School system

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.NAME

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2.2 Methods, Tools, and Techniques

. tools

- Microsoft project
- NetBeans
- *Excel*
- *MySQL shell*
- *Python*
- *Cloud*
- *Slack*
- *team*

2.5 Resource Allocation

Scope the goals of system Project schedule	From student and teacher, the user that use this system Gant chart
Database	SQL data base engineer server
Application and web	Web and application development

Tasks	Resource
define project problem	Analyst, computer tool to draw WBS

produced detailed project schedule	Analyst, Gant chart
confirm project feasibility	Project manager
gather information to learn the problem domain and define system requirements. prioritize requirements. generate and evaluate alternatives. review recommendations with management	Analyst, questioner methods Analyst, computer tool
design and integrate database. design and integrate the network. design the application architecture. design user interface prototype for design details design and integrate system control	Designer
construct software components verify and test train users and document the system install the system	Programmer

2.6 Budget Allocation

Identify the budget amount allocated by key budget categories (e.g., project milestone or standard cost categories such as personnel, and travel), including the period that may constrain the use of the f the budget.

Key Budget Category	Budget Amount	Period
choosing good team to work	2000	Stp1
-Writing algorithms -Writing data dictionary -Analysis data	1000$ 200$ 100$	Stp2

Design database -Design interface -build Site map -build User flow -build video -build Icons -build Colors data entry data collection data preprocessing create web application upload data to cloud model development model training model testing and environment deploying	100$ 100$ 100$ 100$ 100$ 100$ 100$ 100$ 100$ 100$ 100$ 100$ 100$ 100$ 100$ 100$ 100$	Stp3
IMPLEMENTATION	1000$	Stp4
TESTING	1000$	Stp5

Section 3. Risk Management

Based on project-specific methods, describe how risks will be analyzed to establish the project exposure for each risk and to determine which risks are the most important ones to address.

Risk Description	Probability	Impact	Strategy
Cost Estimates Unrealistic	Low	High	*Included in the project plan, subject to amendment as new details regarding project scope are revealed*
Time Estimates Unrealistic	high	low	
Team Size	low	low	
Project Scope Creep	high	high	*Defined in the project plan, reviewed by Project Manager and Steering Committee to prevent scope creep*
Team Members Unknowledgeable of Business	low	high	
Available documentation	high	High	
Narrow Knowledge Level of Users	low	low	
Data privacy and security	low	high	important to have clear policies in place for how data will be collected, used, and shared, and to obtain informed consent from all users.
Bias in the data	high	high	Machine learning and deep learning algorithms are only as good as the data they are trained on. If the data contains biases or reflects inequalities in society, these biases can be perpetuated by the algorithm. It's important to carefully select the data used to train the algorithm, and to evaluate the results to ensure they are fair and unbiased.

⇒

analysis

Interview

Interviews name “ Monna **“**		**date “** 1/4./2023 **“**	
Position “ manger **“**		**time “** **3H**	**“**
Position location “ **cafe** **“**		**interviewer name “** Mohamed	**“**

What is kind of user?

Student and teacher and manger

What is platform that the system used?

Web and application

Do you want any feature for system?

Yas I want to know the kind of activity that student loved and How to increase the percentage of inclusion and prepare them for projects on the ground

Can you describe your experience designing and implementing an e-learning system that incorporates machine learning and deep learning?

Answer: Yes, I have experience designing and implementing an e-learning system that incorporates machine learning and deep learning. Specifically, I designed and developed a system that uses machine learning algorithms to provide personalized learning experiences for students based on their individual learning needs and preferences. The system also incorporates deep learning algorithms to automatically generate quizzes and assessments that are tailored to each student's learning level and progress.

How do you ensure the accuracy and effectiveness of the machine learning algorithms used in the e-learning system?

Answer: To ensure the accuracy and effectiveness of the machine learning algorithms used in the e-learning system, I used a combination of training and testing data sets to train and validate the algorithms. I also used cross-validation techniques to test the algorithms on different subsets of the data and ensure that they are generalizable and not overfitting to the training data.

How do you manage user data and ensure data privacy and security in the e-learning system?

