



2024

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# TRACER

Learning management system





Mohamed Tamer  
Mohamed Musa



Eslam Kamal  
Abdel-Mawla Mohamed



Ayman Osama  
Ibrahim Abdo



Ahmed Fawzy Fawzy  
Mohamed Hassan



Karim Mohamed  
Ali Mohamed



Karim Abdel Salam  
Mohamed Abdel Salam



# Introduction

Learning management system To facilitate the educational process such as attendance recording, allowing the instructor to assign assignments to the students and the ability to access student's grades directly.





# Problem

- Difficulties of recording attendance with errors and inaccuracies in the traditional method.
- Difficulties in the assignments process.
- No centralized place to get grades.
- Non centralized management system



# Our Services

- Attendance: The process of capturing images of student is done using an IP camera with facial recognition technology.
- Grades: Added by the instructor, the detailed student grades are visualized in one place for the student.
- assignments: Added by the instructor, and the grade of the assignment is added to student's grades.



# Result

- 01 Ease of attendance recording and error reduction
- 02 Flexible creation and submission of tasks
- 03 A centralized place for student grades
- 04 Tracking students' performance

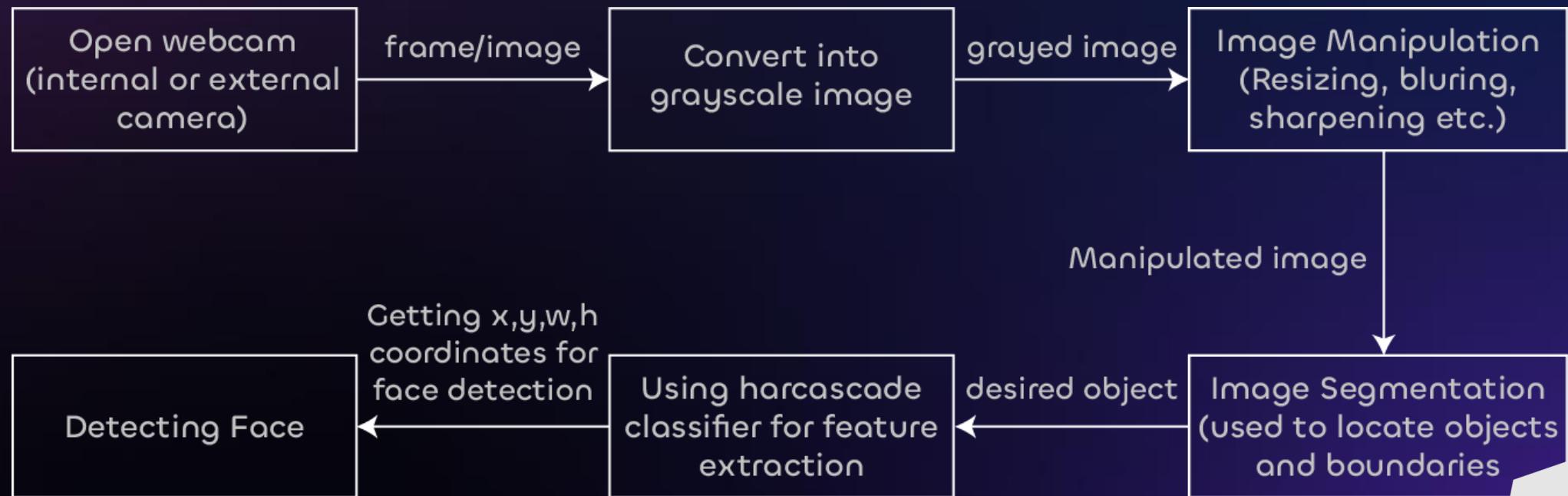


# Face recognition system application steps

Acquire image → Face Detection → Face Recognition → Person Identity

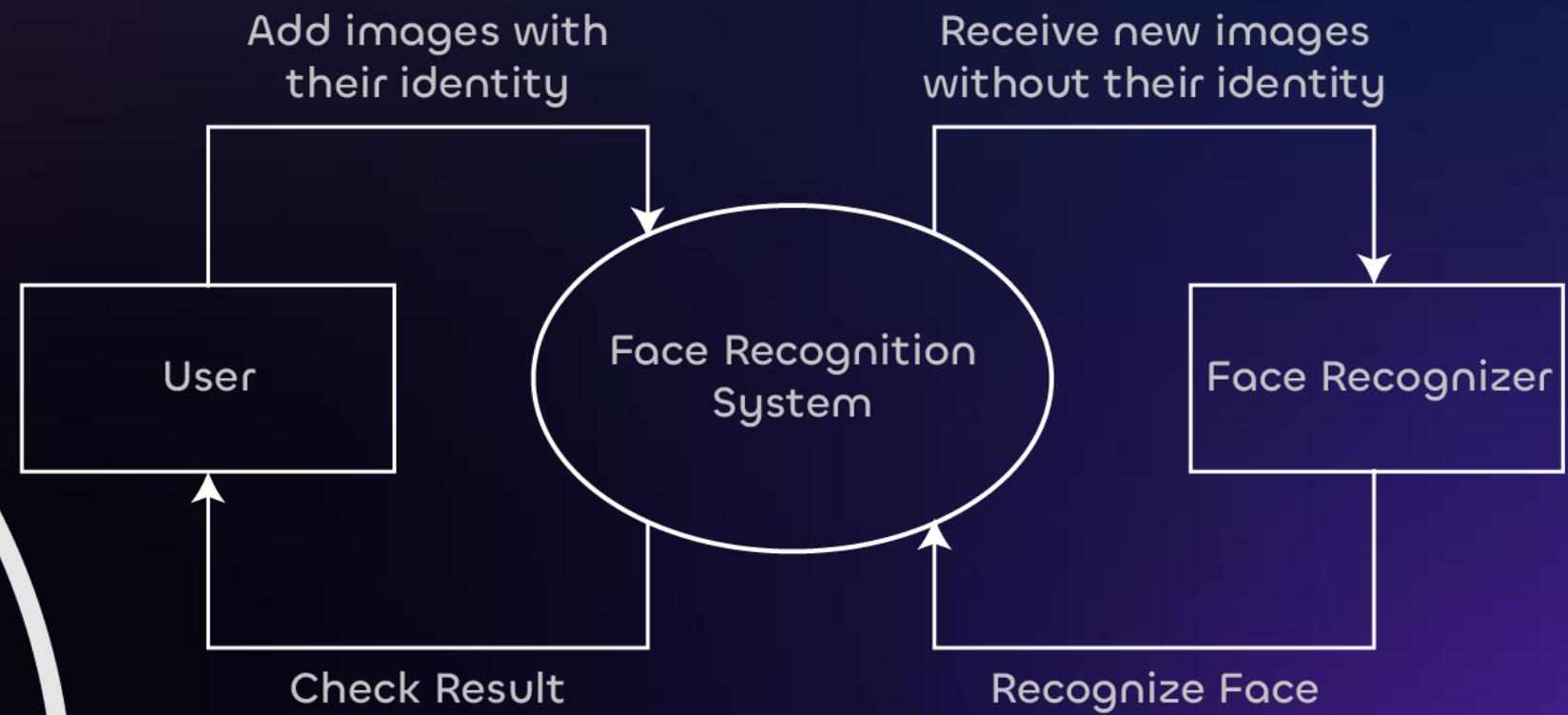


# Face Detection Part





# Face recognition Part





# Used

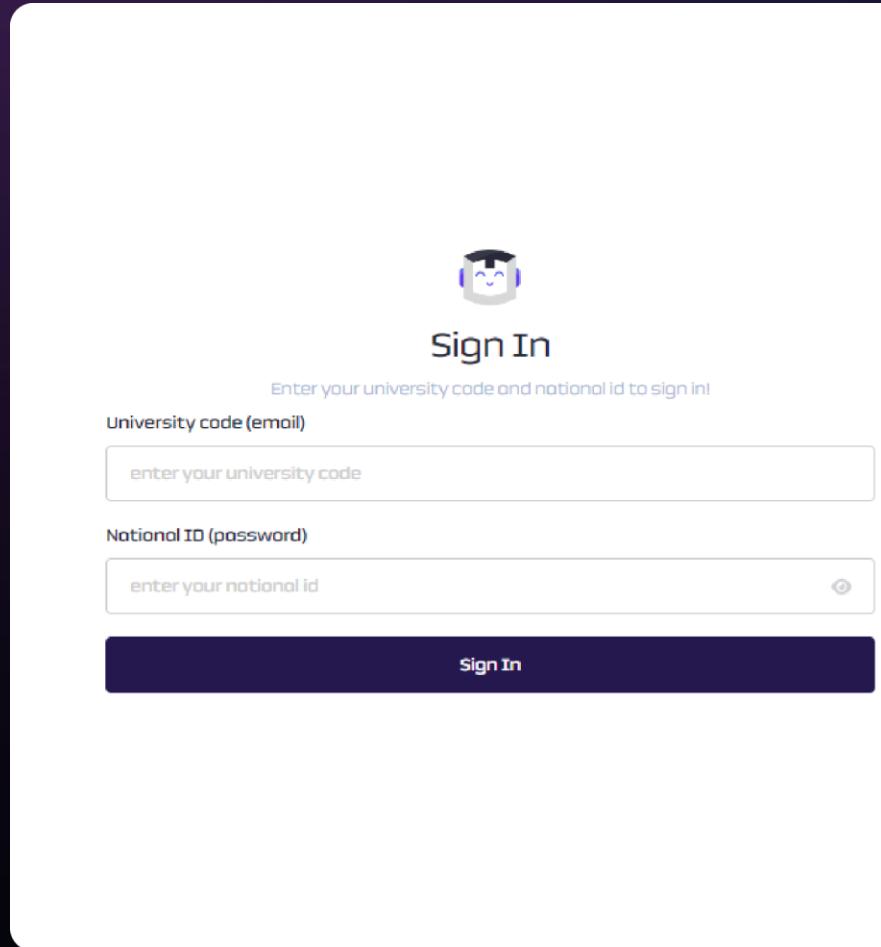
- Tools
  - Figma
  - Vscode
  - Spyder
- Technology
  - For Web : HTML - CSS - JavaScript
  - For Back end: Flask - Facial Recognition
- Hardware
  - IP Camera



