

**1.Create three tables named students,department,year**

**2.Student should contain relationship to both department and year**

```
mysql -u root -p
```

Enter password: \*\*\*

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 11

Server version: 8.0.37 MySQL Community Server - GPL

**#Create database databasename**

```
mysql> create database nikitha;
```

Query OK, 1 row affected (0.01 sec)

```
mysql> use nikitha;
```

Database changed

**#Creating department table**

```
mysql> -- Create the 'department' table
```

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

```
    -> dept_id INT PRIMARY KEY,
```

```
    -> dept_name VARCHAR(50) NOT NULL
```

```
    -> );
```

Query OK, 0 rows affected (0.02 sec)

**#creating year table**

```
mysql> -- Create the 'year' table
```

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

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

```
    -> year_name VARCHAR(10) NOT NULL
```

```
    -> );
```

Query OK, 0 rows affected (0.01 sec)

**#creating a student table and adding dept id and year id as foreign key**

```
mysql> -- Create the 'students' table
```

```
mysql> CREATE TABLE students (
->  student_id INT PRIMARY KEY,
->  student_name VARCHAR(100) NOT NULL,
->  dept_id INT,
->  year_id INT,
->  FOREIGN KEY (dept_id) REFERENCES department(dept_id),
->  FOREIGN KEY (year_id) REFERENCES year(year_id)
-> );
```

Query OK, 0 rows affected (0.07 sec)

```
mysql> desc students;
```

Field	Type	Null	Key	Default	Extra
student_id	int	NO	PRI	NULL	
student_name	varchar(100)	NO		NULL	
dept_id	int	YES	MUL	NULL	
year_id	int	YES	MUL	NULL	

4 rows in set (0.02 sec)

```
mysql> desc department;
```

Field	Type	Null	Key	Default	Extra
dept_id	int	NO	PRI	NULL	
dept_name	varchar(50)	NO		NULL	

2 rows in set (0.00 sec)

**mysql> desc year;**

Field	Type	Null	Key	Default	Extra
year_id	int	NO	PRI	NULL	
year_name	varchar(10)	NO		NULL	

2 rows in set (0.00 sec)

#### **4.store five students for each department**

**#inserting values into department table** mysql> INSERT

INTO department (dept\_name) VALUES

-> ('CSE'),

-> ('ECE'),

-> ('EE'),

-> ('ME'),

-> ('Civil');

Query OK, 5 rows affected (0.01 sec) Records:

5 Duplicates: 0 Warnings: 0

#### **#Displaying values of Department table**

mysql> select \* from department;

dept_id	dept_name
1	CSE
2	ECE
3	EE
4	ME
5	Civil

5 rows in set (0.00 sec)

**#inserting values into year table** mysql> INSERT

INTO year (year\_name) VALUES

-> ('Year 1'),

-> ('Year 2'),

-> ('Year 3'),

-> ('Year 4');

Query OK, 4 rows affected (0.00 sec)

Records: 4 Duplicates: 0 Warnings: 0

**#Displaying values of year table**

mysql> select \* from year;

+-----+-----+

| year\_id | year\_name |

+-----+-----+

| 1 | Year 1 |

| 2 | Year 2 |

| 3 | Year 3 |

| 4 | Year 4 |

+-----+-----+

4 rows in set (0.00 sec)

**#inserting values into student table**

mysql> INSERT INTO students (student\_name, dept\_id, year\_id) VALUES

-> ('Student 1 - CSE', 1, 1), ('Student 2 - CSE', 1, 2), ('Student 3 - CSE', 1, 3), ('Student 4 - CSE', 1, 4),

-> ('Student 1 - ECE', 2, 1), ('Student 2 - ECE', 2, 2), ('Student 3 - ECE', 2, 3), ('Student 4 - ECE', 2, 4),

-> ('Student 1 - EE', 3, 1), ('Student 2 - EE', 3, 2), ('Student 3 - EE', 3, 3), ('Student 4 - EE', 3, 4),

-> ('Student 1 - ME', 4, 1), ('Student 2 - ME', 4, 2), ('Student 3 - ME', 4, 3), ('Student 4 - ME', 4, 4),

-> ('Student 1 - Civil', 5, 1), ('Student 2 - Civil', 5, 2), ('Student 3 - Civil', 5, 3), ('Student 4 - Civil', 5, 4);

Query OK, 20 rows affected (0.00 sec) Records:

20 Duplicates: 0 Warnings: 0

**#Displaying values of student table**

mysql> select \* from students;

student_id	student_name	dept_id	year_id
1	Student 1 - CSE	1	1
2	Student 2 - CSE	1	2
3	Student 3 - CSE	1	3
4	Student 4 - CSE	1	4
5	Student 1 - ECE	2	1
6	Student 2 - ECE	2	2
7	Student 3 - ECE	2	3
8	Student 4 - ECE	2	4
9	Student 1 - EE	3	1
10	Student 2 - EE	3	2
11	Student 3 - EE	3	3
12	Student 4 - EE	3	4
13	Student 1 - ME	4	1
14	Student 2 - ME	4	2
15	Student 3 - ME	4	3
16	Student 4 - ME	4	4
17	Student 1 - Civil	5	1
18	Student 2 - Civil	5	2
19	Student 3 - Civil	5	3
20	Student 4 - Civil	5	4

