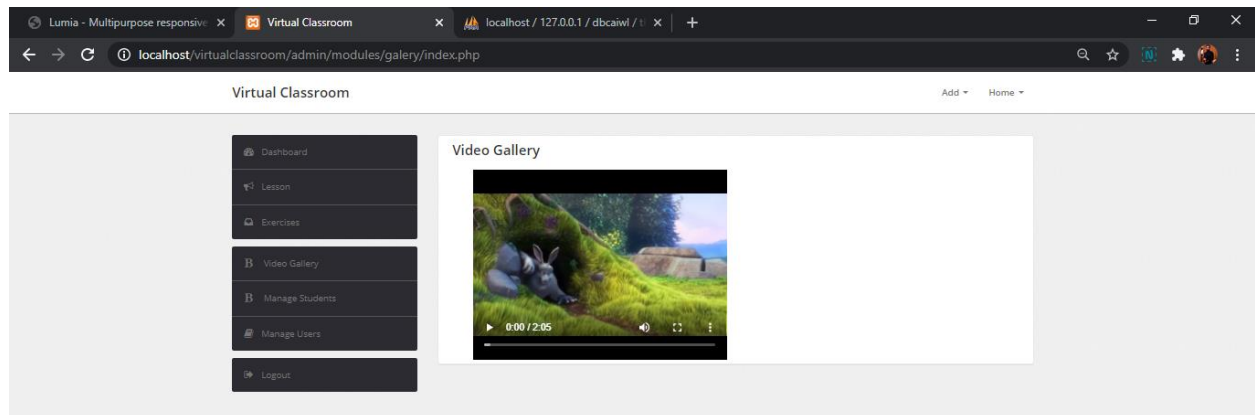


Image No:4(List of Students)

Virtual Classroom

Add Home

Dashboard

Lesson

Exercises

Video Gallery

Manage Students

Manage Users

Logout

List of Student

Show 10 entries Search:

Name	Address	Contact#
a a	a	21
Ashutosh Mane	SR.NO 43 PATHARE THUBE NAGAR, CHANDAN NAGAR, PUNE 14	8888817904
sd sad	sad	231

Showing 1 to 4 of 4 entries

Image No:4(List of User)

Virtual Classroom

Add Home

Dashboard

Lesson

Exercises

Video Gallery

Manage Students

Manage Users

Logout

List of Users

Show 10 entries Search:

Account Name	Username	Action
Akash	akki	Edit Delete
Ashutosh mane	ashu	Edit Delete

Showing 1 to 2 of 2 entries

Image No:4(Add new user)

The screenshot shows a web browser window with the URL `localhost/virtualclassroom/admin/modules/user/index.php?view=add`. The page title is "Virtual Classroom". On the left, there is a sidebar menu with options: Dashboard, Lesson, Exercises, Video Gallery, Manage Students, Manage Users, and Logout. The main content area is titled "Add New User" and contains a form with the following fields: Name (filled with "Ashutosh"), Username (filled with "ashutoshmane06@gmail.com"), Password (masked with "*****"), and Retype Password (masked with "*****"). Below the form are two buttons: "Save" and "List of Users".

Image No:4(Update user)

The screenshot shows a web browser window with the URL `localhost/virtualclassroom/admin/modules/user/index.php?view=edit&id=1`. The page title is "Virtual Classroom". On the left, there is a sidebar menu with options: Dashboard, Lesson, Exercises, Video Gallery, Manage Students, Manage Users, and Logout. The main content area is titled "Update User" and contains a form with the following fields: Name (filled with "Ashutosh mane"), Username (filled with "ashu"), Password (masked with "*****"), and Retype Password (masked with "*****"). Below the form are two buttons: "Save" and "List of Users".

TABLE SPECIFICATIONS

1)Exercise:-

Key	Field Name	Data Type	Null
Primary Key	ExerciseID	int(11)	Not Null
	LessonID	int(11)	Not Null
	Question	text	Not Null
	ChoiceA	text	Not Null
	ChoiceB	text	Not Null
	ChoiceC	text	Not Null
	ChoiceD	text	Not Null
	Answer	Varchar(90)	Not Null
	ExercisesDate	date	Not Null

2)Lesson:-

Key	Field Name	Data Type	Null
Primary Key	LessonId	varchar(90)	Not Null
	LessonChapter	varchar(90)	Not Null
	LessonTitle	text	Not Null
	FileLocation	varchar(90)	Not Null
	Category	varchar(90)	Not Null

