

# DB MODEL - GUVI ZEN CLASS

## MySQL - Task02

### 1. Create database:

```
Create database zenclass;
```

### 2. Choose the database:

```
use zenclass;
```

### 3. Create tables:

#### 1. Courses table:

```
create table courses(  
  -> id int primary key,  
  -> courseName varchar(255),  
  -> description text  
  -> );
```

#### 2. Batches table:

```
create table batches(  
  -> id int primary key,  
  -> batchName varchar(255),  
  -> );
```

#### 3. Mentors table:

```
create table mentors(  
  -> id int primary key,  
  -> name varchar(255),  
  -> );
```

#### 4. Students table:

```
create table students(  
  -> id int primary key,  
  -> studentname varchar(255),  
  -> );
```

#### 5. Tasks table:

```
create table tasks(  
  -> id int primary key,  
  -> taskname varchar(255),  
  -> status varchar(255),  
  -> assignedDate date,  
  -> submittedDate date  
  -> );
```

#### 6. Class table:

```
create table class(  
-> id int primary key,  
-> batchId int,  
-> studentId int,  
-> courseId int,  
-> mentorId int,  
-> taskId int  
-> );
```

#### 4. Display the structure of tables:

##### 1. Courses:

```
mysql> desc courses;  
+-----+-----+-----+-----+-----+-----+  
| Field          | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| id             | int           | NO   | PRI | NULL     |       |  
| courseName     | varchar(255)  | YES  |     | NULL     |       |  
| description     | text          | YES  |     | NULL     |       |  
+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.00 sec)
```

##### 2. Batches:

```
mysql> desc batches;  
+-----+-----+-----+-----+-----+-----+  
| Field          | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| id             | int           | NO   | PRI | NULL     |       |  
| batchName      | varchar(255)  | YES  |     | NULL     |       |  
+-----+-----+-----+-----+-----+-----+  
2 rows in set (0.00 sec)
```

##### 3. Mentors:

```
mysql> desc mentors;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	
name	varchar(255)	YES		NULL	

```
2 rows in set (0.00 sec)
```

#### 4. Students:

```
mysql> desc students;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	
studentName	varchar(255)	YES		NULL	

```
2 rows in set (0.00 sec)
```

#### 5. Tasks:

```
mysql> desc tasks;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	
taskName	varchar(255)	YES		NULL	
status	varchar(255)	YES		NULL	
submitDate	date	YES		NULL	
completion	date	YES		NULL	

```
5 rows in set (0.00 sec)
```

#### 6. Class:

```
mysql> desc class;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	
courseId	int	YES		NULL	
batchId	int	YES		NULL	
mentorId	int	YES		NULL	
studentId	int	YES		NULL	
taskId	int	YES		NULL	

```
6 rows in set (0.00 sec)
```

## 5. Insert data into tables:

### 1. Courses:

Insert into courses(id, courseName, description) values

```
-> (1, 'Full Stack', 'Learn full-stack web development'),
-> (2, 'Java Stack', 'Master java-based web development'),
-> (3, 'FrontEnd Developer', 'Become proficient in front-end
development');
```

**View the course table with data:**

```
mysql> select * from courses;
```

id	courseName	description
1	Full Stack	Learn full-stack web development
2	Java Stack	Master Java-based web development
3	FrontEnd Developer	Become proficient in front-end development

```
3 rows in set (0.00 sec)
```

### 2. Batches:

Insert into batches(id, batchName) values

```
-> (1, 'fsd59'),
-> (2, 'fsd60'),
-> (3, 'fsd61');
```

```
mysql> select * from batches;
+----+-----+
| id | batchName |
+----+-----+
| 1  | fsd59     |
| 2  | fsd60     |
| 3  | fsd61     |
+----+-----+
3 rows in set (0.00 sec)
```

### 3. Mentors:

Insert into mentors(id, name) values

```
-> (1, 'Sathish'),
-> (2, 'Deepan'),
-> (3, 'Balaji');
```

