

DAY – 3

1) Create 3 tables named students, department, year?

2) student should contain relationship to both department and year?

```
mysql> CREATE DATABASE AR;
```

Query OK, 1 row affected (0.01 sec)

```
mysql> CREATE TABLE department (
```

```
-> department_id INT PRIMARY KEY,
```

```
-> department_name VARCHAR(100)
```

```
-> );
```

Query OK, 0 rows affected (0.04 sec)

```
mysql> CREATE TABLE year (
```

```
-> year_id INT PRIMARY KEY,
```

```
-> year_name VARCHAR(20)
```

```
-> );
```

Query OK, 0 rows affected (0.04 sec)

```
mysql> CREATE TABLE students (
```

```
-> student_id INT PRIMARY KEY,
```

```
-> name VARCHAR(50),
```

```
-> department_id INT,
```

```
-> year_id INT,
```

```
-> FOREIGN KEY (department_id) REFERENCES department(department_id),
```

```
-> FOREIGN KEY (year_id) REFERENCES year(year_id)
```

```
-> );
```

Query OK, 0 rows affected (0.05 sec)

```

+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| student_id | int       | NO   | PRI | NULL    |       |
| name       | varchar(50) | YES  |     | NULL    |       |
| department_id | int      | YES  | MUL | NULL    |       |
| year_id    | int       | YES  | MUL | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> desc year;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| year_id    | int       | NO   | PRI | NULL    |       |
| year_name  | varchar(20) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> desc department;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| department_id | int      | NO   | PRI | NULL    |       |
| department_name | varchar(100) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>

```

3)use chatgpt and ask like "this is my table in mysql how can i create same in mongodb"?

To create similar tables in MongoDB based on the structure of your MySQL tables, you'll need to understand how data is organized in MongoDB. MongoDB is a NoSQL database, which means it doesn't use tables and rows like MySQL does; instead, it uses collections and documents.

Here's how you can model the tables `department`, `year`, and `students` from MySQL into MongoDB collections:

```

Department - {
  "department_id": 1,
  "department_name": "CSE"
}
{
  "department_id": 2,
  "department_name": "MECH"
}
{

```

```
"department_id": 3,  
"department_name": "ECE"  
}
```

Year- {

```
"year_id": 1,  
"year_name": "2022-2023"  
}  
{  
"year_id": 2,  
"year_name": "2021-2022"  
}  
{  
"year_id": 3,  
"year_name": "2023-2024"  
}
```

Student- {

```
" student_id": 1,  
"name": "Devil",  
"department_id": 1,  
"year_id": 1  
}  
{  
" student_id": 2,  
"name": "Tony",  
"department_id": 2,  
"year_id": 2  
}  
  
{  
" student_id": 3,  
"name": "Chris evin",  
"department_id": 3,  
"year_id": 3  
}
```

MongoDB Compass - localhost:27017/eiaesb.students

Connect Edit View Collection Help

localhost:27017 ...

My Queries department year eiaesb students

localhost:27017 > eiaesb > students

Documents 3 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } or [Generate query](#) Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE 1 - 3 of 3

```
{
  "_id": ObjectId('664e234588d9d195fea5052f'),
  "student_id": 1,
  "name": "Devil",
  "department_id": 1,
  "year_id": 1
}
```

```
{
  "_id": ObjectId('664e234588d9d195fea50530'),
  "student_id": 2,
  "name": "Tony",
  "department_id": 2,
  "year_id": 2
}
```

```
{
  "_id": ObjectId('664e234588d9d195fea50531'),
  "student_id": 3,
  "name": "Chris evin",
  "department_id": 3,
  "year_id": 3
}
```

>_MONGOSH

MongoDB Compass - localhost:27017/eiaesb.department

Connect Edit View Collection Help

localhost:27017 ...

My Queries department year eiaesb department

localhost:27017 > eiaesb > department

Documents 3 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } or [Generate query](#) Explain Reset Find Options

