MODERN APPLICATION DEVELOPMENT (JAVA SPRING BOOT)
ASSIGNMENT-2

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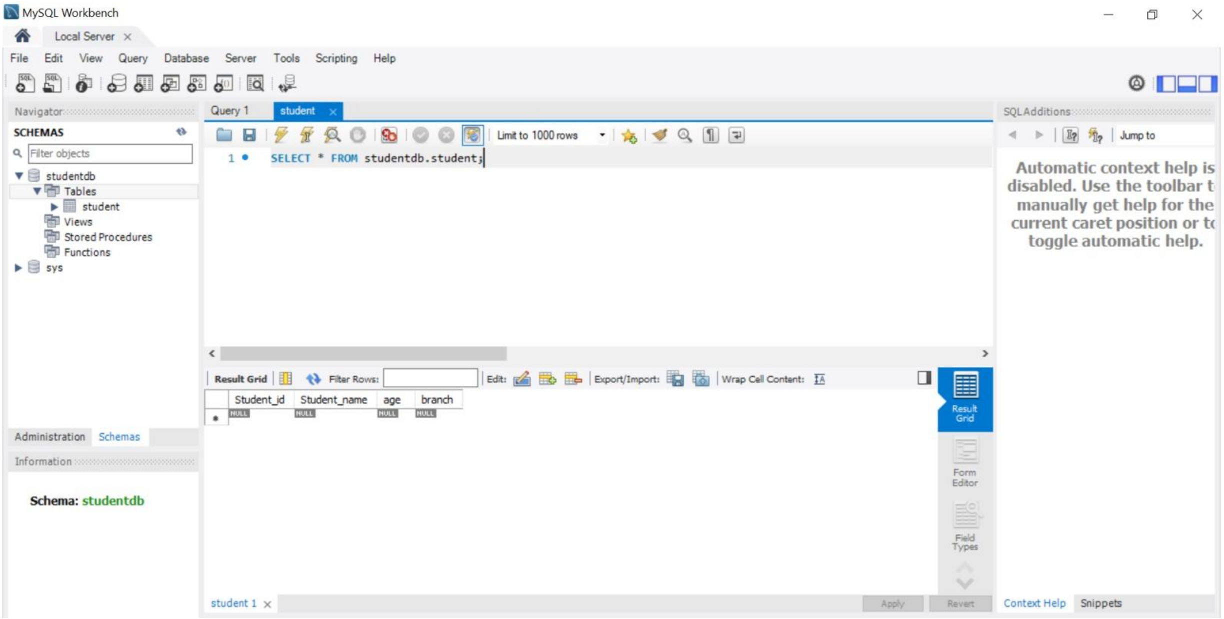
1) Create, update and delete commands in mysql

- CREATE table statement:

```
CREATE DATABASE `studentdb`;

CREATE TABLE `studentdb`.`student` (
  `Student_id` INT NOT NULL,
  `Student_name` VARCHAR(45) NOT NULL,
  `age` INT NOT NULL,
  `branch` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`Student_id`));

SELECT * FROM studentdb.student;
```



```
1 • SELECT * FROM studentdb.student;
```