Answer: To manage user data and ensure data privacy and security in the e-learning system, I used secure storage and transmission protocols, such as encryption and hashing. I also implemented access control measures to restrict user access to sensitive data and regularly monitored system logs for any suspicious activity or unauthorized access.

Can you describe how the e-learning system incorporates deep learning algorithms to generate personalized quizzes and assessments for students?

Answer: Yes, the e-learning system uses deep learning algorithms to analyze each student's learning progress and generate personalized quizzes and assessments that are tailored to their individual learning level and needs. The system uses a neural network architecture to identify patterns in the student's performance data and predict their level of mastery for each topic. Based on this analysis, the system generates quizzes and assessments that are appropriate for the student's learning level and provide opportunities for further learning and skill development.

FUNCTIONAL REQUIREMENTS FOR E LEARNING SYSTEM

User management: The system should have the ability to manage different types of users, such as students, teachers, and administrators, and allow them to log in with different levels of access and permissions.

Content management: The system should have the ability to manage and deliver learning content, such as lessons, quizzes, and assignments, and allow teachers to create and modify content as needed.

Personalization: The system should be able to provide personalized learning experiences for each student, based on their individual needs, preferences, and learning styles.

Assessment and feedback: The system should have the ability to assess student learning through quizzes, assignments, and other assessments, and provide feedback to both students and teachers to help guide their learning and teaching.

Recommendation engine: The system could incorporate a recommendation engine that uses machine learning and deep learning algorithms to suggest learning content, activities, and interventions for each student based on their learning history and performance.

Progress tracking and reporting: The system should be able to track student progress and generate reports that provide insights into student performance, such as which topics are most challenging and which students may need additional support.

Communication and collaboration: The system should have the ability to facilitate communication and collaboration between students and teachers, such as through chat or messaging tools, discussion forums, and video conferencing.

Admin should be able to add , update and delete courses

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Admin should be able to add , update and delete user

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Admin should be able to manage, schedules of source

NONFUNCTIONAL REQUIREMENTS FOR E LEARNING SYSTEM

Performance requirement

System should be compatible with all modern browser.

Appearance

Login / logout (safety)

Performance: This refers to the system's ability to handle a large number of users and data without experiencing significant delays or crashes. It might include requirements such as response time, throughput, and availability.

Security: This refers to the system's ability to protect sensitive user data from unauthorized access or malicious attacks. It might include requirements such as encryption, access control, and logging.

Usability: This refers to the system's ease of use and its ability to meet the needs and expectations of its users. It might include requirements such as navigation, user interface design, and accessibility for users with disabilities.

Scalability: This refers to the system's ability to adapt and expand as user needs change over time. It might include requirements such as modularity, extensibility, and compatibility with different hardware and software environments.

Reliability: This refers to the system's ability to function consistently and predictably over time, without experiencing significant errors or failures. It might include requirements such as fault tolerance, backup and recovery, and testing.

Compliance: This refers to the system's ability to meet regulatory and industry standards, such as those related to data privacy, security, and accessibility

Report

The requirements that were obtained from this interview are:

1-system will be a website and desktop application

2- the system needs the attributes of students and instructors

3- this system will be used by teachers, students

4-use deep learning algorithms to make a school system

5-description of the graphic user interface to the project

Questionaries

What the survey is about:

This survey shows how upper secondary education is provided. The questionnaire asks for information about:

- The educational programs offered at your school site.
- The school's resources.
- Teachers.
- The use of information technology and the obstacles in this area.

Is your school public or private?

- Public school ☐
- Private school ☐

About what percentage of your total funding for a typical school year comes from the following sources?

a. Government (includes departments, local, regional, state, and national)	%
b. Student fees or school charges paid by parents	%
c. Benefactors, donations, bequests, sponsorships, parent fundraising	%
d. Other	%
Total	100 %

How many students were enrolled in your school?

