

LEARNING MANAGEMENT SYSTEM FOR MCS

(SEMESTER PROJECT
DOCUMENTATION)

Team Members:

- PC Aliya Fatima
- PC Ayesha Saleem
(BESE-24C)

Technologies used:

1. Frontend:

- HTML 5
- CSS
- Bootstrap 4 (CSS Framework)
- Javascript
- JQuery
- Popper (positioning engine)
- Calander.js (calendar plugin)
- Chart.js (data visualization plugin)

2. Database:

- MySQL

3. Backend:

- Node.js (run time environment)
- Express
- Express handlebars (templating engine)

Software used:

1. For Coding:

- Visual Studio Code

- Sublime text

2. For Database:

- XAMPP

3. Hosting:

- Google Chrome localhost

Software Required:

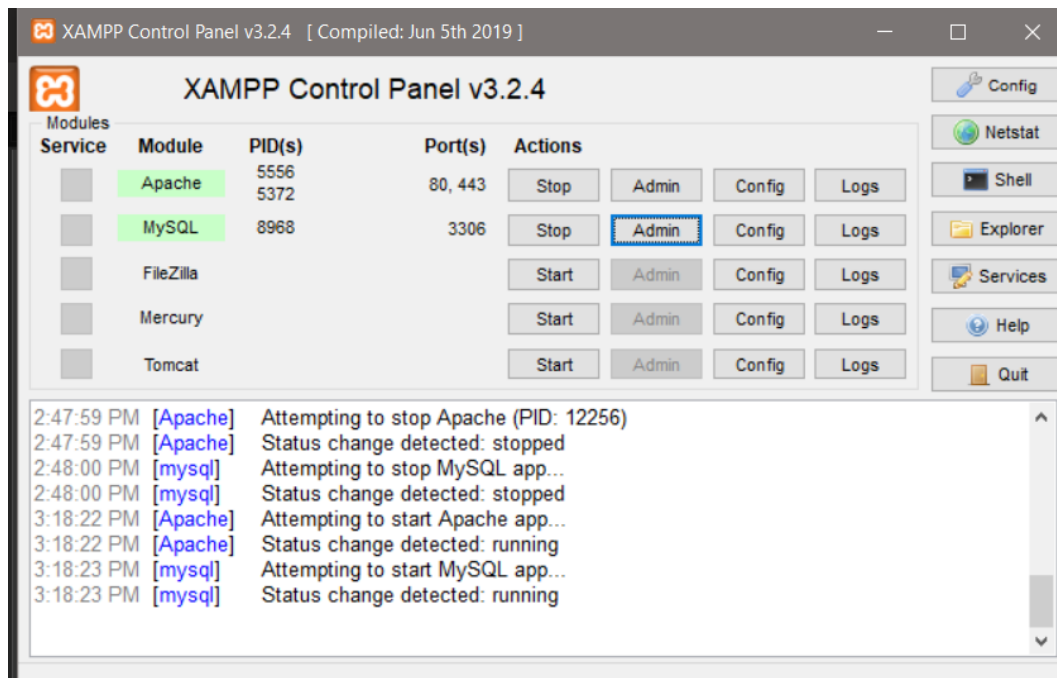
Software for running the code

- XAMPP
- MySql
- Any browser

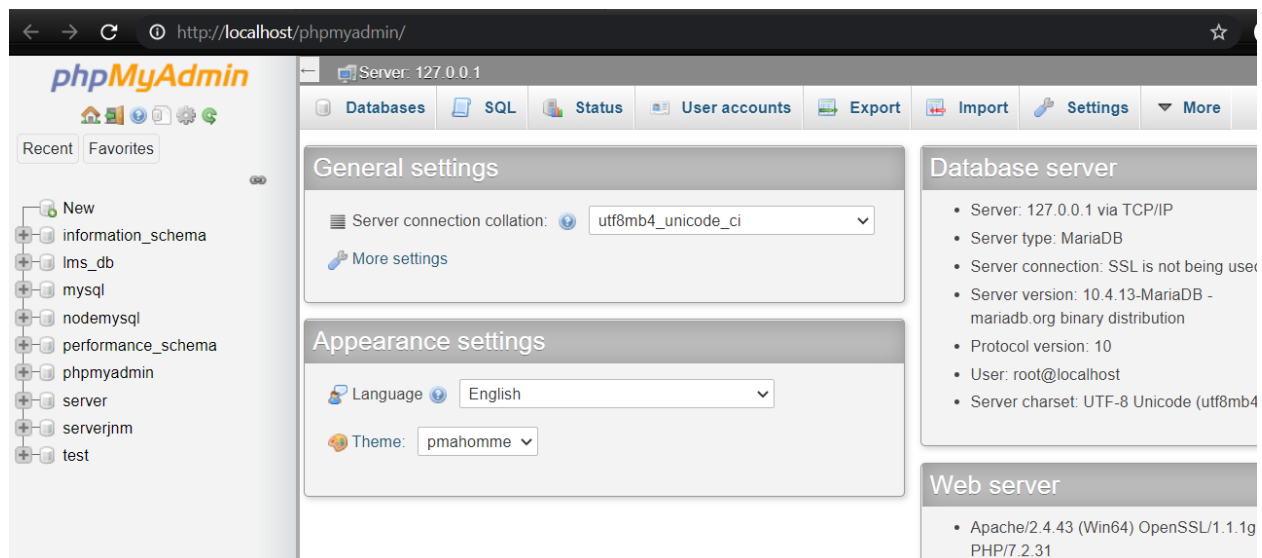
How to run the Code:

1. Setup:

- Install XAMPP and MySQL
- Once installed, open the XAMPP control panel and start Apache and MySQL actions.
(Apache and MySql modules will turn green as shown below)
- Then click on admin button marked in the picture below.