# Student Design



# Sign In



The sign-in form is located on the left side of the screen. It features a logo of a book with a face at the top, followed by the word "Sign In". Below it is a placeholder text "Enter your university code and national id to sign in!". There are two input fields: one for "University code (email)" containing "enter your university code" and another for "National ID (password)" containing "enter your national id". A "Sign In" button is positioned at the bottom of the form.



The welcome screen is on the right, set against a dark purple background with abstract white shapes resembling a brain or DNA helix. At the top right is a large white eye icon. The text "Welcome To" is above "TRACER", which is written in a large, bold, white font. A small white figure of a person stands in the lower-left area of the design.



# Registration subjects

Profile   Subject Registration   Request excuse   Excuses   Log out

Note: If you register for the course and then drop it later, no grades will be added to your record for this course during the semester.

Choose Subject

Computer Science

Add Subject

Computer Science	X
Data Retrieving	X
Cloud	X
Network	X
Data Base	X
Information Security	X



# Profile

Profile Subject Registration Request excuse Excuses Log out

Ryman Osama

University Code: 1234567891238  
National ID: 1234567891238  
Academic Year: 1  
Section Number: 6

Computer Science

Oral	10.0
Practical	5.0
Midterm	9.0

Data Retriving

Oral
------

Quizzes

First Test-update /18.0 Computer Science	Duration Only /12.0 Computer Science	float 4.5 / 6.0 Data Base
--	--------------------------------------	---------------------------

Attendance

Computer Science Lecture 14	Section 1
Data Retriving Lecture 0	Section 0



# Send excuse

The screenshot shows a user interface for sending an excuse. At the top, there is a navigation bar with a user icon, the text "Profile", "Subject Registration", "Request excuse", "Excuses", and a "Log out" button. Below the navigation bar, there are two main input fields: a file upload field labeled "Upload Image ^" and a text area labeled "Write Excuse". A large, dark blue "Send" button is positioned at the bottom of the form.

Profile   Subject Registration   Request excuse   Excuses   Log out

Upload Image ^

Write Excuse

Send



# Excuses

A screenshot of a mobile application interface. At the top, there is a navigation bar with icons for profile, subject registration, request excuse, excuses, and log out. Below the navigation bar, there is a large, semi-transparent white overlay. On the left side of this overlay, there is a small profile picture of a cat. To its right, the text "Date: 19 - 06 - 2024 (03:05 PM)" is displayed. Below this, the word "EXCUSE" is visible. A diagonal banner across the middle of the overlay reads "No response". The background of the app shows a dark grid pattern.



# Quiz

12:34

**Duration Only**  
Computer Science

1. What is web analytics?

- A method to create websites
- A tool for online marketing
- The measurement, collection, analysis, and reporting of internet data
- A social media strategy

2. Which of the following questions can web analytics help answer?

- What is the website's bounce rate?
- How many users visited the website?
- Which pages do users visit most often?
- All of the above

3. DDBMS governs the storage and processing of logically related data over interconnected computer systems.

- True
- False



# Task

ملف

يجب رفع ملف حل الكویر

[Download quiz](#)

Choose File No file chosen



# Instructor Design



# Registration subjects

The screenshot shows a user interface for managing student registrations. At the top, there is a navigation bar with icons for profile, subject registration, attendance, excuse, add quiz, and grades, along with a log out button. Below the navigation bar, a message in red text states: "Sorry: Registration has been closed by the admin." A dropdown menu titled "Choose Subject" is open, displaying four options: Computer Science, Data Retriving, and Data Base. The "Computer Science" option is currently selected, indicated by a blue border around its text.