4. Which of the following best describes the area in which your school is located?
. A (fewer than 3 000 people)
A (3 000 to about 15 000 people)
A (15 000 to about 100 000 people)
A (100 000 to about 1 000 000 people)
Close to the cultural/business/shopping center of a
with over 1 000 000 people
Elsewhere in a city with over 1 000 000 people

In which study areas is it difficult to hire a fully qualified teacher?

a. Mother tongue	1 Yes 2 No
b. Mathematics	1 Yes 2 No
c. foreign languages	1 Yes 2 No
d. social studies	1 Yes 2 No
e. Sciences	1 Yes 2 No
k. Other	1Yes 2 No

how often does your school group students using the following methods?

a. Students are grouped more or less at random

b. Students are grouped according to similar ability levels

c. Students are grouped so that classes contain a mixture of ability levels

d. Students are assigned according to the special expertise of teachers

Feasibility study

Benefit per year = 30000$.

One time cost = 33000$.

Recurring cost per year = 1000$

Discount rate = 20%.

$PV_n = Y \times \frac{1}{(1+i)^n}$

0	$PV_b = 0$	$PV_c = 33000\$$
1	$PV_b = 25000\$$	$PV_c = 833\$$
2	$PV_b = 20833\$$	$PV_c = 695\$$
3	$PV_b = 17361\$$	$PV_c = 578\$$
4	$PV_b = 14467\$$	$PV_c = 482\$$
5	$PV_b = 12056\$$	$PV_c = 401\$$

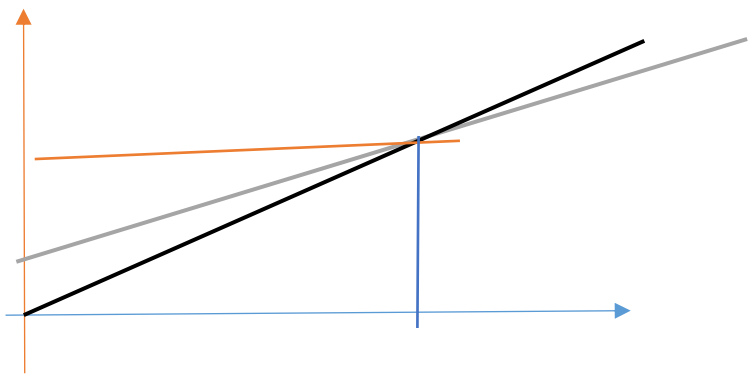
0	$NPV_b = 0$	$NPV_c = 33000\$$
1	$NPV_b = 25000\$$	$NPV_c = 33833\$$
2	$NPV_b = 45833\ \$$	$NPV_c = 34528\$$
3	$NPV_b = 63194\$$	$NPV_c = 35106\$$
4	$NPV_b = 77661\$$	$NPV_c = 35588\$$
5	$NPV_b = 189717\$$	$NPV_c = 35989\$$

N	Yearly PV cash flow
0	-33000
1	24167
2	20138
3	16783
4	13985
5	11655

N	Yearly overflow NPV cash flow
0	-33000
1	-8833
2	11305
3	28088
4	42073
5	153728

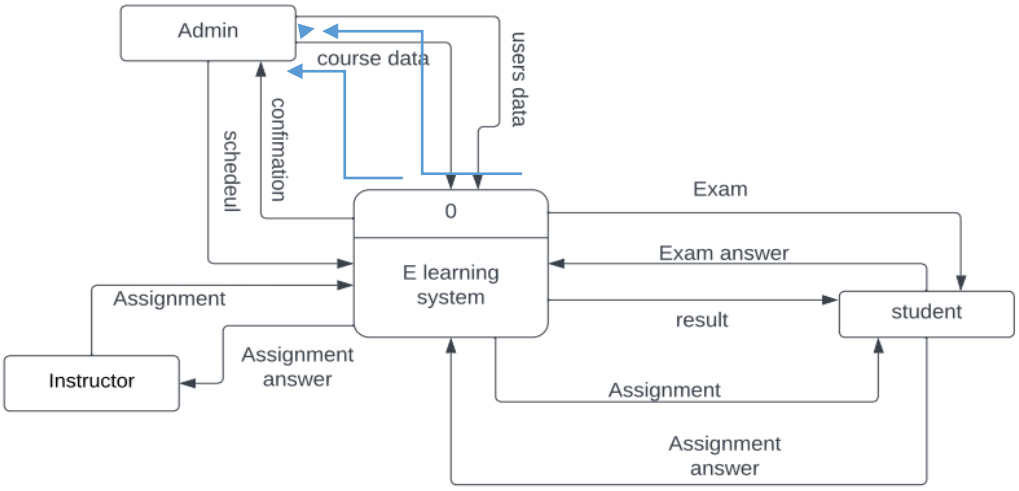
Break-even point = $\frac{\text{Yearly PV cash flow} - \text{Yearly overflow NPV cash flow}}{\text{Yearly PV cash flow}}$ =(23610-18943)/23610 = 0.19 NPV