- The admin will open phpMyAdmin in localhost of your default browser. (as shown below)



- Click on new and type the name of database as “lms_db”.

Databases

 **Create database** 

<input type="text" value="lms_db"/>	<input type="text" value="utf8mb4_general_ci"/>	<input type="button" value="Create"/>
-------------------------------------	---	---------------------------------------

Database	Collation	Action
<input type="checkbox"/> information schema	utf8_general_ci	Check privileges

- Now click on create and a database will be created and created database will be opened
- Choose insert option and click on choose file option



Importing into the database "lms_db"

File to import:

File may be compressed (gzip, bzip2, zip) or uncompressed.

A compressed file's name must end in **.[format].[compression]**. Example: **.sql.zip**

Browse your computer: No file chosen (Max: 40MiB)

You may also drag and drop a file on any page.

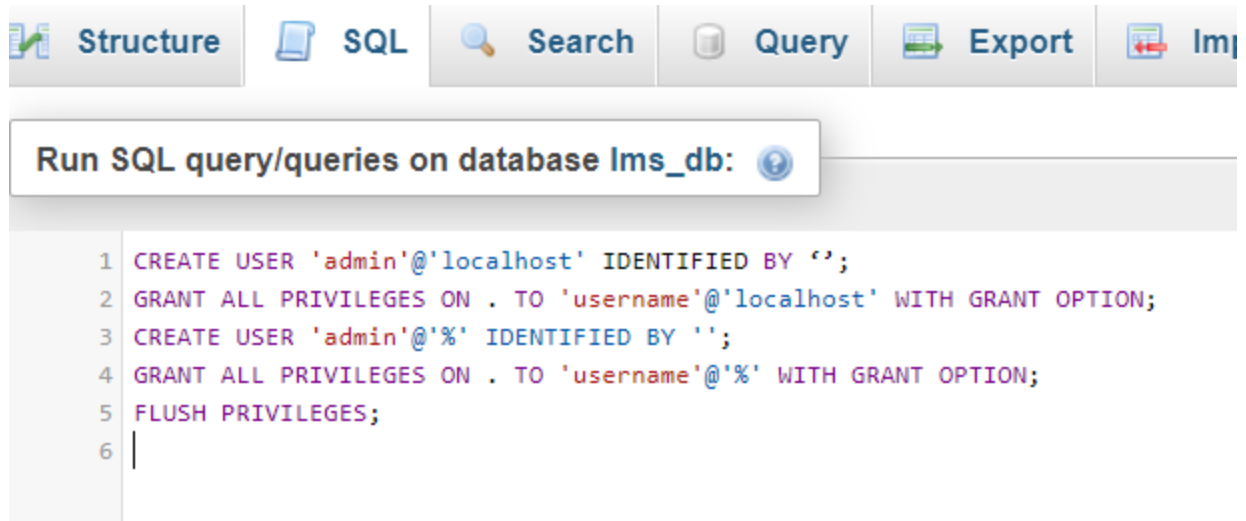
Character set of the file:

- Choose the lms_db.sql file in the folder and click on go. It will take some time to load the database.
(Following db will be created.)

Server: 127.0.0.1 » Database: lms_db						
Structure SQL Search Query Export Import Operations More						
Table	Action	Rows	Type	Collation		
<input type="checkbox"/> admin	★ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> assignments	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> assi_of_st	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> batch	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> courses	★ Browse Structure Search Insert Empty Drop	12	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> instructor	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> inst_teach_st	★ Browse Structure Search Insert Empty Drop	12	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> lectures	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> quizzes	★ Browse Structure Search Insert Empty Drop	22	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> quiz_of_st	★ Browse Structure Search Insert Empty Drop	20	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> student	★ Browse Structure Search Insert Empty Drop	12	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> st_in_courses	★ Browse Structure Search Insert Empty Drop	5	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> users	★ Browse Structure Search Insert Empty Drop	17	InnoDB	utf8mb4_general_ci		
<input type="checkbox"/> user type	★ Browse Structure Search Insert Empty Drop	3	InnoDB	utf8mb4_general_ci		

- Now click in Sql option and copy the following code to create a user with all kind of privileges and click on go.

