**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) **Download the**OR(https://dbdiagram.io/d/5e4954919e76504e0ef18086)

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 |

1. **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 |

1. **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 |

1. **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 |

1. **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 |

1. **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 |

1. **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 |