20 rows in set (0.00 sec)

### 5.write a query to display students from CSE department

```
mysql> SELECT students.student_id, students.student_name, department.dept_name
-> FROM students
-> JOIN department ON students.dept_id = department.dept_id
-> WHERE department.dept_name = 'CSE';
```

student_id	student_name	dept_name
------------	--------------	-----------

student_id	student_name	dept_name
1	Student 1 - CSE	CSE
2	Student 2 - CSE	CSE
3	Student 3 - CSE	CSE
4	Student 4 - CSE	CSE

4 rows in set (0.01 sec)

### 6.write a query to display only deptname using student table

```
mysql> SELECT DISTINCT department.dept_name
      -> FROM students
      -> JOIN department ON students.dept_id = department.dept_id;
```

dept_name
CSE
ECE
EE
ME
Civil

5 rows in set (0.00 sec)

### 7.write a query to display students sorted by dept and firstname

```
mysql> SELECT students.student_id, students.student_name, department.dept_name
      -> FROM students
      -> JOIN department ON students.dept_id = department.dept_id
      -> ORDER BY department.dept_name, students.student_name;
```

student_id	student_name	dept_name
------------	--------------	-----------

```
| student_id | student_name | dept_name |
```

```
+-----+-----+-----+
```

```
| 17 | Student 1 - Civil | Civil |
| 18 | Student 2 - Civil | Civil |
| 19 | Student 3 - Civil | Civil |
| 20 | Student 4 - Civil | Civil |
| 1  | Student 1 - CSE   | CSE   |
| 2  | Student 2 - CSE   | CSE   |
| 3  | Student 3 - CSE   | CSE   |
| 4  | Student 4 - CSE   | CSE   |
| 5  | Student 1 - ECE   | ECE   |
| 6  | Student 2 - ECE   | ECE   |
| 7  | Student 3 - ECE   | ECE   |
| 8  | Student 4 - ECE   | ECE   |
| 9  | Student 1 - EE    | EE    |
| 10 | Student 2 - EE    | EE    |
| 11 | Student 3 - EE    | EE    |
| 12 | Student 4 - EE    | EE    |
| 13 | Student 1 - ME    | ME    |
| 14 | Student 2 - ME    | ME    |
| 15 | Student 3 - ME    | ME    |
| 16 | Student 4 - ME    | ME    |
```

```
+-----+-----+-----+
```

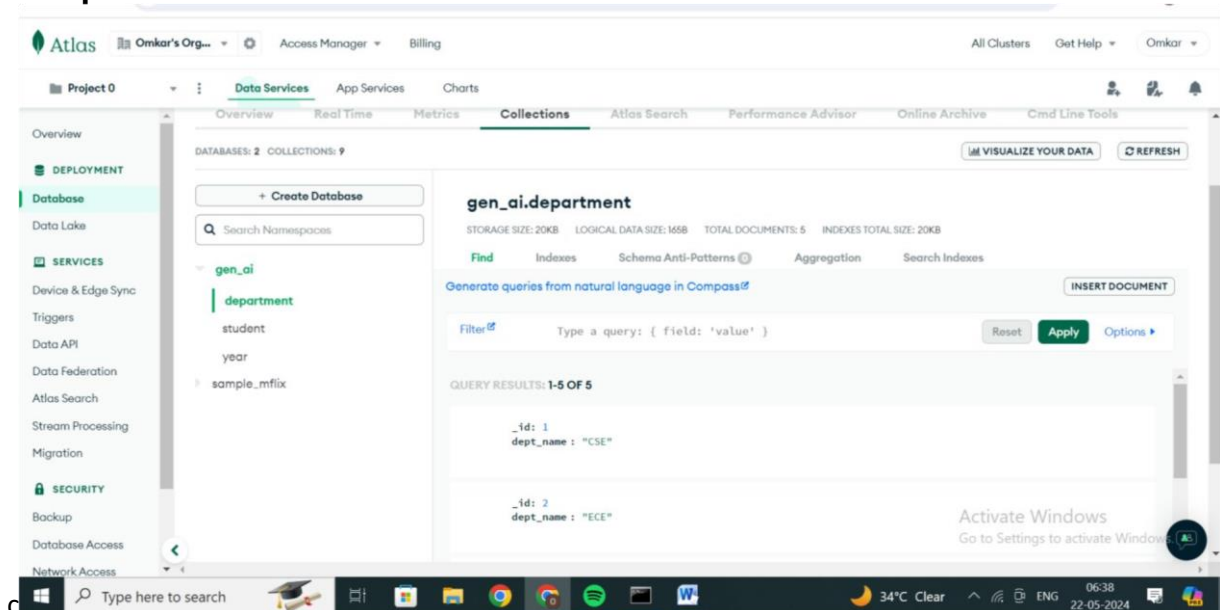
20 rows in set (0.01 sec)

