PROBLEM STATEMENT

Design a normalized relational database schema for an elearning platform.
Features:

1. Offers multiple trainings
2. Details regarding each training: Modules, Topics, Final Test MCQ questions, and assignments
3. Cost orientation may differ for trainings based on dates
4. Offers multiple batches of a training
5. Basic details of users'
6. Multiple trainings enrolments
7. Store users' data for each training

SOLUTION

Normalized relational database schema: Design (https://dbdiagram.io/d/5e4954919e76504e0ef18086)

Note: If the design link is not clickable, then download the pdf and study the link.

1. **Offers multiple trainings**
   Tables: trainings, faqs

trainings	
id	int [primary key, auto increment]
heading	varchar(255)
sub_heading	varchar(255)
about	varchar(max)
table_of_content_link	varchar(255)
is_registration_active	tinyint
order	int
base_price	int
duration	int
created_at	timestamp

last_updated_at	timestamp

faqs	
id	int [primary key, auto increment]
training_id	int [foreign key, trainings.id]
question	varchar(max)
answer	varchar(max)
order	int
is_active	tinyint
created_at	timestamp
last_updated_at	timestamp

2. **Details regarding each training: Modules, Topics, Final Test MCQ questions, and assignments**
   Tables: modules, topics, final_tests, final_tests_questions, assignments

modules	
id	int [primary key, auto increment]
training_id	int [foreign key, trainings.id]
name	varchar(255)
order	int
is_active	tinyint
created_at	timestamp
last_updated_at	timestamp

topics	
id	int [primary key, auto increment]

module_id	int [foreign key, modules.id]
name	varchar(255)
content	varchar(max)
order	int
is_active	tinyint
created_at	timestamp
last_updated_at	timestamp

final_tests	
id	int [primary key, auto increment]
training_id	int [foreign key, trainings.id]
total_questions	int
time_limit	int
is_active	tinyint
created_at	timestamp
last_updated_at	timestamp

final_tests_questions	
id	int [primary key, auto increment]
final_test_id	int [foreign key, final_tests.id]
question	varchar(max)
option_one	varchar(max)
option_two	varchar(max)
option_three	varchar(max)
option_four	varchar(max)
correct_option	enum (option_one, option_two_option_three, option_four)

order	int
is_active	tinyint
created_at	timestamp
last_updated_at	timestamp

assignments	
id	int [primary key, auto increment]
training_id	int [foreign key, trainings.id]
assignment_link	varchar(max)
is_active	tinyint
created_at	timestamp
last_updated_at	timestamp

3. **Cost orientation may differ for trainings based on dates**
   Table: amounts

amounts	
id	int [primary key, auto increment]
training_id	int [foreign key, trainings.id]
valid_till	timestamp
is_active	tinyint
created_at	timestamp
last_updated_at	timestamp

4. **Offers multiple batches of a training**
   Table: batches

batches

id	int [primary key, auto increment]
training_id	int [foreign key, trainings.id]
start_date	date
is_active	tinyint
created_at	timestamp
last_updated_at	timestamp

5. **Store basic user data**
   Tables: users, users_details

users	
id	int [primary key, auto increment]
email	varchar(max)
password	varchar(max)
is_active	tinyint
created_at	timestamp
last_updated_at	timestamp

users_details	
id	int [primary key, auto increment]
user_id	int [foreign key, users.id]
f_name	varchar(255)
l_name	varchar(255)
phone_number	varchar(50)
created_at	timestamp
last_updated_at	timestamp

6. **Multiple trainings enrolments**
   Table: trainings_users

trainings_users	
id	int [primary key, auto increment]
user_id	int [foreign key, users.id]
batch_id	int [foreign key, batches.id]
registration_timestamp	timestamp
registration_amount	int
is_paid	tinyint
payment_timestamp	timestamp
payment_amount	int
utm_source	varchar(255)
utm_medium	varchar(255)
utm_campaign	varchar(255)
created_at	timestamp
last_updated_at	timestamp

7. **Store users' data for each training**
   Tables: trainings_users_assignments, trainings_users_final_test_questions, trainings_users_final_test_summary

trainings_users_assignments	
id	int [primary key, auto increment]
training_user_id	int [foreign key, trainings_users.id]

assignment_id	int [foreign key, assignments.id]
submitted_url	varchar(max)
submission_timstamp	timestamp
created_at	timestamp
last_updated_at	timestamp

Trainings_users_final_test_questions	
id	int [primary key, auto increment]
training_user_id	int [foreign key, trainings_users.id]
final_test_question_id	int [foreign key, final_test_questions.id]
selected_option	enum (option_one, option_two_option_three, option_four)
created_at	timestamp
last_updated_at	timestamp