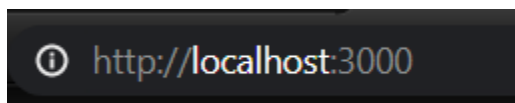
```
CREATE USER 'admin'@'localhost' IDENTIFIED BY '';
GRANT ALL PRIVILEGES ON . TO 'username'@'localhost' WITH GRANT OPTION;
CREATE USER 'admin'@'%' IDENTIFIED BY '';
GRANT ALL PRIVILEGES ON . TO 'username'@'%' WITH GRANT OPTION;
FLUSH PRIVILEGES;
```



- Now open your code editor (preferred vs code) and in the terminal write “node app.js”
(if you are using any other editor first change your directory to specific folder)
- Following thing will be displayed in the console which shows the app is running in port 3000 and is connected to database

```
PS C:\Users\asim\Desktop\web engineering\Websites\user authentication> node app.js
Node server is running..
Mysql Connected...
█
```

- Now open the browser at local host 3000



- Following landing page will be loaded



LMS Statistics



Total Students

124



Total Instructors

124



Total Courses

124



Graduates

124

About

[Documentation](#)

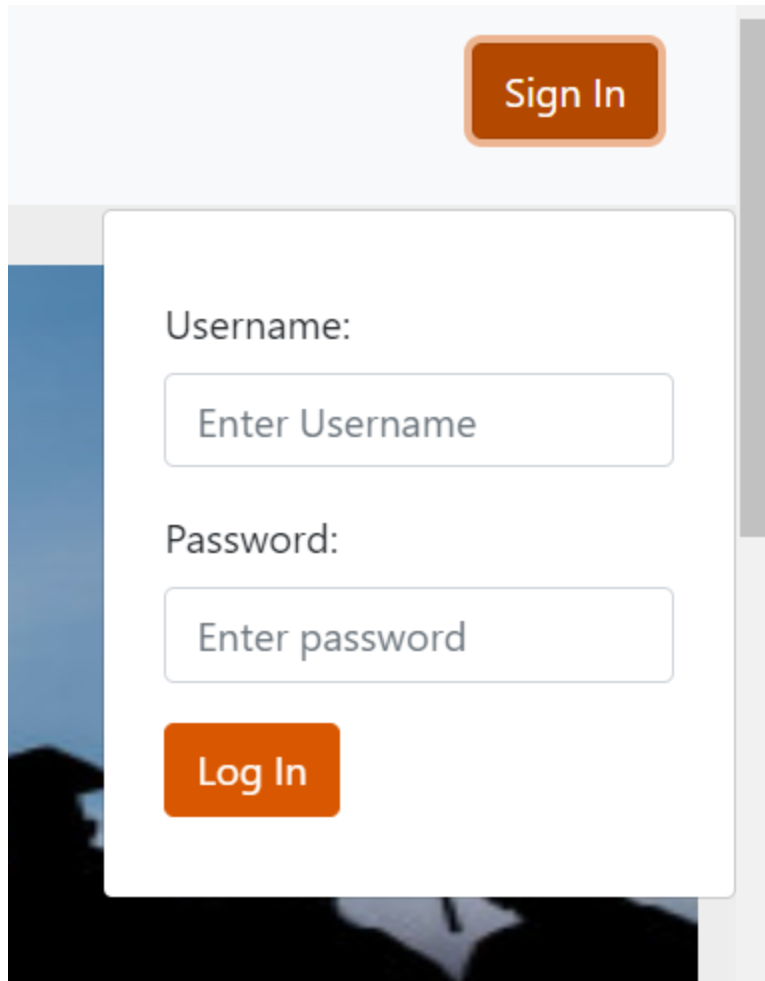
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- Now click on sign in following dropdown menu will open up. Add any credential from the db. (correct credentials will open up dashboard of specific user type wrong credentials will redirect page to landing page.)



Project Description:

1. Introduction:

The LMS Web application is a management app for students and teachers.

- Supports 3 modules
- Is fully responsive (can adjust and run on different screen width)
- Is Dynamic

2. Modules:



- Instructor module

- Student module
- Teacher module

3. Student Functionality:

Students can

- View dashboard the displays his/her current enrolled course

Isha Imad

Dashboard Calander Weekly Statistics

Quick Updates

New Assignments

New Course Content

New Grades

Upcomming Events

Assignment 1

03-11-2021, Thursday 09:00PM


Quiz

03-11-2021, Thursday 09:00PM

Quiz 2

03-11-2021, Thursday 09:00PM

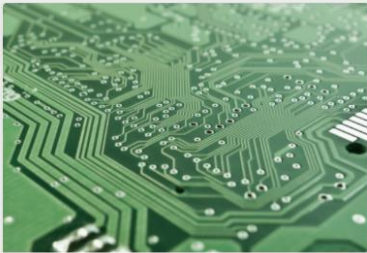
Courses In Progress




CS-301 : Artificial Intelligence

Semester: 8
 Instrctor: Ayesha Naeem
 Credit hours: 3+1

Visit Course Page





CS-302 : Cloud Computing

Semester: 8
 Instrctor: Ali Murtaza
 Credit hours: 3+1

Visit Course Page

CS-303 : FYP

Semester: 8

Instructor: Mohsin Ali

Credit hours: 3+1

[Visit Course Page](#)

About

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- View events in calendar form

[Dashboard](#) [Calander](#) [Weekly Statistics](#)

