Educational Platform

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Project Brief

this project aims to make the e-learning process much easier for the users and save a lot of time for them and its database design aims to make the user purchase courses and keep tracking of their progress over the time by handling the database.

Business Rules

1. Users may enroll in one or more course
2. And Courses maybe get enrolled by one or more user
3. Courses must have one or more lecture
4. And lectures must be assigned to only one course
5. Subjects must have one or more courses
6. And Courses must be categorized under only one subject
7. The enrollment users may keep track the progress of one or more lectures
8. And the lecture is being tracked by only the enrollment user

Database Entities

1. Users The Users entity represent the users who are registered on the database but didn't enroll (purchase) any courses yet.

Attributes

- **Id** => integer, PK(**Primary Key**), NN
- **Role** => varchar(string) NN, the role if the user (admin or user) Default is user
- **Name** => varchar, NN, the name of the student
- **Email** => varchar, NN, the email of the student

- **email_verified_at** => TIMESTAMP, default null
- **image** => varchar,default null
- **created_at** TIMESTAMP
- **updated_at =>** TIMESTAMP default null
- **remember_token => varchar**

2. Courses

This entity includes all of info about each course like title, image, price, discount if available

Attributes

- **Id =>** INT, **PK**(primary key), NN
- **Title =>** VARCHAR, NN , title of the course
- **Description =>** VARCHAR, NN, Description of the course
- **Image =>** VARCHAR, NN
- **Price =>** DOUBLE, NN, price of the course
- **discount_type =>** VARCHAR,NN
- **discoun_value=>** MEDIUMINT,NN
- **max_discount=>** MEDIUMINT
- **created_at=>** TIMESTAMP, default null
- **updated_at=>** TIMESTAMP, default null
- **subjects_id=> FK**(**Foreign key**) REFERENCES from subjects table **,** NN

3. users_courses

this entity represents the users who enolled to a course at least and it's a link between the two other entities Courses and users

Attributes

- **courses_id=> INT, (**Fk)**Foreign Key** REFERENCES from **courses** table but is the **PK** for users_courses table, the course id which user is enrolled in
- **users_id=> INT, (Fk) Foreign Key** REFERENCES from **users** table but it the **PK** for this course
- **lecture_id=> INT, (FK) Foreign Key** REFERENCES from **Lectures** table
- **progress=>** VARCHAR, NN
- **created_at=>** TIMESTAMP,
- **updated_at=>** TIMESTAMP, default NULL

4. subjects

this entity represents the categories or subject available on the platform which courses are listed under them

Attributes

- **id** =>INT,NN,Unique, PK(Primary Key)
- **name=>** subject or category name
- **created_at=>** TIMESTAMP
- **updated_at=>**TIMESTAMP, default NULL

5. Lectures

This entity represents the lectures which each course includes

Attributes

- **Id=>**INT, NN, **PK**(Primary Key)

- **courses_id** =>INT, NN, **FK**(Foreign Key) REFERENCES from Courses but it's the **PK** for this table
- **Title**=> VARCHAR, NN, title of the lecture
- **Description**=> TEXT, NN
- **Link**=> VARCHAR, NN, link of the lecture
- **Image**=> VARCHAR**, NN**
- **created_at**=> TIMESTAMP,NN
- **updated_at** => TIMESTAMP, default NULL

<u>Database ERD</u>