3)Score:-

Key	Field Name	Data Type	Null
Primary Key	ScoreID	int(11)	Not Null
	LessonID	int(11)	Not Null
	ExerciseID	int(11)	Not Null
	StudentID	int(11)	Not Null
	NoItems	int(11)	Not Null
	Score	int(11)	Not Null
	Submitted	tinyint(1)	Not Null

4)Student:-

Key	Field Name	Data Type	Null
Primary Key	StudentId	varchar(90)	Not Null
	Fname	varchar(90)	Not Null
	Lname	varchar(90)	Not Null
	Address	varchar(90)	Not Null
	MobileNo	varchar(90)	Not Null
	STUDUSERNAME	varchar(90)	Not Null
	STUDPASS	varchar(90)	Not Null

5)USER:-

Key	Field Name	Data Type	Null
Primary Key	USERID	int(11)	Not Null
	NAME	varchar(90)	Not Null
	UEMAIL	varchar(90)	Not Null
	PASS	varchar(90)	Not Null
	TYPE	varchar(30)	Not Null

6)Student question:-

Key	Field Name	Data Type	Null
Primary Key	SQID	int(11)	Not Null
	ExerciseID	int(11)	Not Null
	LessonID	int(11)	Not Null
	StudentID	int(11)	Not Null
	Question	varchar(90)	Not Null
	CA	varchar(90)	Not Null
	CB	varchar(90)	Not Null
	CC	varchar(90)	Not Null
	CD	varchar(90)	Not Null
	QA	Varchar(90)	Not Null

Table No: 1

The screenshot shows the phpMyAdmin interface for the 'tblexercise' table. The table structure is as follows:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	ExerciseID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	LessonID	int(11)			No	None			Change Drop More
3	Question	text	latin1_swedish_ci		No	None			Change Drop More
4	ChoiceA	text	latin1_swedish_ci		No	None			Change Drop More
5	ChoiceB	text	latin1_swedish_ci		No	None			Change Drop More
6	ChoiceC	text	latin1_swedish_ci		No	None			Change Drop More
7	ChoiceD	text	latin1_swedish_ci		No	None			Change Drop More
8	Answer	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
9	ExercisesDate	date			No	None			Change Drop More

The 'Indexes' section shows a PRIMARY index on ExerciseID.

Table No: 2

The screenshot shows the phpMyAdmin interface for the 'tbllesson' table. The table structure is as follows:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	LessonID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	LessonChapter	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
3	LessonTitle	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
4	FileLocation	text	latin1_swedish_ci		No	None			Change Drop More
5	Category	varchar(90)	latin1_swedish_ci		No	None			Change Drop More

The 'Indexes' section shows a PRIMARY index on LessonID.

Table No: 3

The screenshot shows the phpMyAdmin interface for the 'tblscore' table. The table structure is as follows:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	ScoreID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	LessonID	int(11)			No	None			Change Drop More
3	ExerciseID	int(11)			No	None			Change Drop More
4	StudentID	int(11)			No	None			Change Drop More
5	NoItems	int(11)			No	1			Change Drop More
6	Score	int(11)			No	None			Change Drop More
7	Submitted	tinyint(1)			No	None			Change Drop More

Indexes:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	ScoreID	2	A	No	

Partitions: No partitioning defined!

Table No: 4

The screenshot shows the phpMyAdmin interface for the 'tblstudent' table. The table structure is as follows:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	StudentID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	Fname	varchar(80)	latin1_swedish_ci		No	None			Change Drop More
3	Lname	varchar(80)	latin1_swedish_ci		No	None			Change Drop More
4	Address	varchar(80)	latin1_swedish_ci		No	None			Change Drop More
5	MobileNo	varchar(80)	latin1_swedish_ci		No	None			Change Drop More
6	STUDUSERNAME	varchar(80)	latin1_swedish_ci		No	None			Change Drop More
7	STUDPASS	varchar(80)	latin1_swedish_ci		No	None			Change Drop More

Indexes:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	StudentID	2	A	No	

Partitions: No partitioning defined!

Table No: 5

The screenshot shows the phpMyAdmin interface for the database 'dbcaiw' and table 'tblstudentquestion'. The 'Table structure' tab is active, displaying the following table structure:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	SQID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	ExerciseID	int(11)			No	None			Change Drop More
3	LessonID	int(11)			No	None			Change Drop More
4	StudentID	int(11)			No	None			Change Drop More
5	Question	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
6	CA	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
7	CB	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
8	CC	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
9	CD	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
10	QA	varchar(90)	latin1_swedish_ci		No	None			Change Drop More

Below the table structure, the 'Indexes' section shows a primary index on the 'SQID' column:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	SQID	11	A	No	

The 'Partitions' section indicates 'No partitioning defined!'.