- Profile
- Subject Registration
- Attendance
- Excuse
- Add Quiz
- Grades
- Log out

Sorry: Registration has been closed by the admin.

Choose Subject

- Computer Science
- Computer Science
- Data Retriving
- Data Base



# Profile

Profile   Subject Registration   Attendance ▾   Excuse ▾   Add Quiz   Grades   Log out

Eslam Somy   University Code: 22222200000000   National ID: 22222200000000   Department: is

**Data Base**  
float  
13 - 06 - 2024

**Computer Science**  
Duration Only  
05 - 06 - 2024

**Data Base**  
مفت  
12 - 06 - 2024



# Send excuse

The screenshot shows a user interface for sending an excuse. At the top, there is a navigation bar with icons for profile, subject registration, attendance, excuse, add quiz, and grades, along with a log out button. Below the navigation bar, there is a section for uploading an image, indicated by a placeholder text "Upload Image ^". To the right of this is a larger area labeled "Write Excuse" which contains a text input field. At the bottom of the page is a prominent dark blue "Send" button.

Profile Subject Registration Attendance Excuse Add Quiz Grades Log out

Upload Image ^

Write Excuse

Send



# Excuses

A screenshot of a student dashboard titled "Excuses". The top navigation bar includes links for Profile, Subject Registration, Attendance, Excuse, Add Quiz, and Grades, along with a Log out button. A central message box displays the following information: Date: 19 - 06 - 2024 (02:44 PM), أنا أسلام (Anas Al-Salam), and Rejected. The word "Rejected" is written in red on a diagonal banner across the message box.



# Session Info

[Return Dashboard](#)

Place

1 Java

Subject

Computer Science

Session Type

Lecture

**Save**



## Take Attendance

A dark gray rectangular overlay covers the bottom half of the screen, obscuring the main content area. It has rounded corners and a slight shadow effect.

- [X](#)
- [Take Attendance](#)
- [Attendance Archives](#)
- [Subject Registration](#)
- [Subjects Grades](#)
- [Request Excuse](#)
- [Excuses](#)
- [Add Quiz](#)
- [Log out](#)



# Attendance Archive

Profile   Subject Registration   Attendance ▾   Excuse ▾   Add Quiz   Grades   Log out ↗

**Subject** All ▾   **Session** All ▾

Data Base Session Number: (1) 2024-05-23 (03:19:47 PM) Number of attendees: (0)	Computer Science Session Number: (1) 2024-05-24 (05:06:16 PM) Number of attendees: (2)	Computer Science Session Number: (2) 2024-06-18 (11:49:44 AM) Number of attendees: (4)	Computer Science Session Number: (3) 2024-06-18 (11:55:36 AM) Number of attendees: (3)	Computer Science Session Number: (4) 2024-06-18 (11:58:45 AM) Number of attendees: (4)
Computer Science Session Number: (5) 2024-06-18 (12:02:49 PM) Number of attendees: (3)	Computer Science Session Number: (6) 2024-06-18 (12:05:40 PM) Number of attendees: (2)	Computer Science Session Number: (7) 2024-06-18 (12:08:20 PM) Number of attendees: (4)	Computer Science Session Number: (8) 2024-06-19 (09:29:28 AM) Number of attendees: (5)	Computer Science Session Number: (9) 2024-06-19 (10:09:02 AM) Number of attendees: (2)
Computer Science Session Number: (10) 2024-06-19 (10:30:44 AM) Number of attendees: (3)	Computer Science Session Number: (11) 2024-06-19 (02:31:23 PM) Number of attendees: (0)	Computer Science Session Number: (12) 2024-06-19 (02:40:50 PM) Number of attendees: (3)	Computer Science Session Number: (13) 2024-06-28 (07:20:35 PM) Number of attendees: (0)	Computer Science Session Number: (14) 2024-06-28 (07:23:01 PM) Number of attendees: (1)



# Attendees

Profile   Subject Registration   Attendance ▾   Excuse ▾   Add Quiz   Grades   Log out

Computer Science   lecture   Session Number: 1

Number of students attending (2)

Ryman Osama  
Uni.code: 1234567891238  
Ac.year: 1  
Section: 6

Eslam Kamal  
Uni.code: 1234567891231  
Ac.year: 4  
Section: 2

[Delete](#)   [Delete](#)

---

Number of absent students (4)

Rhmed Fowzy  
Uni.code: 1234567891239  
Ac.year: 3  
Section: 7

Karem Mohamed  
Uni.code: 1234567891244  
Ac.year: 1  
Section: 4

Mohamed Tamer  
Uni.code: 1234567891245  
Ac.year: 2  
Section: 5

Karem AbdelSalam  
Uni.code: 1234567891235  
Ac.year: 1  
Section: 4

[Add](#)   [Add](#)   [Add](#)   [Add](#)