**View the course table with data:**

```
mysql> select * from mentors;
+----+-----+
| id | name   |
+----+-----+
| 1  | Sathish |
| 2  | Deepan  |
| 3  | Balaji  |
+----+-----+
3 rows in set (0.00 sec)
```

### 4. Students:

Insert into students(id, studentName) values

```
-> (1, 'Sri'),
-> (2, 'Gomathi'),
-> (3, 'Abu');
-> (4, 'Madhura'),
-> (5, 'Sakthi'),
-> (6, 'karthik');
-> (7, 'vedha'),
-> (8, 'Raja'),
-> (9, 'Hari');
-> (10, 'Abi')
```

**View the course table with data:**

```
l> select * from students;
```

studentName
Sri
Gomathi
Abu
Madhura
Sakthi
karthik
vedha
Raja
Hari
Abi

```
ows in set (0.00 sec)
```

## 5. Tasks:

Insert into tasks(id, taskName, status, assignedDate, submittedDate)  
values(1, 'Develop a Restful API', 'Completed', '2024-07-01', '2024-07-02'),

-> (2, 'Build a CRUD Application', 'Pending', '2024-07-06',  
NULL),

->(3, 'Data Structure Algorithm', 'Completed', '2024-07-10',  
'2024-07-11'),

->(4, 'Build a Contact Book', 'Pending', '2024-07-21', NULL),

->(5, 'Weather API', 'Completed', '2024-07-23', '2024-07-24'),

->(6, 'Responsive Blog', 'Completed', '2024-07-26', '2024-07.-27');

**View the course table with data:**

```
mysql> select * from tasks;
```

id	taskName	status	assignedDate	submittedDate
1	Develop a Restful API	Completed	2024-07-01	2024-07-02
2	Build a CRUD Application	Pending	2024-07-06	NULL
3	Data Structure Algorithm	Completed	2024-07-10	2024-07-11
4	Build a Contact Book	Pending	2024-07-21	NULL
5	Weather API	Completed	2024-07-23	2024-07-24
6	Responsive Blog	Completed	2024-07-26	2024-07-27

```
6 rows in set (0.00 sec)
```

## 6. Class:

```
insert into class(id, batchId, studentId, courseId, mentorId,
taskId) values(1, 1, 1, 1, 1, 1),
->(2, 1, 2, 1, 1, 1),
->(3, 2, 10, 2, 2, 3),
->(4, 1, 1, 1, 1, 2),
->(5, 3, 4, 3, 3, 5),
->(6, 2, 5, 2, 2, 4),
->(7, 1, 2, 1, 1, 2),
->(8, 3, 4, 3, 3, 6),
->(9, 2, 9, 2, 2, 4),
->(10, 1, 8, 1, 1, 1),
->(11, 2, 10, 2, 2, 4),
->(12, 3, 3, 3, 3, 6),
->(13, 2, 9, 2, 2, 3),
->(14, 3, 7, 3, 3, 5),
->(15, 1, 6, 1, 1, 1),
->(16, 3, 7, 3, 3, 6),
->(17, 2, 5, 2, 2, 3),
->(18, 1, 6, 1, 1, 2),
->(19, 3, 3, 3, 3, 5),
->(20, 1, 8, 1, 1, 2);
```

**View the course table with data:**

```
mysql> select * from class;
```

id	batchId	studentId	courseId	mentorId	taskId
1	1	1	1	1	1
2	1	2	1	1	1
3	2	10	2	2	3
4	1	1	1	1	2
5	3	4	3	3	5
6	2	5	2	2	4
7	1	2	1	1	2
8	3	4	3	3	6
9	2	9	2	2	4
10	1	8	1	1	1
11	2	10	2	2	4
12	3	3	3	3	6
13	2	9	2	2	3
14	3	7	3	3	5
15	1	6	1	1	1
16	3	7	3	3	6
17	2	5	2	2	3
18	1	6	1	1	2
19	3	3	3	3	5
20	1	8	1	1	2

```
20 rows in set (0.00 sec)
```