Table No: 6

The screenshot shows the phpMyAdmin interface for the database 'dbcaiw' and table 'tblusers'. The 'Table structure' tab is active, displaying the following table structure:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	USERID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	NAME	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
3	UEMAIL	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
4	PASS	varchar(90)	latin1_swedish_ci		No	None			Change Drop More
5	TYPE	varchar(30)	latin1_swedish_ci		No	None			Change Drop More

Below the table structure, the 'Indexes' section shows a primary index on the 'USERID' column:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	USERID	0	A	No	

The 'Partitions' section indicates 'No partitioning defined!'.

TESTING

TESTING AND CHARACTERISTICS OF TESTING

Testing of software is critical, since testing determines the correctness, completeness and quality of the software being developed. Its main objective is to detect errors in the software. Errors prevent software from producing outputs according to user requirements. They occur if some part of the developed system is found to be incorrect, incomplete, or inconsistent. Errors can broadly be classified into three types, namely, requirements errors, design errors, and programming errors. To avoid these errors, it is necessary that: requirements are examined for conformance to user needs, software design is consistent with the requirements and notational convention, and the source code is examined for conformance to the requirements specification, design documentation and user expectations. All this can be accomplished through efficacious means of software testing.

Software testing is aimed at identifying any bugs, errors, faults, or failures (if any) present in the software. Bug is defined as a logical mistake, which is caused by a software developer while writing the software code. Error is defined as the measure of deviation of the outputs given by the software from the outputs expected by the user. Fault is defined as the condition that leads to malfunctioning of the software. Malfunctioning of software is caused due to several reasons such as change in the design, architecture or software code. Defect that causes error in operation or negative impact is called failure. Failure is defined as that state of software under which it is unable to perform functions according to user requirements. Bugs, errors, faults and failures prevents the software from performing efficiently and hence cause the software to produce unexpected outputs. Errors can be present in the software due to the following reasons.

- **Programming errors:** Programmers can make mistakes while developing the source code.
- **Unclear requirements:** The user is not clear about the desired requirements or the developers are unable to understand the user requirements in a clear and concise manner.
- **Software complexity:** The greater the complexity of the software, the more the scope of committing an error (especially by an inexperienced developer).
- **Changing requirements:** The users usually keep on changing their requirements, and it becomes difficult to handle such changes in the later stage of development process. Therefore, there are chances of making mistakes while incorporating these changes in the software.
- **Time pressures:** Maintaining schedule of software projects is difficult. When deadlines are not met, the attempt to speed up the work causes errors.
- **Poorly documented code:** If the code is not well documented or well written, then maintaining and modifying it becomes difficult. This causes errors to occur.

CHARACTERISTICS OF SOFTWARE TESTING:

There are several tests (such as unit and integration) used for testing the software. Each test has its own characteristics. The following points, however, should be noted.

High probability of detecting errors: To detect maximum errors, the tester should understand the software thoroughly and try to find the possible ways in which the software can fail. For example, in a program to divide two numbers, the possible way in which the program can fail is when 2 and 0 are given as inputs and 2 is to be divided by 0. In this case, a set of tests should be developed that can demonstrate an error in the division operator.

No redundancy: Resources and testing time are limited in software development process. Thus, it is not beneficial to develop several tests, which have the same intended purpose. Every test should have a distinct purpose.

Choose the most appropriate test: There can be different tests that have the same intent but due to certain limitations such as time and resource constraint, only few of them are used. In such a case, the tests, which are likely to find more number of errors, should be considered.

Moderate: A test is considered good if it is neither too simple, nor too complex. Many tests can be combined to form one test case. However this can increase the complexity and leave many errors undetected. Hence, all tests should be performed separately.