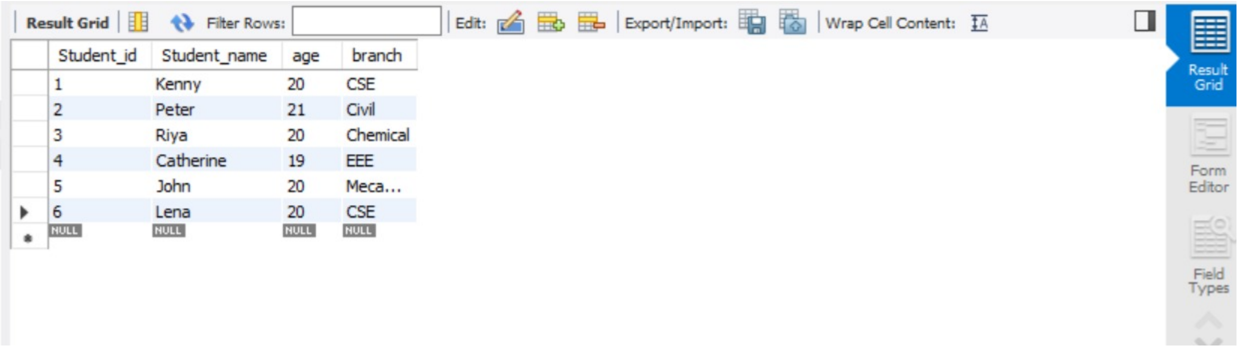
Student_id	Student_name	age	branch
NULL	NULL	NULL	NULL

Schema: studentdb

Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or tc toggle automatic help.

- Insert statements:

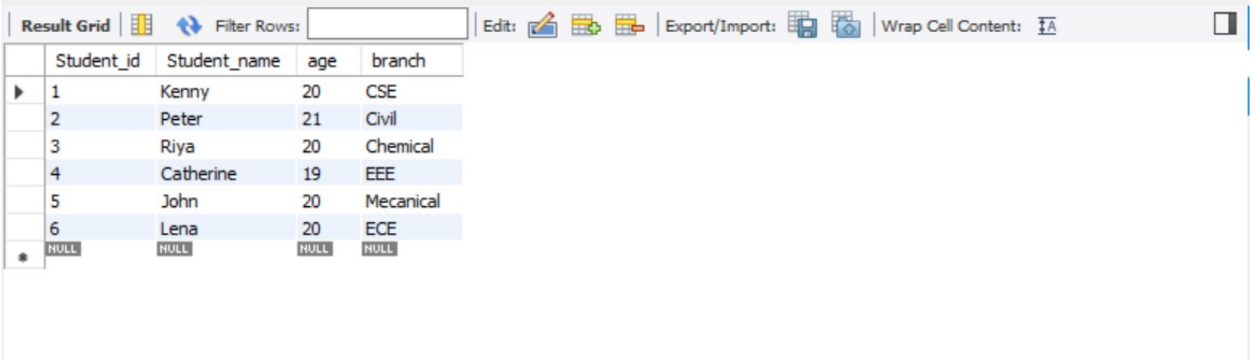
```
INSERT INTO `studentdb`.`student` (`Student_id`, `Student_name`, `age`, `branch`)
VALUES ('1', 'Kenny', '20', 'CSE');
INSERT INTO `studentdb`.`student` (`Student_id`, `Student_name`, `age`, `branch`)
VALUES ('2', 'Peter', '21', 'Civil');
INSERT INTO `studentdb`.`student` (`Student_id`, `Student_name`, `age`, `branch`)
VALUES ('3', 'Riya', '20', 'Chemical');
INSERT INTO `studentdb`.`student` (`Student_id`, `Student_name`, `age`, `branch`)
VALUES ('4', 'Catherine', '19', 'EEE');
INSERT INTO `studentdb`.`student` (`Student_id`, `Student_name`, `age`, `branch`)
VALUES ('5', 'John', '20', 'Mechanical');
INSERT INTO `studentdb`.`student` (`Student_id`, `Student_name`, `age`, `branch`)
VALUES ('6', 'Lena', '20', 'CSE');

SELECT * FROM studentdb.student;
```



Student_id	Student_name	age	branch
1	Kenny	20	CSE
2	Peter	21	Civil
3	Riya	20	Chemical
4	Catherine	19	EEE
5	John	20	Meca...
6	Lena	20	CSE
NULL	NULL	NULL	NULL

- Update statements:

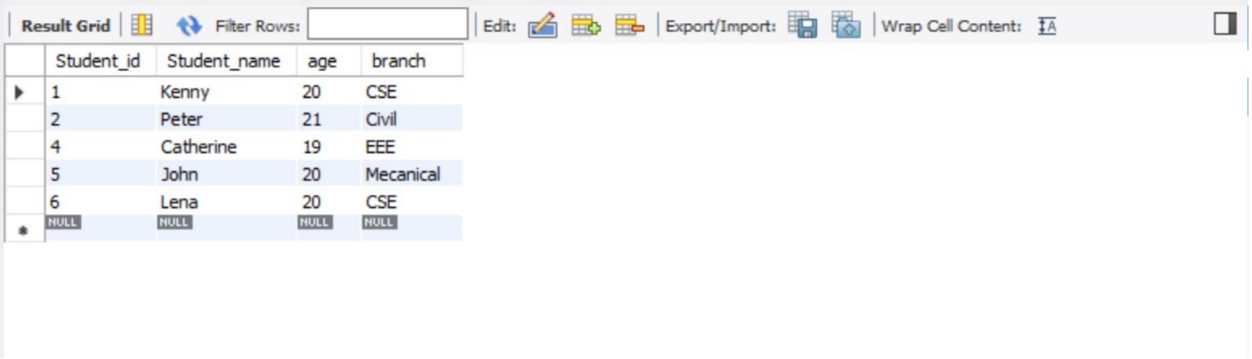
```
UPDATE  `studentdb`.`student` SET branch='ECE' WHERE Student_id='6';
SELECT* FROM `studentdb`.`student`;
```



Student_id	Student_name	age	branch
1	Kenny	20	CSE
2	Peter	21	Civil
3	Riya	20	Chemical
4	Catherine	19	EEE
5	John	20	Mecanical
6	Lena	20	ECE
NULL	NULL	NULL	NULL

- <u>Delete statement:</u>

```
DELETE FROM `studentdb`.`student` WHERE (`Student_id` = '3');
SELECT* FROM `studentdb`.`student`;
```



Student_id	Student_name	age	branch
1	Kenny	20	CSE
2	Peter	21	Civil
4	Catherine	19	EEE
5	John	20	Mecanical
6	Lena	20	CSE
NULL	NULL	NULL	NULL

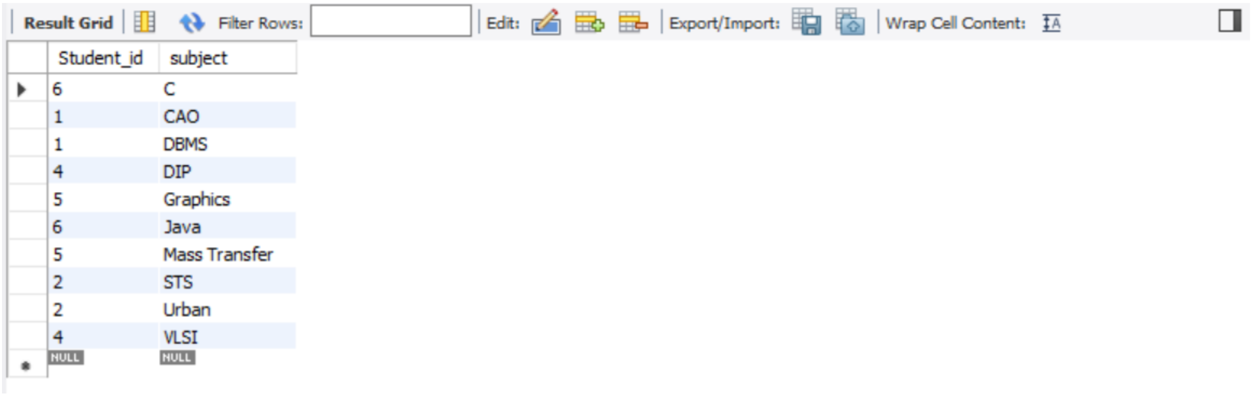
2) Create tables and perform joins in mysql