## Choose Type Quiz



MCQ



Files



# MCQ Quiz

## New Quiz

Quiz Name

Quiz Timer

Question

Point

Option

Correct Answer:

Select Correct Answer

+

Question

Point

Option

Correct Answer:

Select Correct Answer

-

Add Question

Save Form

X ▼ QUIZ TIMER

Timer Settings

Time Allowed

hours : minutes

Start/End dates

Quiz opens at  
mm/dd/yyyy - : --  

Quiz closed at  
mm/dd/yyyy - : --



# MCQ Quiz Response

float	Data Base	Responses(1)	Non-responses(5)
Full Name	Section	Degree	
Ryman Osama	6	4.5	
Rhmed Fawzy	7	No Response	
Mohamed Tamer	5	No Response	
Eslam Kamol	2	No Response	
Karem Mohamed	4	No Response	
Karem AbdelSalam	4	No Response	

[Delete responses](#)



# Grades

Profile Subject Registration Attendance Excuse Add Quiz Grades Log out

## Computer Science

Section All Export File

Full Name	Section	Orol	Practical	Midterm
Ryman Osama	6	10.0	5.0	9.0
Rhmed Fawzy	7	6.0	5.0	8.0
Karem Mohamed	4	7.0	4.0	5.0
Mohamed Tamer	5			
Eslam Kamol	2			
Karem AbdelSalam	4			

Submit



# File Task

New Quiz

Quiz Name

Quiz Timer

Choose File No file chosen Point

Description

Save Form

X V QUIZ TIMER

Start/End dates

Quiz opens at mm/dd/yyyy -:-- --

Quiz closed at mm/dd/yyyy -:-- --



# File Task Response

File Data Base Responses(1) Non-responses(5)

Full Name	Section	Degree	File
Ryman Osama	6	2.5	<a href="#">Download</a>
Rhmed Fawzy	7	Degree	No Response
Mohamed Torner	5	Degree	No Response
Eslam Kamal	2	Degree	No Response
Karem Mohamed	4	Degree	No Response
Karem AbdeSolom	4	Degree	No Response

[Delete responses](#) [Submit](#)



# Admin Design



# Students

Search  Q

Add Student Delete All

Academic year All

Section All

Student Name	Uni.code	National ID	Ac.year	Section	Action
Eslam Komal	1234567891231	National ID: 1234567891231	Ac.year : 4	Section: 2	<span>Update</span> <span>Delete</span>
Ryman Osama	1234567891232	National ID: 1234567891232	Ac.year : 1	Section: 2	<span>Update</span> <span>Delete</span>
Korem Mohamed	1234567891233	National ID: 1234567891233	Ac.year : 3	Section: 4	<span>Update</span> <span>Delete</span>
Mohamed Tamer	1234567891234	National ID: 1234567891234	Ac.year : 2	Section: 5	<span>Update</span> <span>Delete</span>
Korem AbdelSalom	1234567891235	National ID: 1234567891235	Ac.year : 1	Section: 4	<span>Update</span> <span>Delete</span>
Ahmed Fawzy	1234567891236	National ID: 1234567891236	Ac.year : 3	Section: 1	<span>Update</span> <span>Delete</span>
Ahmed Ali	1234567891237	National ID: 1234567891237	Ac.year : 4	Section: 5	<span>Update</span> <span>Delete</span>
Ryman Osama	1234567891238	National ID: 1234567891238	Ac.year : 1	Section: 6	<span>Update</span> <span>Delete</span>
Ahmed Fawzy	1234567891239	National ID: 1234567891239	Ac.year : 3	Section: 7	<span>Update</span> <span>Delete</span>
Ashraf Galal	1234567891241	National ID: 1234567891241	Ac.year : 3	Section: 1	<span>Update</span> <span>Delete</span>
Fothi Mohamed	1234567891242	National ID: 1234567891242	Ac.year : 1	Section: 2	<span>Update</span> <span>Delete</span>
Ahmed Abd	1234567891243	National ID: 1234567891243	Ac.year : 2	Section: 3	<span>Update</span> <span>Delete</span>