TEST CASES

No	Data input	Excepted Output	Actual Output	Pass / Fail
1	All fields are empty	Error message: *please fill out this field*	Error message: * please fill out this field *	Pass
2	Password validty check	Error message: "Must contain at least one number and one uppcase and lowercase letter, and at least 8 or more characters"	Error message: "Must contain at least one number and one uppcase and lowercase letter, and at least 8 or more characters"	Pass
3	Login	The System give an error and denied From Login	Login should fail with an error 'Invalid Username and Password'	Pass

No	Data input	Excepted Output	Actual Output	Pass / Fail
4	Register	*You are now successfully registered.You can login now*	* You are now successfully registered.You can login now *	Pass
5	View exercises	Student will be able to see the exercise questions and attempt it	Student will be able to see the exercise questions and attempt it	Pass
6	View score	The score for solved exercises will be displayed to student	The score for solved exercises will be displayed to student	Pass
7	View Videos	The video will be viewed successfully by students	The video will be viewed successfully by students	Pass
8	View Pdf/doc file	The file will be viewed successfully by students	The file will be viewed successfully by students	Pass
9	Username and password required	Error message *User name required* *Password required*	Error message *User name required* *Password required*	Pass
10	View video gallery	The uploaded videos will be viewed successfully by admin	The uploaded videos will be viewed successfully by admin	Pass
11	Manage users	Admin can delete users with delete button	Admin can delete users with delete button	Pass

Image No:1(All fields compulsory)

Inbox (4,004) - ashutoshmane X Meet - noe-vqob-oyw X WhatsApp X localhost / 127.0.0.1 / dbcaivl X Au Register Forms by Colorlib X

localhost/virtualclassroom/register.php

Registration Info

Firstname

Lastname ⚠ Please fill out this field.

Address

Phone

Username

Password

[Submit](#)

[Back to Login](#)

Type here to search

10:01 PM 1/11/2021

Image No: 2(Password validity check)

Inbox (4,004) - ashutoshmane X Meet - noe-vqob-oyw X WhatsApp X localhost / 127.0.0.1 / dbcaivl X Au Register Forms by Colorlib X

localhost/virtualclassroom/register.php

Registration Info

Name

Santosh

SR.NO 43,PATHARE THUBE NAGAR,CHANDANNAGAR,PUNE14

07057393255

omii

⚠ Please match the requested format.
Must contain at least one number and one uppercase and lowercase letter, and at least 8 or more characters

[Submit](#)

[Back to Login](#)

Type here to search

10:01 PM 1/11/2021

Image No: 3(Invalid username and password)

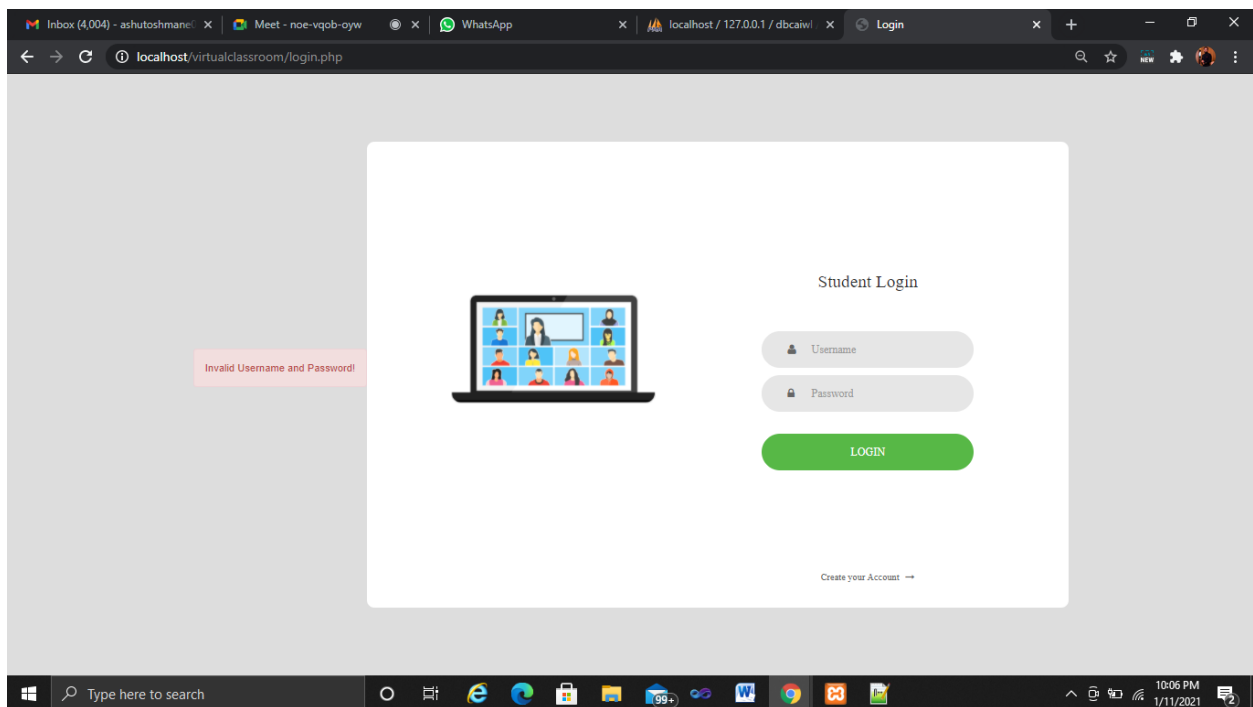


Image No: 4(Account doesn't exist)