<

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today

March 2021

month

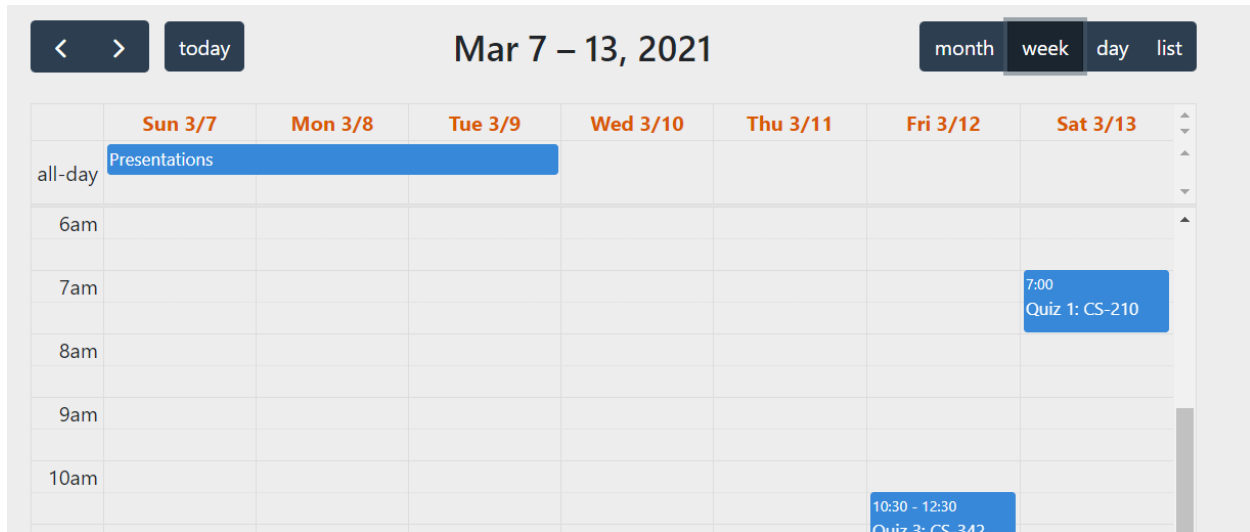
week

day

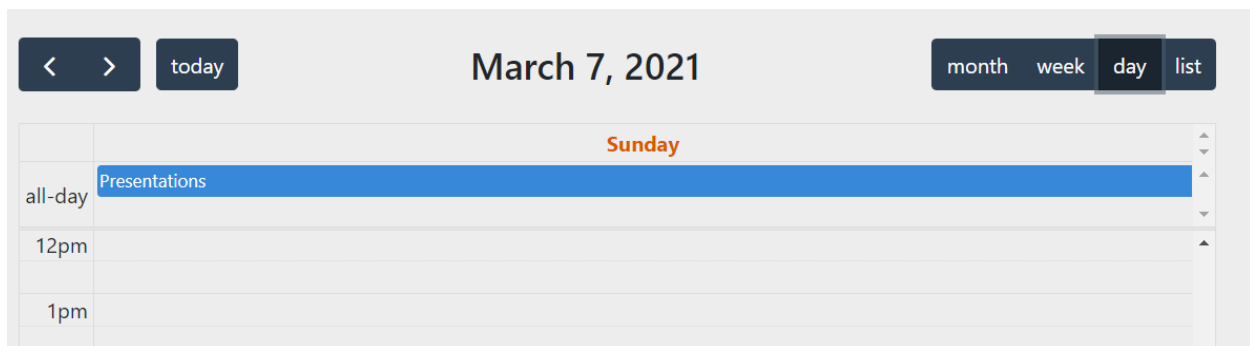
list

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	1 Assignment 1	2	3	4	5	6
7 Presentations	8	9	10	11	12 10:30a Quiz 3: CS-	13 7a Quiz 1: CS-210
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

- Calander can be in week view



- It can be in day view



- It can be in list view

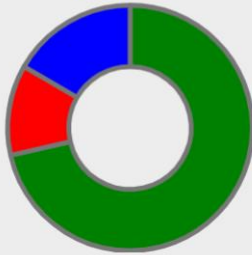


- Student can view his weekly statistics

Statistics of this Week

Weekly Attendance

Attended Missed
Late



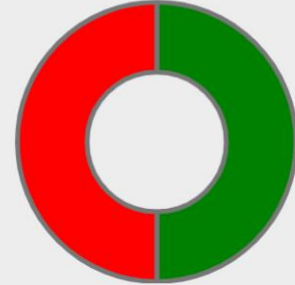
Weekly Assignmnets

Submitted Missed
Late



Weekly Quizes

Taken Missed



- View can their enrolled courses in list form

(Students can visit courses from both dashboard and my courses pages)

All enrolled courses

Course Name	Course Code	Semester	Instructor	Status	
Artifical Intellegence	SE-301	8th	Ayesha Naeem	In Progress	Visit Course
Cloud Computing	SE-302	8th	Ali Murtaza	In Progress	Visit Course
FYP	SE-303	8th	Moahsin Ali	In Progress	Visit Course

- Following course dashboard opens on clicking visiting course



- Student can view his course attendance

BESE-24C
Artificial Intelligence

Sr No.	Date	Attendance Status	Details
1.	13/3/2021	Present	Report
2.	13/3/2021	Absent	Report
3.	13/3/2021	Present	Report

[Back](#)

- Student can report any issue in attendance.

Report Attendance Issue

Date: 13/3/2021

Subject: Artificial Intelligence

Report your problem here...