## 5. Execute some Queries:

### 1. Show all data in same table:

```
mysql> select class.id, courses.courseName, batches.batchName, mentors.name, students.studentName, tasks.taskName, tasks.status, tasks.submittedDate from class
    inner join courses on class.courseId = courses.id
    inner join batches on class.batchId = batches.id
    inner join mentors on class.mentorId = mentors.id
    inner join students on class.studentId = students.id
    inner join tasks on class.taskId = tasks.id;
```

id	courseName	batchName	name	studentName	taskName	status	submittedDate
1	Full Stack	fsd59	Sathish	Sri	Develop a Restful API	Completed	2024-07-02
2	Full Stack	fsd59	Sathish	Gomathi	Develop a Restful API	Completed	2024-07-02
3	Java Stack	fsd60	Deepan	Abi	Data Structure Algorithm	Completed	2024-07-11
4	Full Stack	fsd59	Sathish	Sri	Build a CRUD Application	Pending	NULL
5	FrontEnd Developer	fsd61	Balaji	Madhura	Weather API	Completed	2024-07-24
6	Java Stack	fsd60	Deepan	Sakthi	Build a Contact Book	Pending	NULL
7	Full Stack	fsd59	Sathish	Gomathi	Build a CRUD Application	Pending	NULL
8	FrontEnd Developer	fsd61	Balaji	Madhura	Responsive Blog	Completed	2024-07-27
9	Java Stack	fsd60	Deepan	Hari	Build a Contact Book	Pending	NULL
10	Full Stack	fsd59	Sathish	Raja	Develop a Restful API	Completed	2024-07-02
11	Java Stack	fsd60	Deepan	Abi	Build a Contact Book	Pending	NULL
12	FrontEnd Developer	fsd61	Balaji	Abu	Responsive Blog	Completed	2024-07-27
13	Java Stack	fsd60	Deepan	Hari	Data Structure Algorithm	Completed	2024-07-11
14	FrontEnd Developer	fsd61	Balaji	vedha	Weather API	Completed	2024-07-24
15	Full Stack	fsd59	Sathish	karthik	Develop a Restful API	Completed	2024-07-02
16	FrontEnd Developer	fsd61	Balaji	vedha	Responsive Blog	Completed	2024-07-27
17	Java Stack	fsd60	Deepan	Sakthi	Data Structure Algorithm	Completed	2024-07-11
18	Full Stack	fsd59	Sathish	karthik	Build a CRUD Application	Pending	NULL
19	FrontEnd Developer	fsd61	Balaji	Abu	Weather API	Completed	2024-07-24
20	Full Stack	fsd59	Sathish	Raja	Build a CRUD Application	Pending	NULL

20 rows in set (0.00 sec)

## 2.show completed task name and students name:

```
mysql> select class.id, students.studentName, tasks.taskName, tasks.status f
rom class
-> inner join students on class.studentId = students.id
-> inner join tasks on class.taskId = tasks.id
-> where tasks.status = 'Completed';
```

id	studentName	taskName	status
1	Sri	Develop a Restful API	Completed
2	Gomathi	Develop a Restful API	Completed
3	Abi	Data Structure Algorithm	Completed
5	Madhura	Weather API	Completed
8	Madhura	Responsive Blog	Completed
10	Raja	Develop a Restful API	Completed
12	Abu	Responsive Blog	Completed
13	Hari	Data Structure Algorithm	Completed
14	vedha	Weather API	Completed
15	karthik	Develop a Restful API	Completed
16	vedha	Responsive Blog	Completed
17	Sakthi	Data Structure Algorithm	Completed
19	Abu	Weather API	Completed

```
13 rows in set (0.00 sec)
```

## 3. Show mentors name and theirs total students count:

```
mysql> select mentors.name, count(students.id) as totalstudents from class
-> inner join mentors on class.mentorId = mentors.id
-> inner join students on class.studentId = students.id
-> group by mentors.name;
```

name	totalstudents
Sathish	8
Deepan	6
Balaji	6

```
3 rows in set (0.00 sec)
```