

Documentation for Examination System

1. Introduction:

The Examination System is a web application designed to facilitate the management of courses, instructors, and students within an educational institution. It provides different levels of access and functionality tailored to administrators, instructors, and students. The system is built using the MVC (Model-View-Controller) architecture with a SQL database backend, and it is hosted on Azure for scalability and reliability.

2. User Roles:

a. Admin: Administrators have full control over the system. They can perform CRUD operations on courses, instructors, and students. Additionally, they can generate reports and manage user passwords.

b. Instructor: Instructors have permission to view and edit student degrees. They can also generate exams and add questions to exams, including multiple-choice questions (MCQs) and true/false questions.

c. Student: Students have access to view courses and their associated content. During exam times, students can initiate exams if they are available. They can also change their passwords for security purposes.

3. Functionality:

a. Admin:

- Create, Read, Update, and Delete (CRUD) operations on courses, instructors, and students.
- Generate reports on various aspects of the system, such as course enrollment, exam results, etc.
- Manage user passwords, including the ability to reset passwords if necessary.

b. Instructor:

- View and edit student degrees, including the ability to enter grades for assessments.
- Generate exams for courses and add questions to the exams, including MCQs and true/false questions.

- Access exam results and performance metrics for students.

c. Student:

- View available courses and course content.
 - During exam periods, students can initiate exams for courses if they are available.
- View exam results and grades upon completion of assessments.

4. System Architecture:

- The system follows the MVC architecture, where models represent the data entities, views display the user interface, and controllers handle user requests and application logic.
- A SQL database is used to store data related to courses, instructors, students, exams, and assessments.
- The application is hosted on Microsoft Azure for scalability, reliability, and security.
- Authentication and authorization mechanisms are implemented to ensure that users only have access to the functionality appropriate for their role.

5. Security:

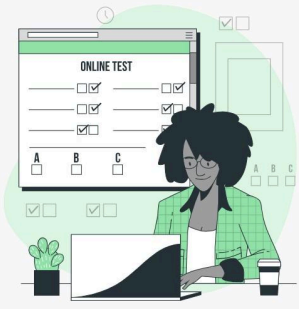
- User authentication is implemented to verify the identity of users logging into the system.
- Role-based access control (RBAC) is enforced to restrict access to certain features based on user roles.
- Password management features allow users to change their passwords securely to maintain account security.

6. Reporting:

- The system provides administrators with the ability to generate reports on various aspects of the system, such as course enrollment, exam results, and student performance.
- Reports are generated based on data stored in the SQL database and can be exported in different formats for further analysis.

UI Screens

Login Page




• Examination System Login •

Email:

Password:





[Login](#)



Login As Admin

Admin Control

[Dashboard](#)
[Students](#)
[Instructors](#)
[Courses](#)
[LogOut](#)

Course Id	Course Name	Pass Degree	Course Topics	Action
1	Html	20	Introduction to HTML HTML Elements and Tags HTML Forms and Tables	UPDATE 
2	js	75	Introduction to JavaScript JavaScript Functions and Control Structures DOM Manipulation and Events JavaScript Functions and Control Structures DOM Manipulation and Events	UPDATE 
3	c#	60	Introduction to C# C# Data Types and Variables Object-Oriented Programming in C#	UPDATE 
4	sql	60	Introduction to SQL SQL Queries and Data Retrieval	UPDATE 

[Add Course](#)

Admin Control

Dashboard

Students

Instructors

Courses

LogOut



• Manage Course •

Student: Mike - os

Courses Assigned

js
c#
sql

Courses Available

Html

Change

Cancel

Admin Control

Dashboard

Students

Instructors

Courses

LogOut



• Add New Course •

Enter Course Name:

Enter Course Name

PassDegree:

Enter Pass Degree

Course Topics:

Enter topics

Assign To Tracks:

os
pd
ai

Add

Admin Control

Dashboard

Students

Instructors

Courses

LogOut



Email

AsmaaAlbhity@gmail.com

First Name

Asmaa

Last Name

Albhity

Password

123456789

Gender

Female

Salary

90000.00

Submit

Cancel

Admin Control

Dashboard









































Students

Instructors

Courses

LogOut

 Add Instructor

ID	First Name	Last Name	Salary	Email	Password	Action
2	Asmaa	Albhity	90000.00	AsmaaAlbhity@gmail.com	123456789	   
3	Asmaa	Omar	50000.00	AsmaaOmar@gmail.com	123456789	   
4	Nada	Mohsen	55000.00	nadaMohsen@gmail.com	123456789	   
5	Nada	atef	55000.00	nadaAtef@gmail.com	123456789	   
6	Aya	shehata	60000.00	AyaShehata@gmail.com	123456789	   
7	Naiyra	Talaat	52000.00	NaiyraTalaat@gmail.com	123456789	   
8	Habeba	shet	58000.00	Habebashet@gmail.com	123456789	   
9	Donya	Mohammed	52000.00	DonyaMohamed@gmail.com	123456789	   
10	Bothyna	Ahmed	58000.00	BothenaAhmed@gmail.com	123456789	   
11	Esraa	Mohamed	52000.00	EsraaMohamed@gmail.com	123456789	   

Admin Control

Dashboard









































Students

Instructors

Courses

LogOut

 Add Student

ID	First Name	Last Name	Email	Password	Gender	Track	Action
1	Mike	Johnson	student1@gmail.com	123456789	male	os	   
2	Emily	Brown	student2@gmail.com	123456789	female	os	   
3	Chris	Taylor	student3@gmail.com	123456789	male	os	   
4	Emily	Brown	student4@gmail.com	123456789	female	os	   
5	Daniel	Clark	student5@gmail.com	123456789	male	os	   
211	David	Lee	David.Lee.1.1@gmail.com	123456789	male	os	   
212	Daniel	Clark	Daniel.Clark.1.2@gmail.com	123456789	female	os	   
213	John	Doe	John.Doe.1.3@gmail.com	123456789	male	os	   
214	Mike	Johnson	Mike.Johnson.1.4@gmail.com	123456789	female	os	   
215	John	Doe	John.Doe.1.5@gmail.com	123456789	male	os	   

Admin Control

Dashboard

Students

Instructors

Courses

LogOut

Edit Student

Email

student1@gmail.com

First Name

Mike

Last Name

Johnson

Password

123456789

Gender

Male

Department

os

Save

Cancel

Login As Instructor

Instructor Control

Reports

Courses

Usr Profile

LogOut

Courses

ID	Name	Action
2	js	<div>Student Grades</div> <div>Generate Exam</div> <div>All Exams</div> <div>Add Question</div>
4	sql	<div>Student Grades</div> <div>Generate Exam</div> <div>All Exams</div> <div>Add Question</div>

Instructor Control

Reports

Courses

Usr Profile

LogOut

Student Grades

Mike Johnson	Emily Brown
60	
Chris Taylor	Emily Brown
80	
Daniel Clark	David Lee
Daniel Clark	John Doe
Mike Johnson	John Doe
Emily Brown	Emily Brown

Instructor Control

Reports

Courses

Usr Profile

LogOut

Generate Exam

Exam Date

mm/dd/yyyy

Start Time

--:-- --

End Time

--:-- --

Track

Track

Full Mark

Number of True/False Questions:

Number of Multiple Choice Questions:

Submit

Cancel

Admin Control

Dashboard

Students

Instructors

Courses

LogOut

Add Question To js Course

Select Question Type: True/False Question

True/False Question Form

Question:

Enter the question

Select the correct answer:

True
False

Add

Admin Control

Dashboard

Students

Instructors

Courses

LogOut

Add Question To js Course

Select Question Type: Multiple Choice Question (MCQ)

Multiple Choice Question Form

Question:

Enter the question

Distracted Answer 1:

Answer 1

Distracted Answer 2:

Answer 2

Distracted Answer 3:

Answer 3

Correct Answer

Correct Answer

Add

Admin Control

Dashboard

Students

Instructors

Courses

LogOut


Instructor Courses Data

Course Id	Course Name	Operation
2	js	Delete
4	sql	Delete

Add

Cancel

Student Login



Mike Johnson

os Track

Supervisor: Asmaa

Edit

LogOut

Student Courses

Course Name: js

Exam ID: 6

The Exam duration of this course is: 02:00:00

The Exam Date is: 02/03/2024

Go to Exam

Course Name: c#

Exam ID: 7

The Exam duration of this course is: 01:00:00

The Exam Date is: 03/03/2024

Go to Exam

Course Name: sql

Exam ID: 8

The Exam duration of this course is: 01:01:00



Edit Account

StudentPassword

123456789

Edit

Student Name: Mike Johnson

Exam Name: c#

Exam Date: 03/03/2024

Timer: 0:59:44

Q 1: What is the correct way to instantiate an object in C#?

