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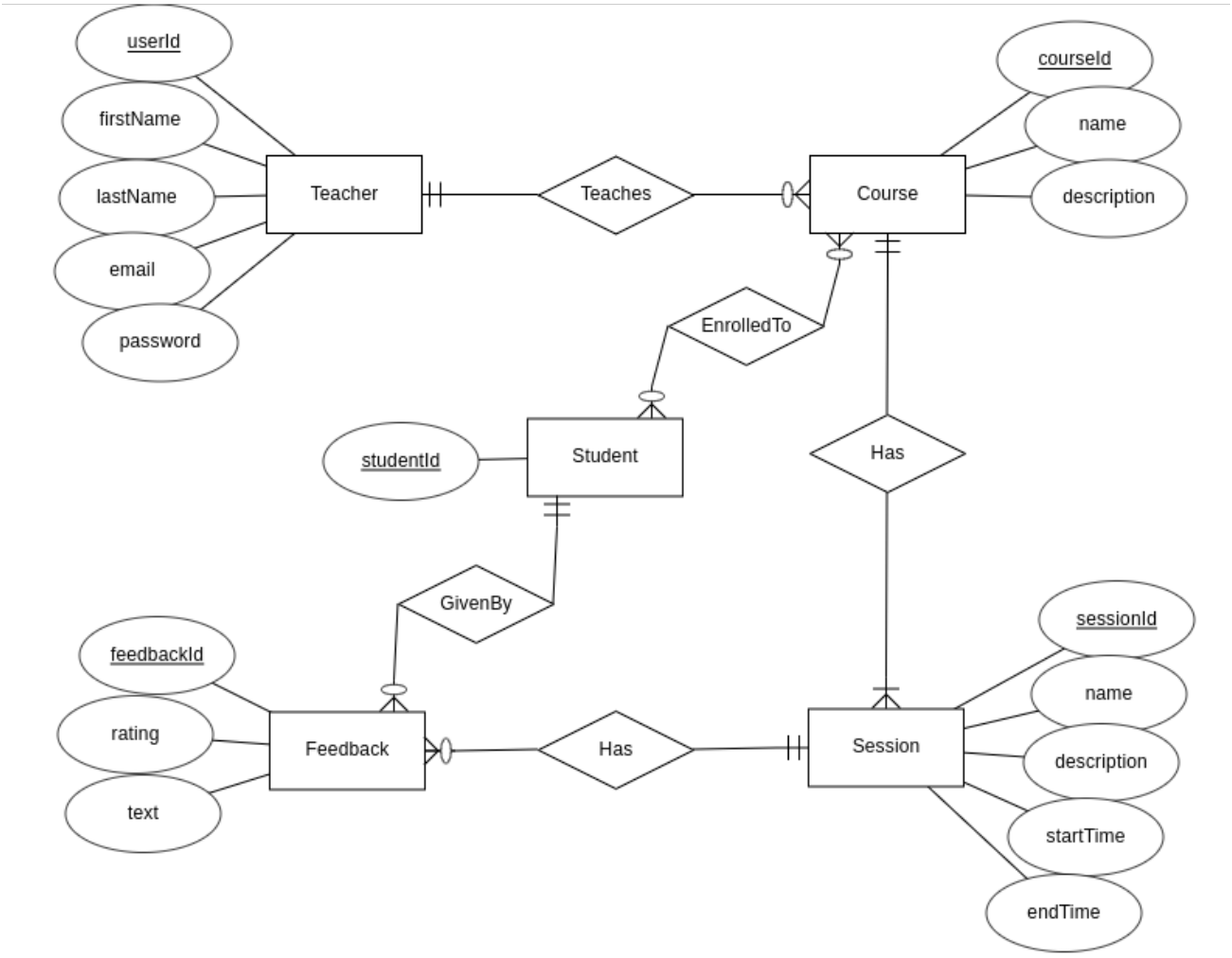
1. Project vision

The Instant Review Software is designed for teachers at diverse educational institutions, aiming to enhance their lecture quality through timely and impactful student feedback. This web application allows students to provide immediate responses post-lecture, enabling educators to adapt and evolve their teaching methods effectively. Unlike traditional end-of-course feedback, this tool offers real-time insights into lecture performance, helping teachers identify successful topics and teaching styles.