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

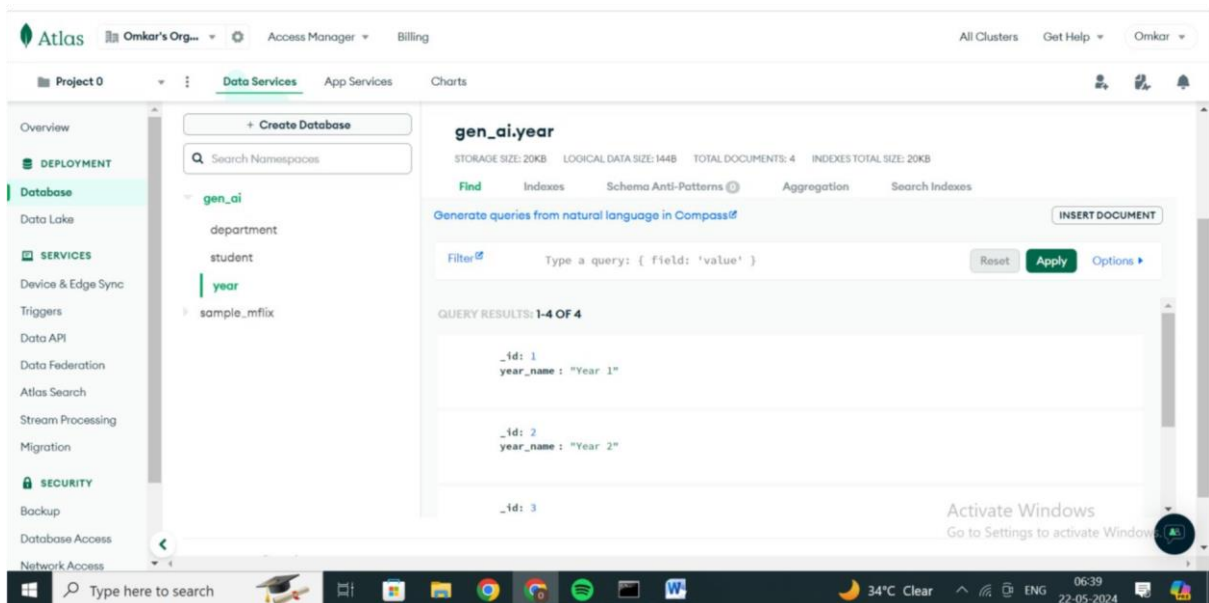
**//Creating a database called gen\_ai in mongodb and**

Adding collections called Department,Year and Students using mango db atlas

## #Departmentcollection



## #Year collection





## #Student Collection

The screenshot displays the MongoDB Atlas web interface. The top navigation bar includes the Atlas logo, the organization name 'Omkar's Org...', and links for 'Access Manager' and 'Billing'. On the right, there are links for 'All Clusters', 'Get Help', and the user's name 'Omkar'.

The main interface is divided into a left sidebar and a main content area. The sidebar contains a 'Project 0' dropdown and tabs for 'Data Services', 'App Services', and 'Charts'. Under 'Data Services', there are links for 'Overview', 'DEPLOYMENT', 'Database', 'Data Lake', 'SERVICES', 'Device & Edge Sync', 'Triggers', 'Data API', 'Data Federation', 'Atlas Search', 'Stream Processing', 'Migration', 'SECURITY', 'Backup', 'Database Access', and 'Network Access'. The 'Database' tab is selected, showing a tree view of databases and collections. The 'gen\_ai' database is expanded, showing collections 'department', 'student', 'year', and 'sample\_mflix'. The 'student' collection is selected.

The main content area shows the details for the 'gen\_ai.student' collection. It includes statistics: 'STORAGE SIZE: 20KB', 'LOGICAL DATA SIZE: 1.45KB', 'TOTAL DOCUMENTS: 20', and 'INDEXES TOTAL SIZE: 20KB'. There are tabs for 'Find', 'Indexes', 'Schema Anti-Patterns', 'Aggregation', and 'Search Indexes'. The 'Find' tab is active, showing a search bar with a placeholder 'Type a query: { field: 'value' }' and buttons for 'Filter', 'Reset', 'Apply', and 'Options'. Below the search bar, it says 'QUERY RESULTS: 1-20 OF 20'. The results are displayed in a table with two documents:

_id	student_name	dept_id	year_id
1	Student 1 - CSE	1	1
2	Student 2 - CSE	1	2

An 'INSERT DOCUMENT' button is located in the top right corner of the main content area. At the bottom of the screen, there is a Windows taskbar with a search bar, task icons, and system tray information including temperature (34°C), weather (Clear), and date/time (06:39, 22-05-2024).