☒ `ClassName obj = new ClassName();`

☐ `obj = new ClassName();`

☐ `ClassName obj;`

☐ `new ClassName();`

Q 2: What is the correct way to declare a constructor in C#?

☐ `public ClassName()`

☒ `ClassName()`

☐ `constructor ClassName()`

☐ `void ClassName()`

Q 3: C# is case-insensitive.

Q 14: The external JavaScript file must contain the <script> tag.

- ☒ true
☐ false

Q 15: Which operator is used to assign a value to a variable?

- ☒ =
☐ :
☐ *
☐ +

Q 16: The keyword "var" is used to declare variables in JavaScript.

- ☒ True
☐ False

Submit

Exam Finished Successfully



Your Mark is: 8/10

Back to home

Handle an unauthorized user access



Unauthorized Access

Sorry, you are not authorized to access this resource.

Reports Output

dept No

View Report

|< < 1 of 1 > >|

100%

Track_Info

Track Name: pd

	Course Name	Instructor Name	Student Name
☐	c#	1	102
☐	js	1	102
☐	sql	1	102
		Habeba shet	Emily Brown
		Habeba shet	Emily Brown
		Habeba shet	Olivia Davis
		Habeba shet	Mike Johnson
		Habeba shet	Daniel Clark
		Habeba shet	Sophia Allen
		Habeba shet	Jane Smith
		Habeba shet	David Lee
		Habeba shet	Daniel Clark
		Habeba shet	Mike Johnson
		Habeba shet	John Doe
		Habeba shet	David Lee
		Habeba shet	Olivia Davis
		Habeba shet	Jane Smith
		Habeba shet	Emma Wilson
		Habeba shet	Emily Brown
		Hahaha chat	Chris Tauline

Track_Info

Track Name: os

	Course Name	Instructor Name	Student Name
📅	cs#	1	40
📅	js	1	40
📅	sql	1	40
		Asmaa Omar	Mike Johnson
		Asmaa Omar	Emily Brown
		Asmaa Omar	Chris Taylor
		Asmaa Omar	Emily Brown
		Asmaa Omar	Daniel Clark
		Asmaa Omar	David Lee
		Asmaa Omar	Daniel Clark
		Asmaa Omar	John Doe
		Asmaa Omar	Mike Johnson
		Asmaa Omar	John Doe

Course Id View Report

⏪
<
1 of 1
>
⏩
🔄
100%
📁
🖨
 🔍 | ➡
↶

Course Topic

Course Name	Topic Name	Pass Degree
js		
	Introduction to JavaScript,JavaScript Functions and Control StructuresDOM Manipulation and Events	75
	JavaScript Functions and Control Structures	75
	DOM Manipulation and Events	75

Course Topic

Course Name	Topic Name	Pass Degree
HTML		
	Introduction to HTML	20
	HTML Elements and Tags	20
	HTML Forms and Tables	20
	just for update test	20

Student Grade

Student Name	Course Name	Grade
David Lee		
	js	82
	c#	50
	sql	87

Student Grade

Student Name	Course Name	Grade
Mike Johnson		
	js	40
	c#	75
	sql	95

Navigation icons: back, forward, search, and other controls.