[Back](#) [Submit](#)

- Students can view his assignments

Artificial Intelligence

Assignment 1

3/13/2021

[View Assignment](#)

Assignment 2

[View Assignment](#)

- Students can submit the assignment

Artificial Intelligence

Name

File Name

Due Date

File

Choose File

No file chosen

Back

Submit

- Students can view his course lectures

Artificial Intelligence

Lecture 1: Intro to AI

3/13/2021

Download Lecture

Lecture 2: Intro to AI

3/13/2021

Download Lecture

- Students can view course grades

BESE-24C
Artificial Intelligence

Sr No.	Date	Task	Obtained Marks	Total Marks	Class Average
1.	13/3/2021	Assignment 1	9	10	6
2.	13/3/2021	Quiz 1	9	10	6
3.	13/3/2021	Project	15	20	13

Back

- Students can view any announcements in the course


Artificial Intelligence



Quiz 2 will be held on Thursday, 13/3/2021

Back

- Students can visit their profile



Ayesha Saleem
asaleem.bese-24mcs

ID # 3654
Course: BESE 24C
Semester: 6th

Edit Profile

Personal Information

Password: *****
Collage Email: asaleem.bese-24mcs@student.nust.mcs.edu.pk
Personal Email: aishasaleem699@gmail.com
Contact no: +92 3155487713

Linked Accounts

LinkedIn: <https://www.linkedin.com/in/ayesha-saleem-223397175/>
Github: <https://github.com/Ayesha699>
Online Profile: <https://info-me/ayesha-saleem/>

- Can edit their profile

Back to Dashboard

Name:

Ayesha Saleem

Username:

asaleem.bese-24mcs

ID Number:

3456

Course:

BESE-24C

Semester:

6th

College Email:

asaleem

Personal Email:

aishasaleem

Password:

Confirm Password:

Contact number:

+92-3xx-xxxxxxx

Github Account:

LinkedIn Account:

Online Profile:

Submit

- In case of issue students can visit help center where they can read documentation and contact admin.

[Back to Dashboard](#)

≡

Problem in Operating LMS

If you are facing any problem in operating the software visit the documentation.
link is given below....

Visit Documentation

If the issue is still not resolved contact our technical staff.

Contact Staff

Report Issue

Enter your problem in precise and clear words:

Report your problem here...

Submit

4. Teacher's Functionality:

- Teachers can login similarly as students and can view their courses in the dashboard



LMS
LEARNING
MANAGEMENT SYSTEM



Ayesha Naeem

Dashboard

Calander

Weekly Statistics



Quick Updates

New Assignments

New Course Content

New Grades

Upcomming Events

Courses In Progress

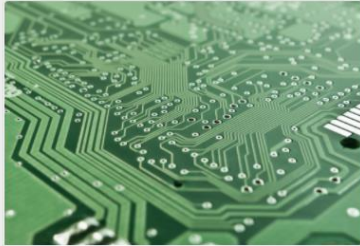


Assignment 1
03-11-2021, Thursday
09:00PM

Quiz
03-11-2021, Thursday
09:00PM

Quiz 2
03-11-2021, Thursday
09:00PM

CS-301 : Artificial Intelligence
Semester: 8
Credit hours: 3+1
[Visit Course Page](#)



IS-306 : Cryptography
Semester: 6
Credit hours: 3+1
[Visit Course Page](#)

CS-309 : Computer Networks
Semester: 4
Credit hours: 3+1
[Visit Course Page](#)

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- Teachers can view events in calendar form

Dashboard
Calander
Weekly Statistics

<
>
today

March 2021

month
week
day
list

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	1 Assignment 1	2	3	4	5	6
7 Presentations	8	9	10	11	12 10:30a Quiz 3: CS-	13 7a Quiz 1: CS-210

	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31	1	2	3

- Calendar can be in week view

<	>	today	Mar 7 – 13, 2021					month	week	day	list
	Sun 3/7	Mon 3/8	Tue 3/9	Wed 3/10	Thu 3/11	Fri 3/12	Sat 3/13				
all-day	Presentations										
6am											
7am							7:00 Quiz 1: CS-210				
8am											
9am											
10am											
						10:30 - 12:30 Quiz 3: CS-342					

- It can be in day view

<

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today

March 7, 2021

month

week

day

list

	Sunday	
all-day	Presentations	
12pm		
1pm		

- It can be in list view

<

>

today

Mar 7 – 13, 2021

month

week

day

list

Sunday		March 7, 2021	
all-day	<div></div> Presentations		
Monday		March 8, 2021	
all-day	<div></div> Presentations		
Tuesday		March 9, 2021	
all-day	<div></div> Presentations		
Friday		March 12, 2021	
10:30am - 12:30pm	<div></div> Quiz 3: CS-342		

- Teachers can add event on clicking on any date on the calander
And is added in the db and calander

localhost:3000 says
Event Title:

OK

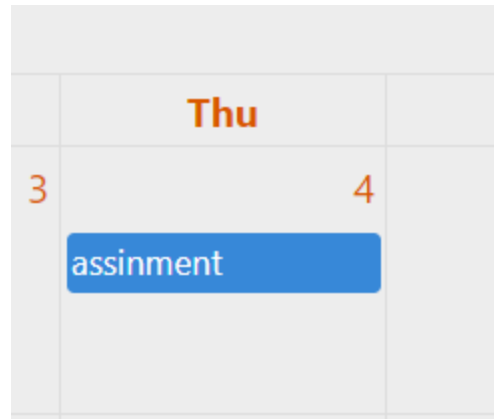
Cancel

March 2021

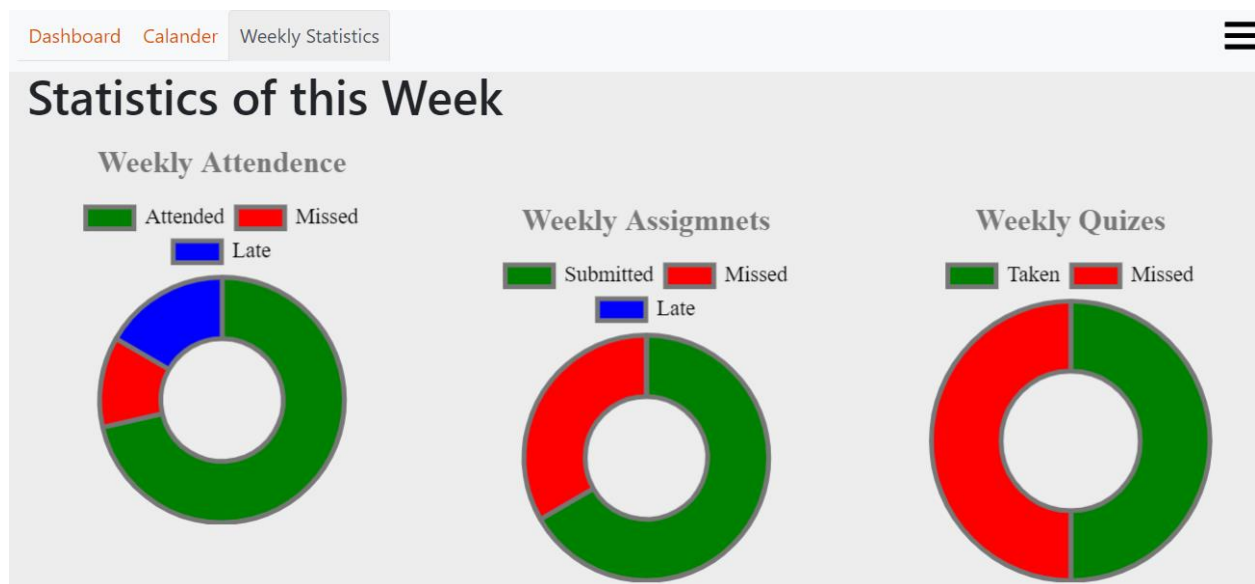
month

week

	Tue	Wed	Thu	Fri	
1	2	3	4	5	



- Teachers can view his weekly statistics



- View can their enrolled courses in list form

(Teachers can visit courses from both dashboard and my courses pages)

All enrolled courses

Course Name	Course Code	Semester	Status	Total Students	
Artifical Intellegence	SE-300	6th	In Progress	34	Visit Course
Artifical Intellegence	SE-300	6th	In Progress	34	Visit Course
Artifical Intellegence	SE-300	6th	In Progress	34	Visit Course

- Following course dashboard opens on clicking visiting course



- Teachers can add attendance

[Add New Attendance](#) [View Previous Attendance](#)

Artificial Intelligence

Date

Sr No.	Student Id	Student Name	Present
1.	000221	Aliya Fatima	<input checked="" type="checkbox"/>
2.	000222	Ayesha Saleem	<input checked="" type="checkbox"/>
3.	000223	Momina Ali	<input checked="" type="checkbox"/>

[Submit](#)

- They can also view previous attendance

Lecture 1

3/13/2021

[View Attendance](#)

Lecture 2

3/13/2021

[View Attendance](#)

BESE-24C Artificial Intelligence

Sr No.	Student Id	Student Name	Attendance Status
1.	000221	Aliya Fatima	Present
2.	000222	Ayesha Saleem	Present
3.	000223	Momina Ali	Absent

[Back](#)

- Teachers can upload assignments

Artificial Intelligence

[Add Activity](#)

Assignment 1

3/13/2021

[Upload Assignment](#)

Assignment 2

[Upload Assignment](#)

Artificial Intelligence

Name

File Name

Due Date

mm/dd/yyyy --:-- --



Select File

Choose File

No file chosen

- Can view submitted assignments

UnGraded Graded

Artificial Intelligence

Assignment 1

3/13/2021

View

Quiz 1

3/13/2021

View

- Can view graded ones

BESE-24C
Artificial Intelligence
Assignment 1

Sr No.	Student Id	Student Name	File	Obtained Marks	Total Marks	Details
1.	000221	Aliya Fatima	.	0	10	Edit
2.	000222	Ayesha Saleem	.	0	10	Edit
3.	000223	Momina Ali	.	0	10	Edit

[Back](#)

- Can view ungraded ones

Assignment 3

3/13/2021

[Grade](#)

Quiz 2

3/13/2021

[Grade](#)

- And add grades

BESE-24C
Artificial Intelligence
Assignment 1

Sr No.	Student Id	Student Name	File	Obtained Marks	Total Marks
1.	000221	Aliya Fatima	.	<input type="text"/>	10
2.	000222	Ayesha Saleem	.	<input type="text"/>	10
3.	000223	Momina Ali	.	<input type="text"/>	10

[Back](#) [Save](#)

- Can view lectures

Artificial Intelligence

[Add Lecture](#)

Lecture 1: Intro to AI

3/13/2021

[Upload Lecture](#)

Lecture 2: Intro to AI

3/13/2021

[Upload Lecture](#)

- And upload new lectures

Artificial Intelligence

Name

File Name

File

Select File

Choose File

No file chosen

- They can view and add announcements

Artificial Intelligence




Quiz 2 will be held on Thursday, 13/3/2021

Back

Add Announcement

- The rest of the features are same including viewing profile, editing profile and asking for help.