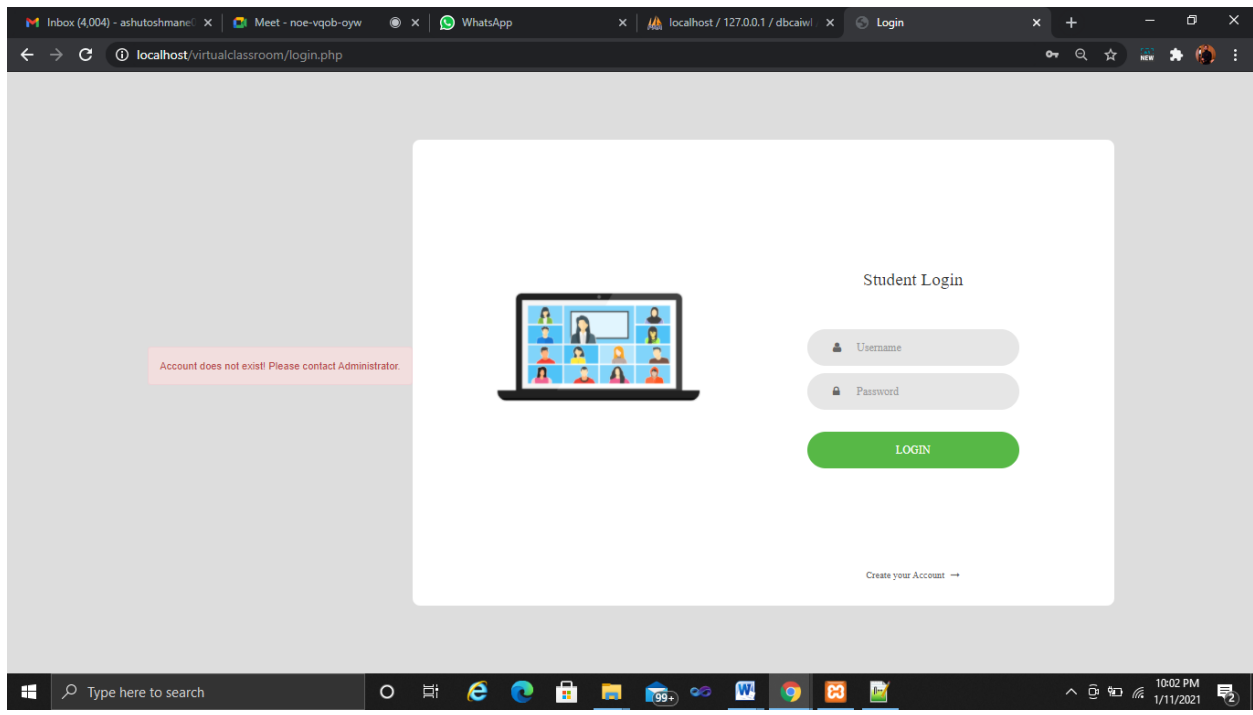


Image No: 5(Student registration successful)