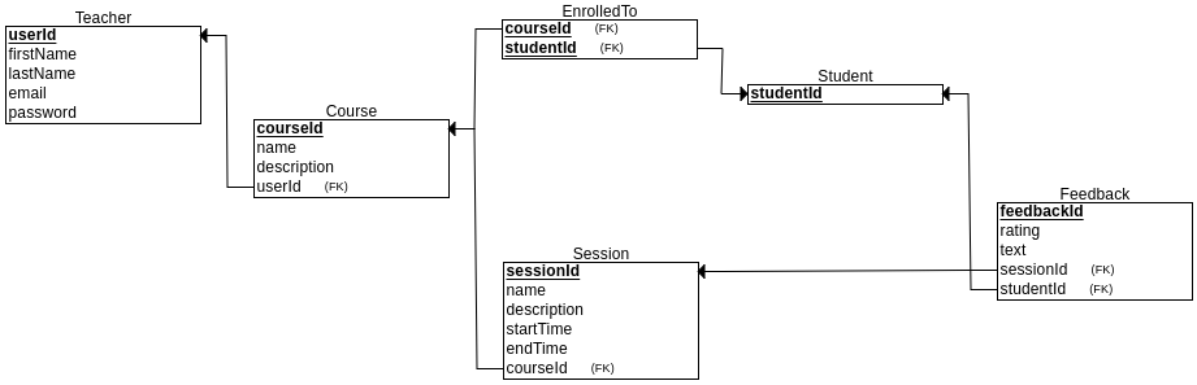
The teacher has the possibility to sign up, log in, and create courses. Inside each course, the teacher can create sessions. For each session the teacher can generate a QR code.

Students can scan a QR code and leave a review for the session using their phone. The review involves a color assessment (red, green and yellow) and a voluntary comment. Each student can leave only one review per one session.

2. An image of the ER diagram



3. An image of the relational database schema generated from the ER diagram



4. A verbal description of each entity type and relationship type in the ER diagram

Entity Types:

1. **Teacher Entity:** Represents a teacher with personal information and credentials. It has attributes such as userId, firstName, lastName, email, and password.

2. **Course Entity:** Represents a course with its identifier, name, and description. It has attributes such as courseId, name, description, and userId (Foreign Key) which is associated with a teacher.

3. **Student Entity:** Represents students identified by their unique student IDs. It has an attribute studentId.

4. **Session Entity:** Represents individual sessions of a course including their schedule. It has attributes like sessionId, name, description, startTime, endTime, and courseId (Foreign Key) which is associated with a course.

5. **Feedback Entity:** Represents feedback given by students for specific sessions. It has attributes such as feedbackId, rating, text, sessionId (Foreign Key) associated with a session, and studentId (Foreign Key) associated with a student.

Relationship Types:

6. **Teacher to Course:** A one-to-many relationship where one teacher can teach multiple courses but each course is taught by one teacher.

7. **EnrolledTo:** A many-to-many relationship between students and courses indicating which students are enrolled in which courses.

8. **Session to Course:** A many-to-one relationship where multiple sessions can be part of one course but each session belongs to only one course.

9. **Feedback to Session & Student:** Indicates that feedback is associated with both a specific session and the student who provided it. It's a many-to-one relationship as multiple feedbacks can be associated with one session or student but each feedback is linked to only one session or student.

5. Sample data for each database table.

TEACHER

userId	firstName	lastName	email	password
1	Alice	Johnson	alice@example.com	pass123
2	Bob	Smith	bob@example.com	pass456

COURSE

courseId	name	description	userId
1	OOP	Basic of OOP	1
2	Web Development	Learn to build full-stack app	2
3	Data Science	Data analysis with Python	1

STUDENT

studentId
1
2
3
4

ENROLLED_TO

studentId	courseId
1	1
2	1
3	1
4	2

SESSION

sessionId	name	description	startTime	endTime	courseId
1	Python Basics	Variables, data types	2024-02-15T10:00:00.000Z	2024-02-15T12:00:00.000Z	1
2	Control Structures	If statement and loops	2024-02-16T10:00:00.000Z	2024-02-16T12:00:00.000Z	1
3	HTML & CSS	Building blocks of web page	2024-02-18T13:00:00.000Z	2024-02-18T16:00:00.000Z	2

FEEDBACK

feedbackId	rating	text	sessionId	studentId
1	5	Great introduction!	1	1
2	4	It's ok!	1	2
3	2	Meh!	2	2
4	3	Difficult to understand!	3	4