Dr Naima Altaf
naltaf@mcs

ID # 3654

Edit Profile

Personal Information


Password: *****
Collage Email: asaleem.bese-24mcs@student.nust.mcs.edu.pk
Personal Email: aishasaleem699@gmail.com
Contact no: +92 3155487713

Linked Accounts


LinkedIn: <https://www.linkedin.com/in/ayesha-saleem-223397175/>
Github: <https://github.com/Ayesha699>
Online Profile: <https://info-me/ayesha-saleem/>

5. Admin's Functionality:

- Admin can view all the features on dashboard



LMS
LEARNING
MANAGEMENT SYSTEM


admin1

Dashboard
Calander
Weekly Statistics

Add User

Add Student
Add Instructor
Add Admin

Delete

Delete User
Delete Course
Delete Batch

Manage Courses

Enroll Student to a course

Add new course

Manage students and batches

Add new batch

Add student in exiting batch

About

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- Admin can add users (Students, Teachers, or new admin)

Server: 127.0.0.1 » Database: lms_db » Table: users

[Browse](#)
[Structure](#)
[SQL](#)
[Search](#)
[Insert](#)
[Export](#)
[Import](#)
[Privileges](#)
[More](#)

Column	Type	Function	Null	Value
user_id	int(11)	<input type="text"/>		<input type="text"/>
name	varchar(30)	<input type="text"/>		<input type="text"/>
username	varchar(30)	<input type="text"/>		<input type="text"/>
pwd	varchar(30)	<input type="text"/>		<input type="text"/>
college_email	varchar(30)	<input type="text"/>		<input type="text"/>
personal_email	varchar(30)	<input type="text"/>		<input type="text"/>
contact	int(11)	<input type="text"/>		<input type="text"/>
<input type="text"/>				

Server: 127.0.0.1 » Database: lms_db » Table: users

[Browse](#)
[Structure](#)
[SQL](#)
[Search](#)
[Insert](#)
[Export](#)
[Import](#)
[Privileges](#)
[More](#)

Column	Type	Function	Null	Value
user_id	int(11)	<input type="text"/>		<input type="text"/>
name	varchar(30)	<input type="text"/>		<input type="text"/>
username	varchar(30)	<input type="text"/>		<input type="text"/>
pwd	varchar(30)	<input type="text"/>		<input type="text"/>
college_email	varchar(30)	<input type="text"/>		<input type="text"/>
personal_email	varchar(30)	<input type="text"/>		<input type="text"/>
contact	int(11)	<input type="text"/>		<input type="text"/>
<input type="text"/>				

- Admin can add course

Column	Type	Function	Null	Value
course_id	int(11)	<input type="text"/>		<input type="text"/>
course_name	varchar(30)	<input type="text"/>		<input type="text"/>
course_code	varchar(10)	<input type="text"/>		<input type="text"/>
status	varchar(10)	<input type="text"/>		<input type="text"/>
announcements	text	<input type="text"/>		

- Can add new batch

[Browse](#)
[Structure](#)
[SQL](#)
[Search](#)
[Insert](#)
[Export](#)
[Import](#)
[Privileges](#)
[More](#)

Column	Type	Function	Null	Value
batch_id	int(20)	<input type="text"/>		<input type="text"/>
batch_no	varchar(250)	<input type="text"/>		<input type="text"/>
semester	varchar(20)	<input type="text"/>		<input type="text"/>

Go

☒ Ignore

- Can enroll batch to course

Column	Type	Function	Null	Value
c_id	int(50)	<input type="text"/>		<input type="text"/>
st_id	int(50)	<input type="text"/>		<input type="text"/>
date	date	<input type="text"/>		<input type="text"/>
attendance	varchar(250)	<input type="text"/>		<div></div>

- Can delete entities

Options

		user_id	name	username	pwd	college
<input type="checkbox"/>	Edit Copy Delete	10011	Ayesha Naeem	anaeem.bese26mcs	12345	ayasha
<input type="checkbox"/>	Edit Copy Delete	10012	Ali Murtaza	amurtaza.bese24mcs	12347	ali.murt
<input type="checkbox"/>	Edit Copy Delete	10013	Sadia Zulfiqar	zsadia.besemcs	12345902	sadia.zi
<input type="checkbox"/>	Edit Copy Delete	10014	Mohsin Ali	amohsin.bese24mcs	12348927	amohsi
<input type="checkbox"/>	Edit Copy Delete	10014	Alina	alinali.bese22mcs	12326	alinali