Student Answers

Is Correct	Student Answer	Correct Answer	Question Title	Question Degree
Correct Answer	JavaScript	JavaScript	What does JavaScript stand for?	5
Incorrect Answer	<scripting>	<script>	Inside which HTML element do we put the JavaScript?	5
Incorrect Answer	The <body> section	Both the <head> section and the <body> section are correct	Where is the correct place to insert a JavaScript?	5
Incorrect Answer	myFunction = function()	function myFunction()	How do you create a function in JavaScript?	5
Correct Answer	myFunction()	myFunction()	How do you call a function named "myFunction"?	5
Correct Answer	while (i <= 10)	while (i <= 10)	How does a WHILE loop start?	5
Correct Answer	for (i = 0; i <= 5; i++)	for (i = 0; i <= 5; i++)	How does a FOR loop start?	5
Incorrect Answer	md(7.25)	Math.round(7.25)	How do you round the number 7.25, to the nearest integer?	5
Correct Answer	true	true	What will the following code return: Boolean(10 > 9)?	5

Navigation icons: back, forward, search, and other controls.

Student Answers

Is Correct	Student Answer	Correct Answer	Question Title	Question Degree
Incorrect Answer	<sheet>	<style>	Which HTML tag is used to define an internal style sheet?	5
Correct Answer	style attribute	style attribute	Which HTML attribute is used to define inline styles?	5
Incorrect Answer	<measure>	<meter>	Which HTML element is used to display a scalar measurement within a range?	5
Correct Answer	<title>	<title>	Which HTML element defines the title of a document?	5
Correct Answer	>	>	Which character is used to indicate an end tag?	5
Correct Answer	<input type="checkbox">	<input type="checkbox">	What is the correct HTML for making a checkbox?	5
Incorrect Answer	<input>	<input type="text">	What is the correct HTML for making a text input field?	5
Correct Answer	<select>	<select>	What is the correct HTML for making a drop-down list?	5
Incorrect Answer	href	alt	Which HTML attribute specifies an alternate text for an image, if the image cannot be displayed?	5
Incorrect Answer	<background>background.jpg<background>	<body style="background-image: url(background.jpg)">	What is the correct HTML for inserting a background image?	5

Number Of Students in each course

Course Name	Number of students
js	201
sql	201
Xml	1

Number Of Students in each course

Course Name	Number of students
js	201
sql	201

Exam Questions	
Question Title	Answer Body
<p>☒ How do you call a function named "myFunction"?</p>	<p>myFunction()</p> <p>call myFunction()</p> <p>call function myFunction()</p> <p>invoke myFunction()</p>
<p>☒ How do you declare a JavaScript variable?</p>	
<p>☒ How do you round the number 7.25, to the nearest integer?</p>	
<p>☒ JavaScript is a server-side scripting language.</p>	
<p>☒ The <script> tag is used to link a JavaScript file to an HTML file.</p>	
<p>☒ The correct way to write a JavaScript array is: var colors = (1:"red", 2:"green", 3:"blue")</p>	
<p>☒ What does JavaScript stand for?</p>	
<p>☒ What will the following code return: Boolean(10 > 9)?</p>	
<p>☒ Where is the correct place to insert a JavaScript?</p>	
<p>☒ Which operator is used to assign a value to a variable?</p>	

Exam Questions	
Question Title	Answer Body
<p>ⓂHow do you call a function named "myFunction"?</p>	<p>myFunction() call myFunction() call function myFunction() invoke myFunction()</p>
<p>ⓂHow do you declare a JavaScript variable?</p>	
<p>ⓂHow do you round the number 7.25, to the nearest integer?</p>	
<p>ⓂJavaScript is a server-side scripting language.</p>	
<p>ⓂThe <script> tag is used to link a JavaScript file to an HTML file.</p>	
<p>ⓂThe correct way to write a JavaScript array is: var colors = (1:"red", 2:"green", 3:"blue")</p>	
<p>ⓂWhat does JavaScript stand for?</p>	
<p>ⓂWhat will the following code return: Boolean(10 > 9)?</p>	
<p>ⓂWhere is the correct place to insert a JavaScript?</p>	
<p>ⓂWhich operator is used to assign a value to a variable?</p>	

The Examination System is a comprehensive solution for managing courses, instructors, and students within an educational institution. It offers a user-friendly interface and robust functionality tailored to the needs of administrators, instructors, and students. With features such as CRUD operations, exam generation, reporting, and password management, the system provides a seamless experience for all users involved in the educational process.