# Instructors

Search  Q

Add Instructor Delete All

Department All

- Nabil Mostafa  
Uni.code: 11111100000000  
National ID: 11111100000000  
Department: is  
Update Delete
- Aliaa Ahmed  
Uni.code: 11111100000000  
National ID: 11111100000000  
Department: is  
Update Delete
- Eslam Somy  
Uni.code: 22222200000000  
National ID: 22222200000000  
Department: is  
Update Delete
- Riham Hossan  
Uni.code: 22222200000000  
National ID: 22222200000000  
Department: is  
Update Delete
- Ahmed Somy  
Uni.code: 33333300000000  
National ID: 33333300000000  
Department: cs  
Update Delete
- Wafaa Tawfik  
Uni.code: 44444400000000  
National ID: 44444400000000  
Department: is  
Update Delete
- Koreem Ahmed  
Uni.code: 44444400000000  
National ID: 44444400000000  
Department: is  
Update Delete
- Gawaher Soliman  
Uni.code: 55555500000000  
National ID: 55555500000000  
Department: is  
Update Delete
- Saad Mohammod  
Uni.code: 66666600000000  
National ID: 66666600000000  
Department: is  
Update Delete
- Asmaa Hanafy  
Uni.code: 77777700000000  
National ID: 77777700000000  
Department: is  
Update Delete
- Sofa Alsaid  
Uni.code: 88888800000000  
National ID: 88888800000000  
Department: is  
Update Delete
- Mohamed Maher  
Uni.code: 99999900000000  
National ID: 99999900000000  
Department: is  
Update Delete



# Attendance Archive

Search		Delete All	
Subject	Session	Session Type	
All	All	All	
Nabil Mostafa Subject: Computer Science Session Type: lecture Session Number: 1 Date: 2024-05-23 (12:01:52 PM)	Nabil Mostafa Subject: Computer Science Session Type: lecture Session Number: 2 Date: 2024-05-23 (12:04:25 PM)	Nabil Mostafa Subject: Computer Science Session Type: section Session Number: 3 Date: 2024-05-23 (03:11:09 PM)	Eslam Somy Subject: Data Base Session Type: lecture Session Number: 1 Date: 2024-05-23 (03:19:47 PM)
Eslam Somy Subject: Computer Science Session Type: lecture Session Number: 1 Date: 2024-05-24 (05:06:16 PM)	Nabil Mostafa Subject: Computer Science Session Type: lecture Session Number: 4 Date: 2024-05-24 (05:11:46 PM)	Nabil Mostafa Subject: Computer Science Session Type: lecture Session Number: 5 Date: 2024-06-06 (03:10:37 PM)	Eslam Somy Subject: Computer Science Session Type: lecture Session Number: 2 Date: 2024-06-18 (11:49:44 AM)
Eslam Somy Subject: Computer Science Session Type: lecture Session Number: 3 Date: 2024-06-18 (11:55:36 AM)	Eslam Somy Subject: Computer Science Session Type: lecture Session Number: 4 Date: 2024-06-18 (11:58:45 AM)	Eslam Somy Subject: Computer Science Session Type: lecture Session Number: 5 Date: 2024-06-18 (12:02:49 PM)	Eslam Somy Subject: Computer Science Session Type: lecture Session Number: 6 Date: 2024-06-18 (12:05:40 PM)
Eslam Somy Subject: Computer Science Session Type: lecture	Eslam Somy Subject: Computer Science Session Type: lecture	Eslam Somy Subject: Computer Science Session Type: lecture	Eslam Somy Subject: Computer Science Session Type: lecture



# Excuse requests

Search  Delete All

 <p><b>Instructor:</b> Eslam Somy Uni.code: 2222200000000 Department: is Date: 19 - 06 - 2024 (02:44 PM)</p> <p><span>Rejected</span></p> <p><span>Delete</span></p>	 <p><b>Student:</b> Ryman Osama Uni.code: 1234567891238 Ac.year:1 Date: 19 - 06 - 2024 (03:05 PM)</p> <p><span>No response</span></p> <p><span>Delete</span></p>
---	--

≡ Search Filter Delete All

grid list checkbox bell calendar refresh person exit



# Excuse

Ayman Osama  
19 - 06 - 2024 03:05 PM

Uni.code : 1234567891238  
Rc. year : 1  
Section : 6

Open the image

excuse

Reject

Accept



# Subjects

Search  Q Open registration

Code Name

Add Subject

CS200	Computer Science	X
DS542	Data Retriving	X
IS204	Information Security	X
IS235	Data Base	X
IT208	Cloud	X
IT240	Network	X

grid list check bell book plus star person calendar



# Grades

Computer Science

Full Name	Oral	Practical	Midterm
Rymon Osama	10.0	5.0	9.0
Rhmed Fowzy	6.0	5.0	8.0
Karem Mohamed	7.0	4.0	5.0
Mohamed Tamer			
Eslam Kamal			
Karem AbdelSalom			



# Departments

Keyword (IS) Name (Information System)

Add Department

IS	Information System	X
CS	Computer Science	X
IT	Information Technology	X
DS	Design System	X
Medical	Medical	X
AI	Artificial Intelligence	X

User icons: grid, person, search, info, settings, calendar, user, profile.