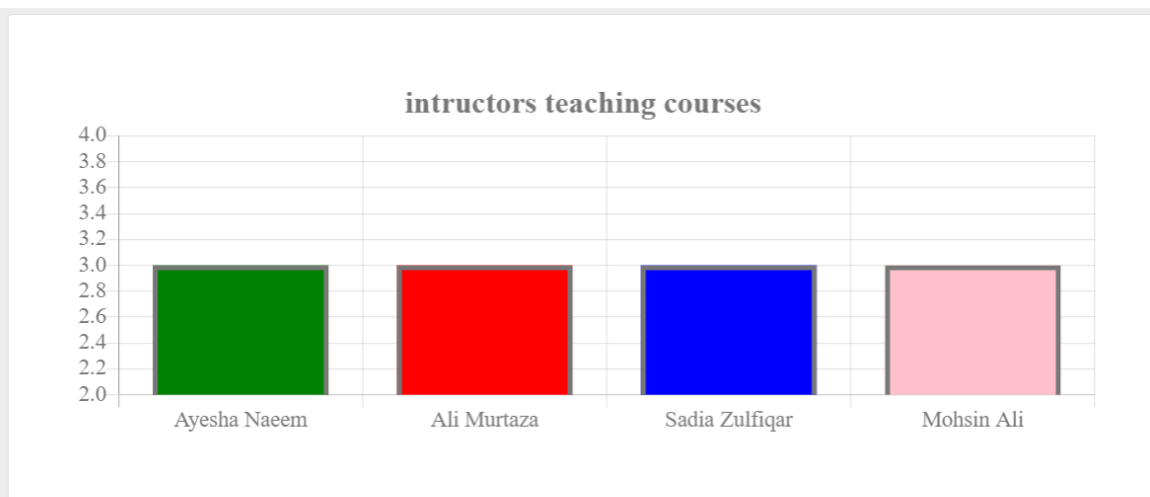
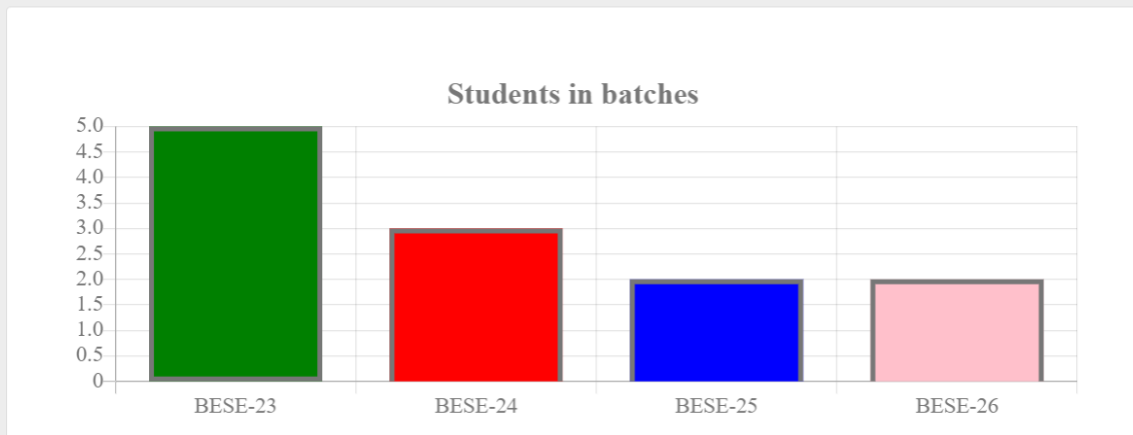
- Admin can add students in a batch

Column	Type	Function	Null	Value
st_id	int(11)	<input type="text"/>		<input type="text"/>
b_id	int(11)	<input type="text"/>		<input type="text"/>

☒ Ignore

- Admin can view statistics

Statistics



- Rest of the options are same as mentioned in student and teacher like viewing and updating courses.

6. The Database:

- The Database has 14 tables

<input type="checkbox"/>	admin	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	1	InnoDB	utf8mb4_general_ci	16.4
<input type="checkbox"/>	assignments	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	0	InnoDB	utf8mb4_general_ci	48.4
<input type="checkbox"/>	assi_of_st	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	0	InnoDB	utf8mb4_general_ci	32.4
<input type="checkbox"/>	batch	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	4	InnoDB	utf8mb4_general_ci	16.4
<input type="checkbox"/>	courses	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	12	InnoDB	utf8mb4_general_ci	64.4
<input type="checkbox"/>	instructor	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	4	InnoDB	utf8mb4_general_ci	16.4
<input type="checkbox"/>	inst_teach_st	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	12	InnoDB	utf8mb4_general_ci	32.4
<input type="checkbox"/>	lectures	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	4	InnoDB	utf8mb4_general_ci	32.4
<input type="checkbox"/>	quizzes	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	22	InnoDB	utf8mb4_general_ci	48.4
<input type="checkbox"/>	quiz_of_st	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	20	InnoDB	utf8mb4_general_ci	32.4
<input type="checkbox"/>	student	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	12	InnoDB	utf8mb4_general_ci	32.4
<input type="checkbox"/>	st_in_courses	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	5	InnoDB	utf8mb4_general_ci	32.4
<input type="checkbox"/>	users	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	17	InnoDB	utf8mb4_general_ci	128.4
<input type="checkbox"/>	user type	★	📄 Browse	📊 Structure	🔍 Search	➕ Insert	🗑️ Empty	🚫 Drop	3	InnoDB	utf8mb4_general_ci	16.4