- <u>Table created:</u>

```
CREATE TABLE `studentdb`.`subjects` (
`Student_id` INT NOT NULL,
`subject` VARCHAR(45) NOT NULL,
PRIMARY KEY (`Student_id`),
CONSTRAINT `Student_id`
FOREIGN KEY (`Student_id`)
REFERENCES `studentdb`.`student` (`Student_id`));
```

```
INSERT INTO `studentdb`.`subjects` (`Student_id`, `subject`) VALUES ('1', 'DBMS');
INSERT INTO `studentdb`.`subjects` (`Student_id`, `subject`) VALUES ('1', 'CAO');
INSERT INTO `studentdb`.`subjects` (`Student_id`, `subject`) VALUES ('2', 'Urban');
INSERT INTO `studentdb`.`subjects` (`Student_id`, `subject`) VALUES ('2', 'STS');
INSERT INTO `studentdb`.`subjects` (`Student_id`, `subject`) VALUES ('4', 'VLSI');
INSERT INTO `studentdb`.`subjects` (`Student_id`, `subject`) VALUES ('4', 'DIP');
INSERT INTO `studentdb`.`subjects` (`Student_id`, `subject`) VALUES ('5', 'Mass Transfer');
INSERT INTO `studentdb`.`subjects` (`Student_id`, `subject`) VALUES ('5', 'Graphics');
INSERT INTO `studentdb`.`subjects` (`Student_id`, `subject`) VALUES ('6', 'C');
INSERT INTO `studentdb`.`subjects` (`Student_id`, `subject`) VALUES ('6', 'Java');
```

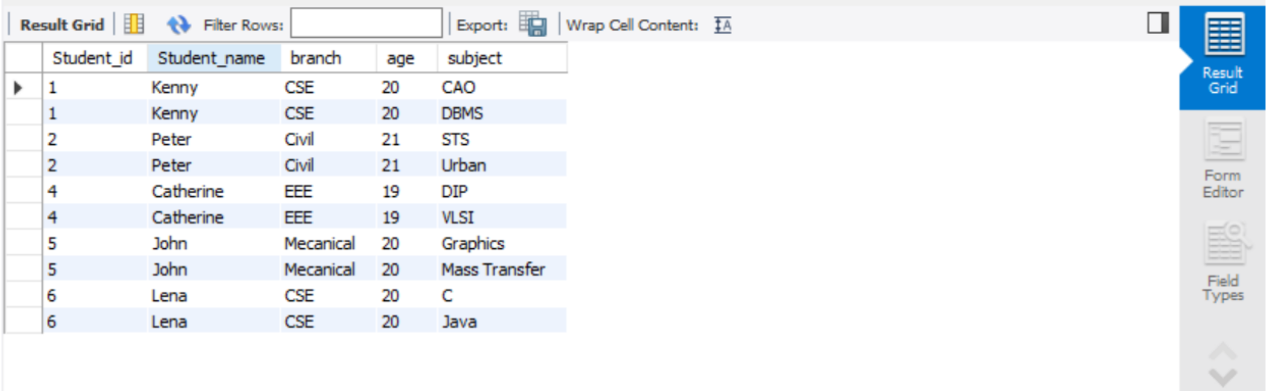
```
SELECT * FROM studentdb.subjects;
```



Student_id	subject
6	C
1	CAO
1	DBMS
4	DIP
5	Graphics
6	Java
5	Mass Transfer
2	STS
2	Urban
4	VLSI
NULL	NULL

- <u>Join statement:</u>

```
SELECT sd.Student_id,
sd.Student_name,
sd.branch,
sd.age,
s.subject
FROM studentdb.student AS sd
LEFT JOIN studentdb.subjects AS s ON sd.Student_id=s.Student_id;
```