# Section Number

A screenshot of a digital interface, likely a mobile application or web-based tool. The interface has a light gray header bar with a small icon of a notepad with a face. Below the header is a search bar containing the placeholder text "Section Number". A dark blue navigation bar at the top features the text "Add section" in white. To the left of the main content area is a vertical sidebar with various icons: a notepad, a document, a checkmark, a bell, a list, a plus sign, a diamond, a magnifying glass, a calendar, a person, and a circular arrow. The main content area displays a list of eight items, each consisting of a number (1 through 8) in a light gray box and a small "X" icon to its right. The background of the entire interface is a dark purple gradient.

Section Number	Action
1	X
2	X
3	X
4	X
5	X
6	X
7	X
8	X



# Academic Year

The screenshot shows a user interface for managing academic years. On the left, there is a vertical sidebar with various icons: a user profile, a gear, a list, a plus sign, a minus sign, a bell, a calendar, a person, and a circular arrow. The main area has a light gray background with a dark blue header bar containing the text "Add Academic Year". Above this bar is a white input field labeled "Number Of Academic Year (1)". Below the header, there are four input fields, each containing a number from 1 to 4, followed by a small "X" button to the right of each field. The entire interface is set against a dark purple background.

Number Of Academic Year (1)

Add Academic Year

1

2

3

4



# Adding admin

The screenshot shows a user interface for adding a new administrator. On the left, there is a vertical sidebar with various icons: a castle (selected), a grid, a person, a checkmark, a bell, a list, a plus sign, a diamond, a person with a gear, a calendar, a person with a plus sign, and a circular arrow. The main area contains a form with three input fields: 'Full Name' (containing 'www www www www'), 'Email' (containing 'Email'), and 'Password' (containing 'Password'). Below the form is a dark blue button labeled 'Add admin'.

Full Name

www www www www

Email

Email

Password

Password

Add admin



# Choose type adding Instructors

The screenshot shows a software interface with a dark background. On the left, there is a vertical sidebar containing various icons, including a user profile, a gear, a plus sign, a calendar, a bell, and a checkmark. The main area features two large, semi-transparent rectangular buttons. The left button is labeled "Add more instructors" and the right button is labeled "Add one instructor". Both buttons have a faint shadow and are positioned over a light gray background that has a subtle circular gradient overlay.



# Adding Instructor

[Return Dashboard](#)

Full Name

University code

National ID

Department

**Add Instructor**



# Add more Instructors

[« Return Dashboard](#)

## Adding more instructor

Note: Download the file, enter data into it, and upload it again. [Download File](#)

Choose File

No file chosen

Upload File

Full Name	University Code	National ID	Department
Nabil Mostafa	11111100000000	11111100000000	is
Aliaa Ahmed	11111100000000	11111100000000	is
Eslam Samy	22222200000000	22222200000000	is
Riham Hossan	22222220000000	22222220000000	is
Ahmed Samy	33333330000000	33333330000000	cs
Wafaa Tawfik	44444400000000	44444400000000	is
Kareem Ahmed	44444440000000	44444440000000	is
Gawaher Soliman	55555500000000	55555500000000	is
Sooad Mohammad	66666600000000	66666600000000	is



# Update Instructor

[Return Dashboard](#)

Full Name

University code

National ID

Department

**Update Information**



## Choose type adding Students

The screenshot shows a mobile application interface with a dark blue header and a light gray background. On the left, there is a vertical navigation bar with various icons: a user profile, a list, a checkmark, a bell, a grid, a plus sign, a diamond, a person icon, and a calendar. The main area displays two large, semi-transparent rectangular buttons. The left button is labeled "Add more students" and the right button is labeled "Add one student". Both buttons have faint circular arrows at the bottom right corner, indicating they are interactive.



# Adding Student

[Return Dashboard](#)

Full Name

University code

National ID

Academic year

Section Number

**Add Student**



# Add more Students

[◀ Return Dashboard](#)

## Adding more students

Note: Download the file, enter data into it, and upload it again. [Download File](#)

Choose File

No file chosen

Upload File

Full Name	University Code	National ID	Academic Year	Section Number
Eslam Komal	1234567891231	1234567891231	4	2
Ryman Osama	1234567891232	1234567891232	1	2
Karem Mohamed	1234567891233	1234567891233	3	4
Mohamed Tomer	1234567891234	1234567891234	2	5
Karem AbdelSalam	1234567891235	1234567891235	1	4
Ahmed Fawzy	1234567891236	1234567891236	3	1
Ahmed Ali	1234567891237	1234567891237	4	5
Ryman Osama	1234567891238	1234567891238	1	6
Ahmed Fawzy	1234567891239	1234567891239	3	7



# Update Student

[Return Dashboard](#)