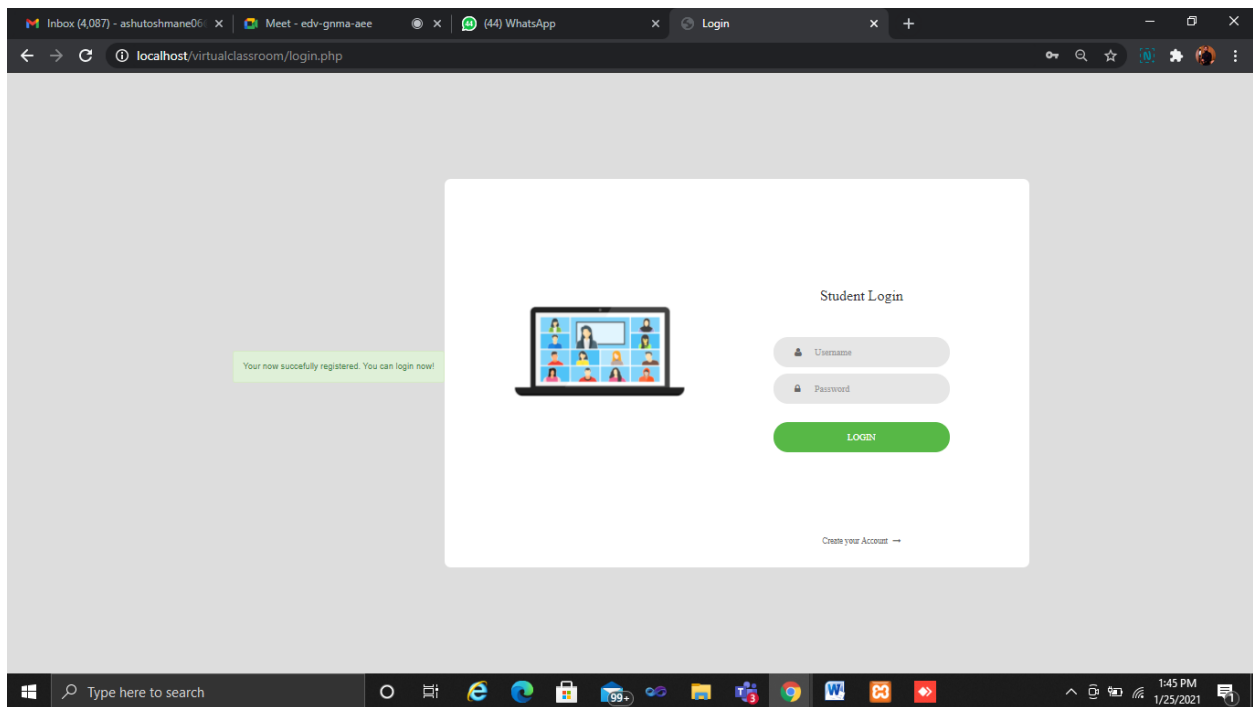


Image No: 5(Admin login username required)