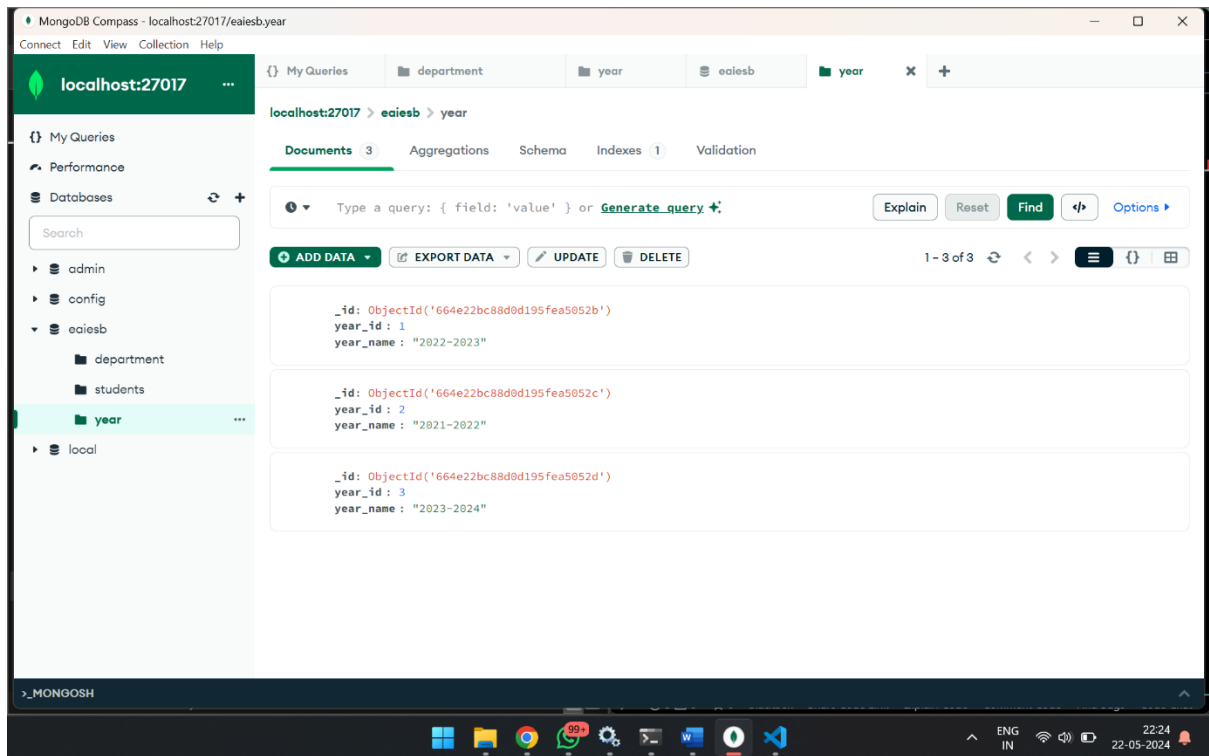
ADD DATA EXPORT DATA UPDATE DELETE 1 - 3 of 3

```
{
  "_id": ObjectId('664e226088d9d195fea50526'),
  "department_id": 1,
  "department_name": "CSE"
}
```

```
{
  "_id": ObjectId('664e226088d9d195fea50527'),
  "department_id": 2,
  "department_name": "MECH"
}
```

```
{
  "_id": ObjectId('664e226088d9d195fea50528'),
  "department_id": 3,
  "department_name": "ECE"
}
```

>_MONGOSH



4)store 5 students for each department?

```
mysql> insert into department values(1,'CSE'),(2,'MECH'),(3,'ECE');
```

Query OK, 3 rows affected (0.01 sec)

Records: 3 Duplicates: 0 Warnings: 0

```
mysql> insert into department values(4,'CSE'),(5,'MECH');
```

Query OK, 2 rows affected (0.01 sec)

Records: 2 Duplicates: 0 Warnings: 0

```
mysql> insert into year values(1,21),(2,22),(3,23),(4,20),(5,24);
```

Query OK, 5 rows affected (0.01 sec)

Records: 5 Duplicates: 0 Warnings: 0

```
mysql> insert into students values(1,'ABHI',1,1),(2,'Ram',2,2),
3,'Tony',3,3),(4,'Shiva',4,4),(5,'Chris',5,5);
```

Query OK, 5 rows affected (0.01 sec)

Records: 5 Duplicates: 0 Warnings: 0

```
mysql> select * from students;
+-----+-----+-----+-----+
| student_id | name  | department_id | year_id |
+-----+-----+-----+-----+
|          1 | ABHI  |             1 |        1 |
|          2 | Ram   |             2 |        2 |
|          3 | Tony  |             3 |        3 |
|          4 | Shiva |             4 |        4 |
|          5 | Chris |             5 |        5 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

5)write a query to display students from CSE department?

```
mysql> select student_id,name from students s,department d where
s.department_id=d.department_id and d.department_name='CSE';
+-----+-----+
| student_id | name  |
+-----+-----+
|          1 | ABHI  |
|          4 | Shiva |
+-----+-----+
2 rows in set (0.00 sec)
```

6)write a query to display only deptname using student table?

```
mysql> select department_name from students s,department d where
s.department_id=d.department_id;
+-----+
| department_name |
+-----+
| CSE              |
| MECH             |
| ECE              |
| CSE              |
| MECH             |
+-----+
5 rows in set (0.00 sec)
```

7)write a query to display students sorted by dept and name?

```
mysql> SELECT s.student_id, s.name, d.department_name  
-> FROM students s,department d  
-> where s.department_id = d.department_id  
-> ORDER BY d.department_name, s.name;
```

student_id	name	department_name
1	ABHI	CSE
4	Shiva	CSE
3	Tony	ECE
5	Chris	MECH
2	Ram	MECH

5 rows in set (0.00 sec)