Full Name  
Mohamed Tamer

University code  
1234567891234

National ID  
1234567891234

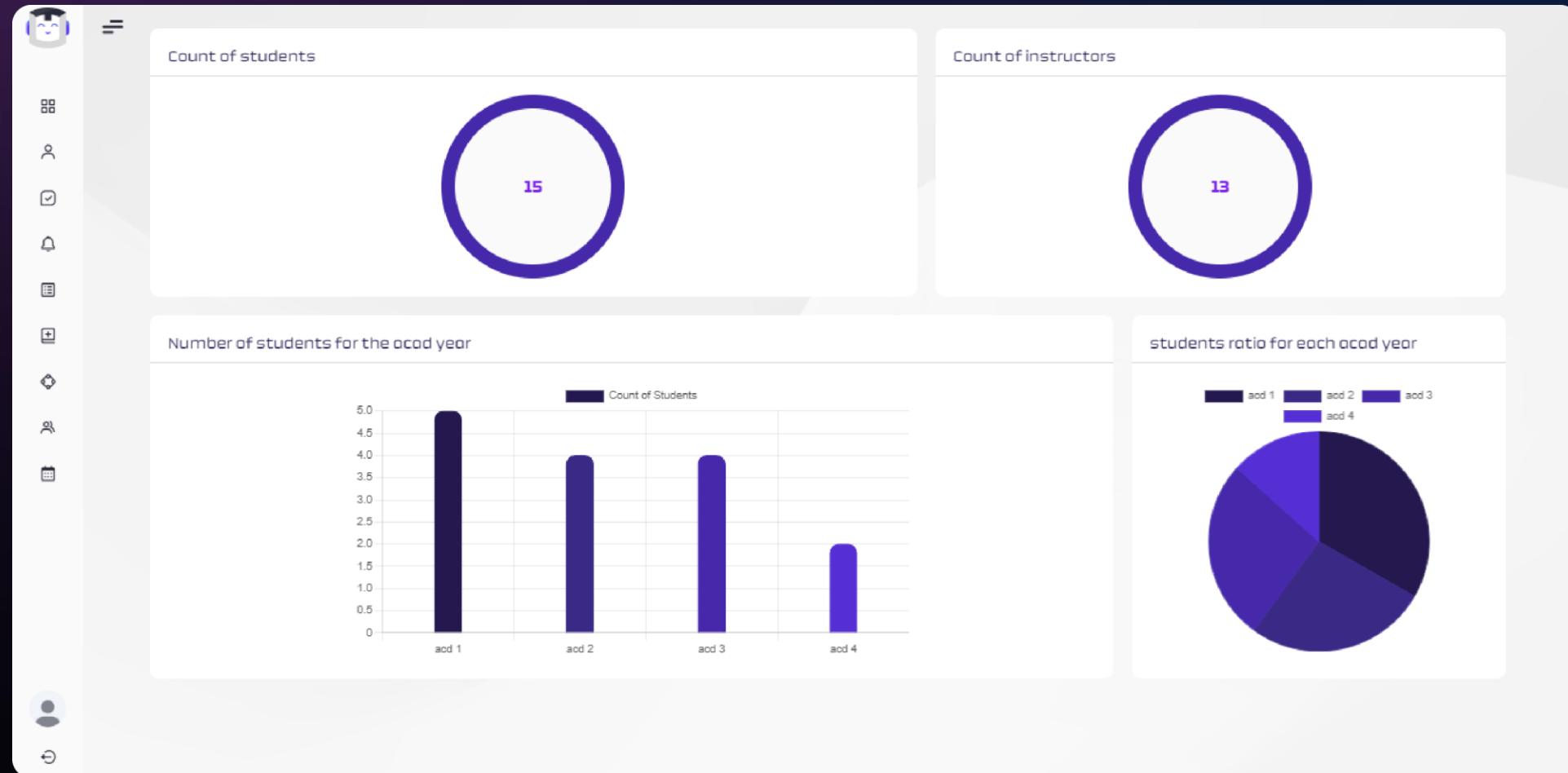
Academic year  
2

Section number  
5

**Update Information**



# Dashboard





# Competitors

Application	Traditional	Face Recognition machine	بفوري	Tracer
Profile	✗	✗	✓	✓
Taking tasks	✗	✗	✗	✓
Grade	✗	✗	✗	✓
Automated attendance	✗	✗	✓	✓
Attendance For Instructor & students	✓	✓	✓	✓
Statistics	✗	✗	✗	✓
Face Recognition	✗	✓	✗	✓





# Conclusion

- A comprehensive and effective solution for education institutions to efficiently track student attendance, performance, and development.



# Future work

- Our future is to develop a mobile application to give more flexibility





THANK YOU