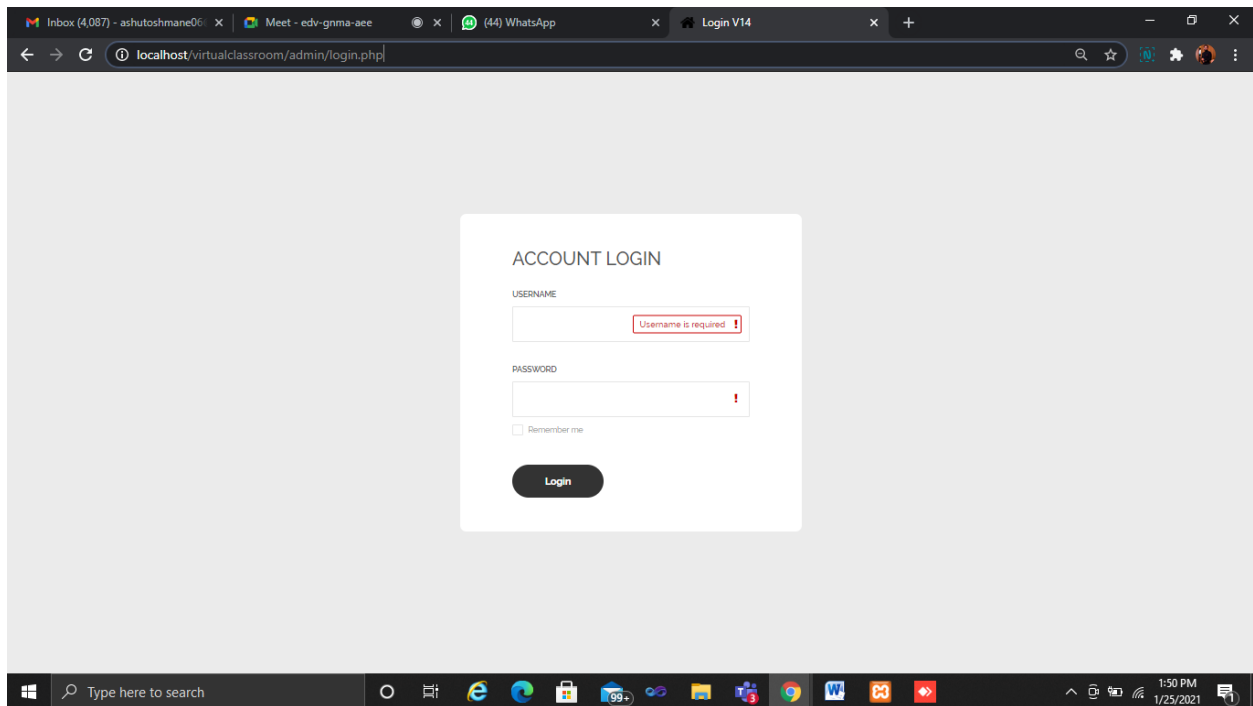
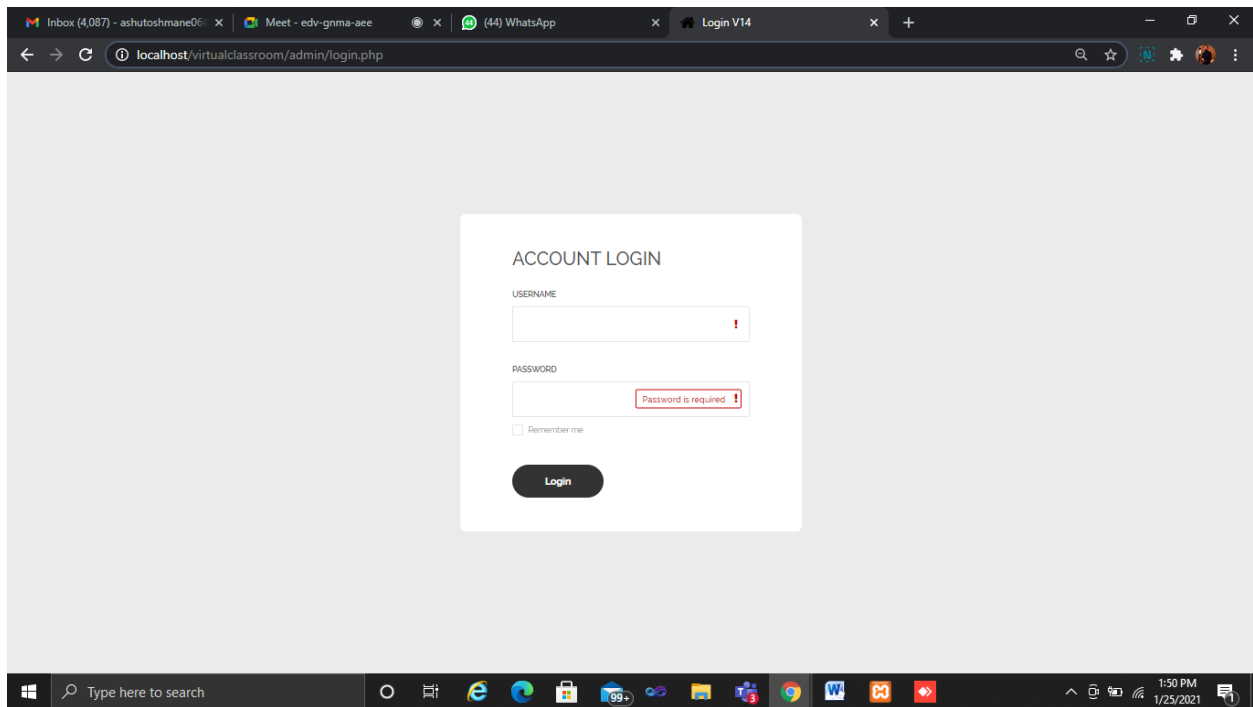


Image No: 5(Admin login password required)



LIMITATIONS AND DRAWBACKS

LIMITATIONS:

1. The virtual classroom is for limited students just like a personal class and not for the whole college/university.
2. Students are not able to attend the live lectures.
3. No control over the learning atmosphere or environment.
4. Virtual Classroom requires computers and internet access, which might not be at hand to everyone.

DRAWBACKS:

1. Physical Activity Is Compromised.
2. Effects Of Excess Screen Time On Students which leads to pain in eyes and specs.
3. Reduced Personal Interaction Between Teacher & Students.
4. No discipline in students as teacher cannot see whether the student is honestly attending the lectures.

PROPOSED ENHANCEMENTS

1. We will be expanding the scope of system for university/college level.
2. Engage students frequently.
3. Students can attend live lectures.
4. Student will be able to interact with their classmates to get a classroom feel.

CONCLUSIONS

1. The project is very feasible for students with basic computer knowledge so it is very user friendly.
2. It helps Students in getting information about the ppts ,videos and exrercises uploaded by teachers.
3. The project is ready to be used by the user and all the validations are checked and tested.