Break-even point at 2.19

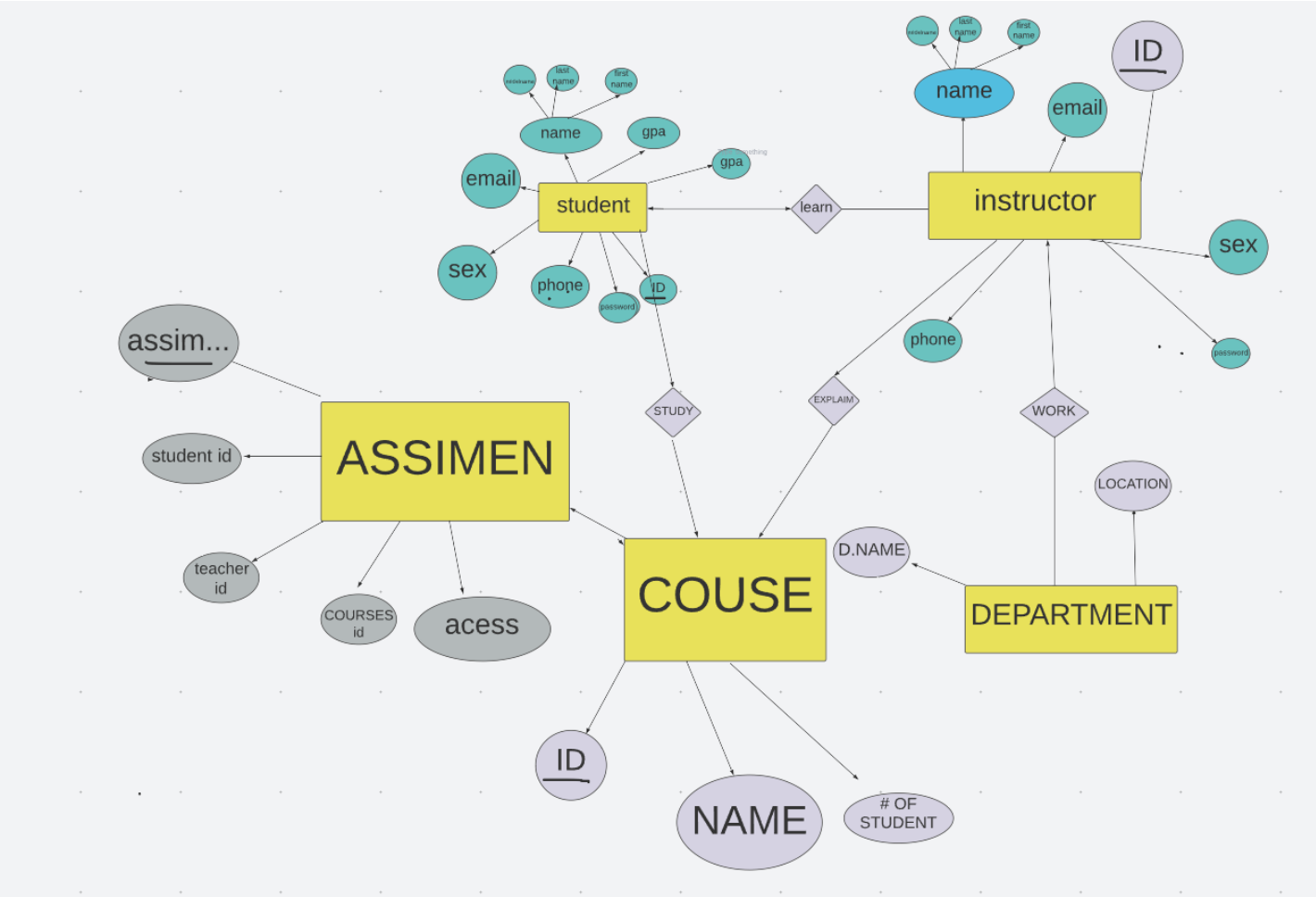


Design

First context diagram:



Second ERD: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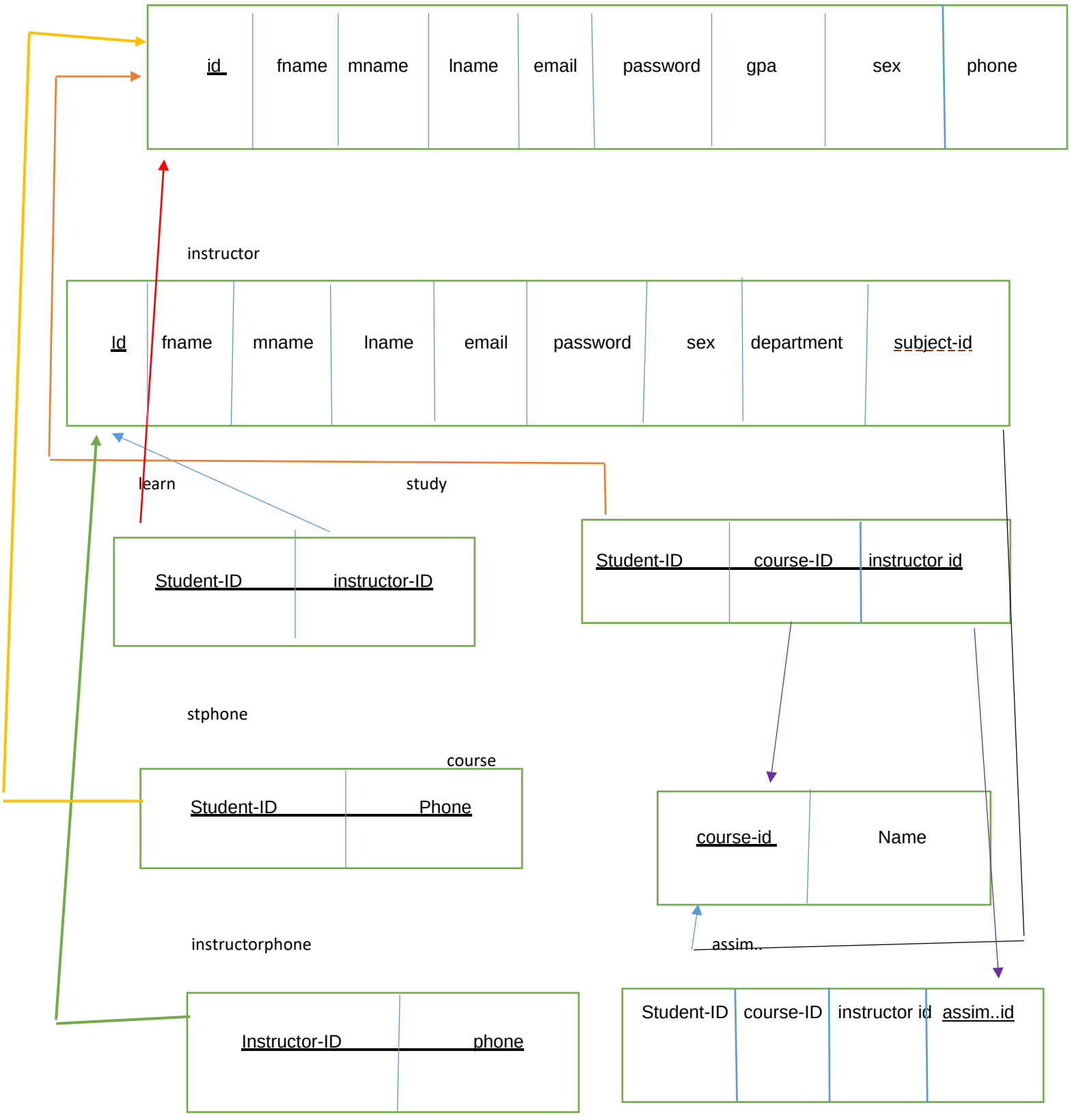
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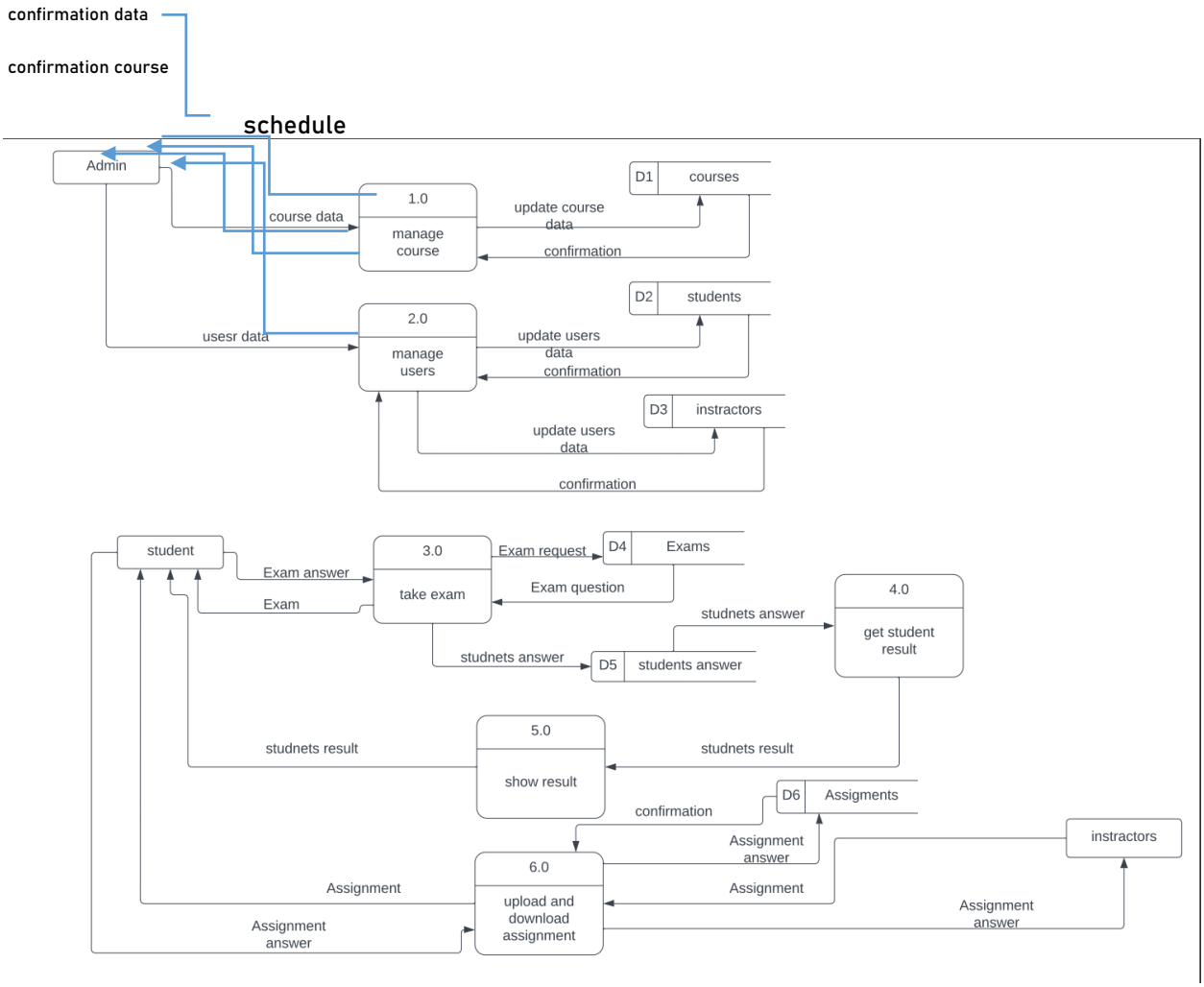
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Exam request
Exam question
D4
Exams
studnets answer
D5
students answer
4.0
get student result
studnets result
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show result
studnets result
confirmation
D6
Assigments
Assignment answer
instractors
Assignment
6.0
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Assignment
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