

MODERN APPLICATION DEVELOPMENT

(JAVA SPRING BOOT)

ASSIGNMENT-02

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**BRANCH: INTEGRATED M TECH (SOFTWARE
ENGINEERING)**

Q1. create ,update, delete commands in mysql for student database.

- **Create Commands:** Let's assume we have three tables: "Students", "Courses", and "Enrollments".

```
CREATE TABLE Students (  
    student_id INT PRIMARY KEY,  
    student_name VARCHAR(50),  
    student_email VARCHAR(100)  
);  
  
CREATE TABLE Courses (  
    course_id INT PRIMARY KEY,  
    course_name VARCHAR(50),  
    course_description VARCHAR(255)  
);
```

```
CREATE TABLE Enrollments (  
    enrollment_id INT PRIMARY KEY,  
    student_id INT,  
    course_id INT,  
    enrollment_date DATE,  
    FOREIGN KEY (student_id) REFERENCES Students(student_id),  
    FOREIGN KEY (course_id) REFERENCES Courses(course_id)  
);
```

Screenshots:

SQL Worksheet

Clear Find Actions Save Run

```
1 CREATE TABLE Students (  
2     student_id INT PRIMARY KEY,  
3     student_name VARCHAR(50),  
4     student_email VARCHAR(100)  
5 );  
6  
7 CREATE TABLE Courses (  
8     course_id INT PRIMARY KEY,  
9     course_name VARCHAR(50),  
10    course_description VARCHAR(255)  
11 );  
12  
13 CREATE TABLE Enrollments (  
14     enrollment_id INT PRIMARY KEY,  
15     student_id INT,  
16     course_id INT,  
17     enrollment_date DATE,  
18     FOREIGN KEY (student_id) REFERENCES Students(student_id),  
19     FOREIGN KEY (course_id) REFERENCES Courses(course_id)  
20 );  
21
```

Table created.

Table created.

- **Insert Commands:**

INSERT INTO Students (student_id, student_name, student_email)

VALUES (1, 'John Doe', 'john@example.com');

INSERT INTO Courses (course_id, course_name, course_description)

VALUES (1001, 'Mathematics', 'Introductory Mathematics');

INSERT INTO Enrollments (enrollment_id, student_id, course_id, enrollment_date)

VALUES (2001, 1, 1001, '2023-05-20');

Screenshots:

```
INSERT INTO Students (student_id, student_name, student_email)  
VALUES (1, 'John Doe', 'john@example.com');
```

```
INSERT INTO Courses (course_id, course_name, course_description)  
VALUES (1001, 'Mathematics', 'Introductory Mathematics');
```

```
INSERT INTO Enrollments (enrollment_id, student_id, course_id, enrollment_date)  
VALUES (2001, 1, 1001, '2023-05-20');
```

- **Update Command:**

SQL Worksheet

```
1 v UPDATE Students
2 SET student_email = 'johndoe@example.com'
3 WHERE student_id = 1;
4
```

UPDATE Students

SET student_email = 'johndoe@example.com'

WHERE student_id = 1;

Screenshots:

STUDENT_ID	STUDENT_NAME	STUDENT_EMAIL
1	John Doe	johndoe@example.com

Download CSV

- **Delete Command:**

DELETE FROM Enrollments WHERE enrollment_id = 2001;

Screenshots:

SQL Worksheet

```
1 v DELETE FROM Enrollments
2 WHERE enrollment_id = 2001;
3
```

0 row(s) deleted.

Q2. create tables and perform joins in mysql:

```
SELECT Students.student_name, Courses.course_name, Enrollments.enrollment_date
FROM Students
JOIN Enrollments ON Students.student_id = Enrollments.student_id
JOIN Courses ON Enrollments.course_id = Courses.course_id;
```

```
SELECT Students.student_name, Courses.course_name
FROM Students
LEFT JOIN Enrollments ON Students.student_id = Enrollments.student_id
LEFT JOIN Courses ON Enrollments.course_id = Courses.course_id;
SELECT Students.student_name, Courses.course_name
FROM Students
LEFT JOIN Enrollments ON Students.student_id = Enrollments.student_id
LEFT JOIN Courses ON Enrollments.course_id = Courses.course_id
WHERE Students.student_id = 1;
```

Screenshots:

SQL Worksheet

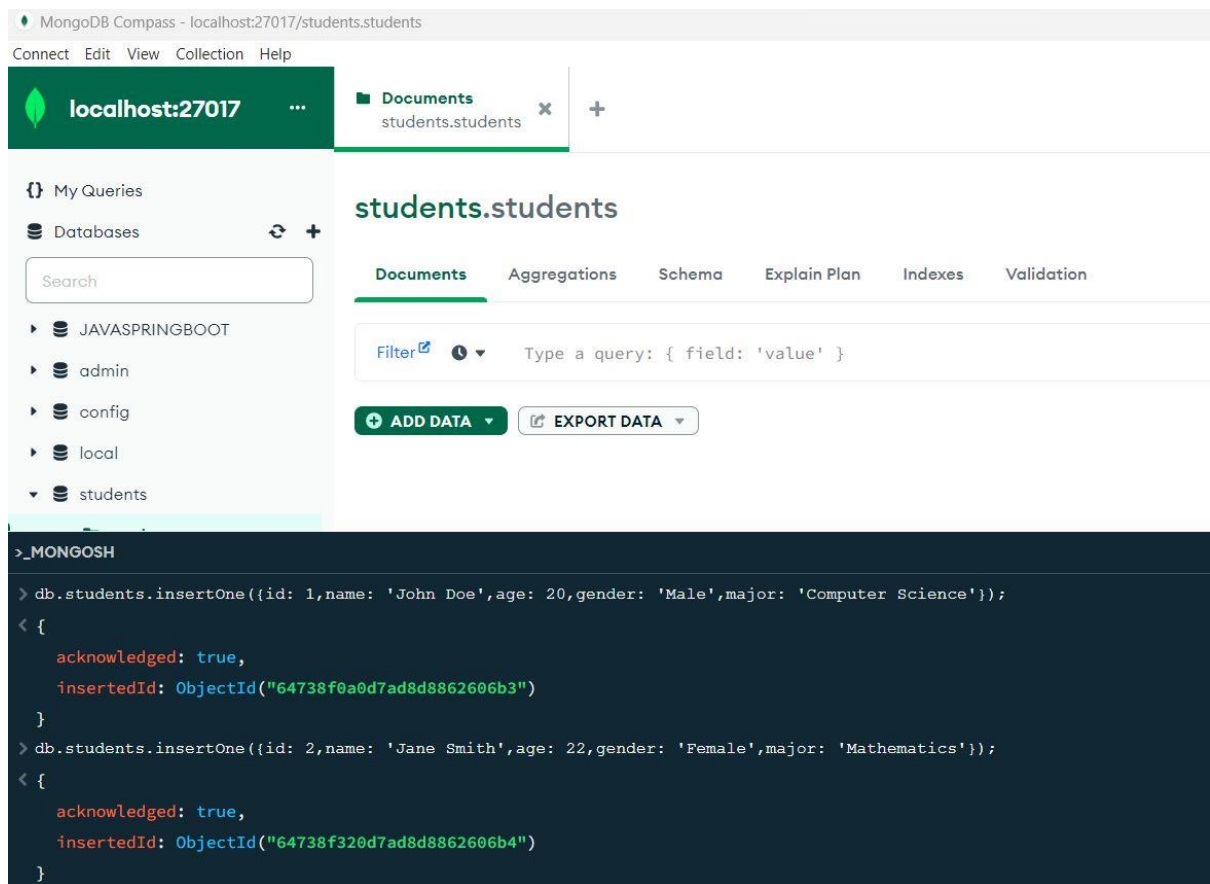
```
1 v SELECT Students.student_name, Courses.course_name, Enrollments.enrollment_date
2 FROM Students
3 JOIN Enrollments ON Students.student_id = Enrollments.student_id
4 JOIN Courses ON Enrollments.course_id = Courses.course_id;
5
6 v SELECT Students.student_name, Courses.course_name
7 FROM Students
8 LEFT JOIN Enrollments ON Students.student_id = Enrollments.student_id
9 LEFT JOIN Courses ON Enrollments.course_id = Courses.course_id;
10
```

Q3. Create, update, delete commands in mongoDB.

Commands: here we take an example for student database.

1.create command:

```
db.students.insertOne({
  name: "John Doe",
  age: 20,
  major: "Computer Science",
  semester: 3
});
```



2. update command:

```
db.students.updateOne(  
  { name: "John Doe" },  
  { $set: { major: "Information Technology" } }  
);
```

MongoDB Compass - localhost:27017/students.students

Connect Edit View Collection Help

localhost:27017 Documents students.students

My Queries Databases Search

JAVASPRINGBOOT admin config

students.students Documents Aggregations Schema Explain Plan Indexes Validation

Filter Type a query: { field: 'value' }

ADD DATA EXPORT DATA

```
>_MONGOSH
}
> db.students.updateOne(
  { id: 1 },
  { $set: { major: 'Electrical Engineering' } }
);
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 0,
  upsertedCount: 0
}
> db.students.updateOne(
  { name: 'Jane Smith' },
  { $set: { age: 23 } }
);
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 0,
  upsertedCount: 0
}
Enterprise test>
```

3. delete command:

db.students.deleteOne({ name: "John Doe" });

Connect Edit View Collection Help



localhost:27017

**Documents**
students.students

{ } My Queries

Databases



students.students

> _MONGOSH

```
> db.students.updateOne(
  { id: 1 },
  { $set: { major: 'Electrical Engineering' } }
);
```

```
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 0,
  upsertedCount: 0
}
```

```
> db.students.updateOne(
  { name: 'Jane Smith' },
  { $set: { age: 23 } }
);
```

```
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 0,
  upsertedCount: 0
}
```

```
> db.students.deleteOne({ id: 2 });
```

```
db.students.deleteOne({ name: 'John Doe' });
```

```
< {
  acknowledged: true,
  deletedCount: 0
}
```

Enterprise test>