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ANNEXURE(WEEKLY REPORT)

WEEK 1

Week: Start date and End Date : 16th November- 23rd november

Project Title: Virtual Classroom

Team detail

Roll No	Name
234	Ashutosh Mane
238	Sujeet Patil
213	Akash Desai

Plan for the week (Last Week)

We planned on deciding the overall flow of the project.also palnned about the database design and no of tables along with attribute with the help of ER diagram.We have also discussed about how interface would look.

Outcome of the week

We have a clear idea about the working of our project.We have a clear ER diagram and also the database which includes the tables and attributes of table.

Skill Gained

We have gained the skill of information gathering and also about the designing of database .

Major Challenges

We faced problems while deciding the attributes for the table.

Plan for the Next week

Our plan for next week is to complete the interface of all dynamic pages and also some part of backend.

WEEK 2

Week: Start date and End Date : 23rd November – 1st December

Project Title: Virtual Classroom

Team detail

Roll No	Name
234	Ashutosh Mane
238	Sujeet Patil
213	Akash Desai

Plan for the week (Last Week)

We planned on deciding the pages designing of login sign up and home pages

Outcome of the week

We have completed the interface of some dynamic pages and also some part of backend.

Skill Gained

We have gained the skill of designing the web pages.

Major Challenges

We faced problems while fetching data from database the config part.

Plan for the Next week

Our plan for next week is to complete the interface of all dynamic pages of admin as well as student side.

WEEK 3

Week: Start date and End Date : 1st December – 8th December

Project Title: Virtual Classroom

Team detail

Roll No	Name
234	Ashutosh Mane
238	Sujeet Patil
213	Akash Desai

Plan for the week (Last Week)

We planned to complete the interface of all dynamic pages of admin and some part of student side.

Outcome of the week

We have completed the pages of admin side of lessons uploading, questions/exercise uploading and viewing the students info and on student side we have completed the student homepage and exercise viewing part for student.

Skill Gained

We have gained the knowledge of inserting data into database using web pages.

Major Challenges

We faced problems while uploading the files from the computer device to our database as we were entering wrong location for the uploaded data.

Plan for the Next week

Our plan for next week is to work on the designed pages to look more attractive and user friendly and also some backend part of admin as well as student side

WEEK 4

Week: Start date and End Date : 9TH December – 14TH December

Project Title: Virtual Classroom

Team detail

Roll No	Name
234	Ashutosh Mane
238	SujeetPatil
213	Akash Desai

Plan for the week (Last Week)

Our plan for next week is to work on the designed pages to look more attractive and user friendly and also some backend part of admin as well as student side

Outcome of the week

We have completed the pages of admin side of lessons uploading, questions/exercise uploading and viewing the students info and also able to view the list of users.

Skill Gained

We have gained the knowledge of aligning data in tabular format and backend retrieval of data.

Major Challenges

We faced problems while adding the answers to questions and also uploading the files from the computer device to our database as we were entering wrong location for the uploaded data.

Plan for the Next week

Our plan for next week is to work on some part of student side .

WEEK 5

Week: Start date and End Date : 14TH December – 22nd December

Project Title: Virtual Classroom

Team detail

Roll No	Name
234	Ashutosh Mane
238	Sujeet Patil
213	Akash Desai

Plan for the week (Last Week)

Our plan for next week is to work on the designed pages to look more attractive and user friendly and Our plan for next week is to work on some part of student side .

Outcome of the week

We have completed some pages of student side which include login page, home page, register page.

Skill Gained

We have gained the knowledge of validation of the data while registration for example password validation check etc.

Major Challenges

We faced problems while adding the answers to questions and while retrieving the score of the student .

Plan for the Next week

Our plan for next week is to work on some part of student side .

WEEK 6

Week: Start date and End Date : 22nd December – 29th December

Project Title: Virtual Classroom

Team detail

Roll No	Name
234	Ashutosh Mane
238	Sujeet Patil
213	Akash Desai

Plan for the week (Last Week)

Our plan for the week was to work on some part of student side .

Outcome of the week

We have completed some pages of student side which include login page, home page, register page and also the pages where student can view the files and video uploaded by teacher.

Skill Gained

We have gained the knowledge of validation of the data while registration for example password validation check and empty field validation check.

Major Challenges

We faced problems while adding the answers to questions and while retrieving the score of the student and downloading data uploaded by teachers.

Plan for the Next week

Our plan for next week is to complete the student side.