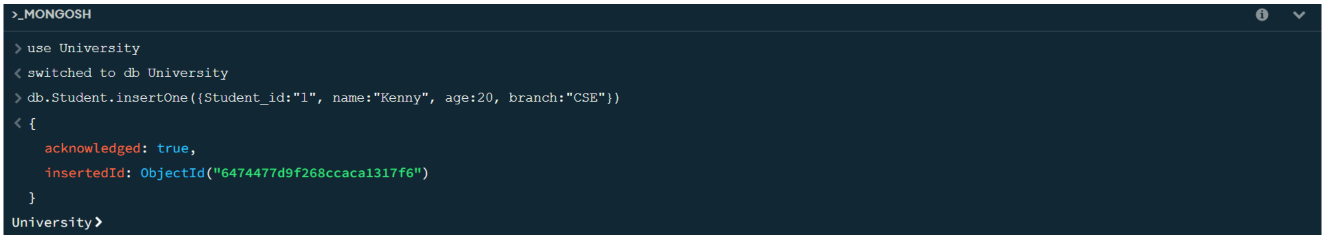
Student_id	Student_name	branch	age	subject
1	Kenny	CSE	20	CAO
1	Kenny	CSE	20	DBMS
2	Peter	Civil	21	STS
2	Peter	Civil	21	Urban
4	Catherine	EEE	19	DIP
4	Catherine	EEE	19	VLSI
5	John	Mecanical	20	Graphics
5	John	Mecanical	20	Mass Transfer
6	Lena	CSE	20	C
6	Lena	CSE	20	Java

3) Create, update and delete commands in MongoDB

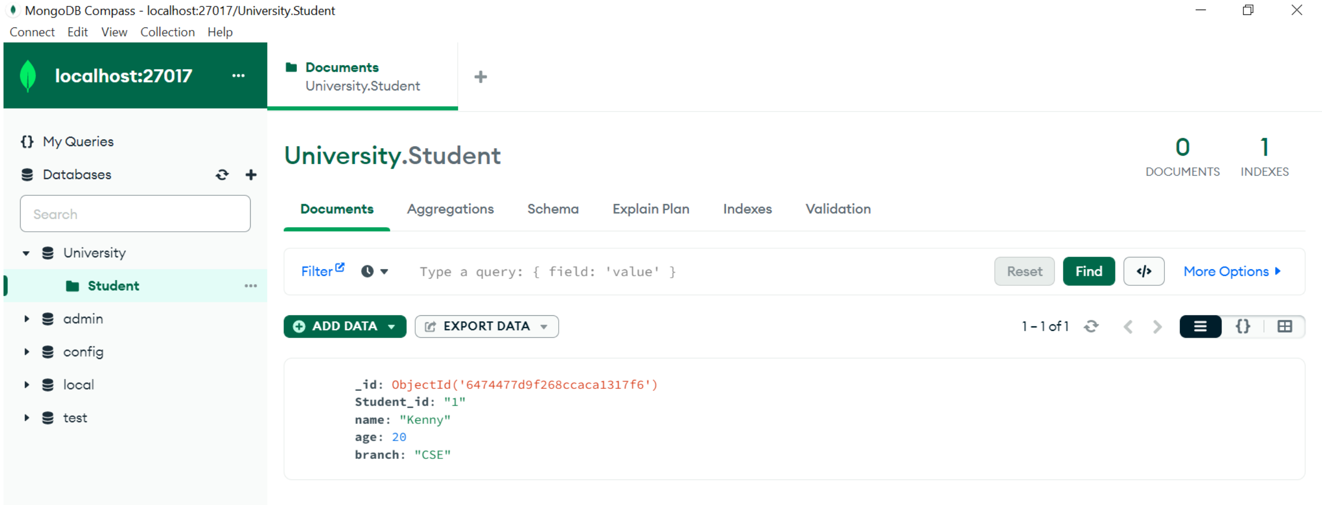
- ### Insert commands

<u>Inserting single record:</u>

db.Student.insertOne({Student_id:"1", name:"Kenny", age:20, branch:"CSE"})



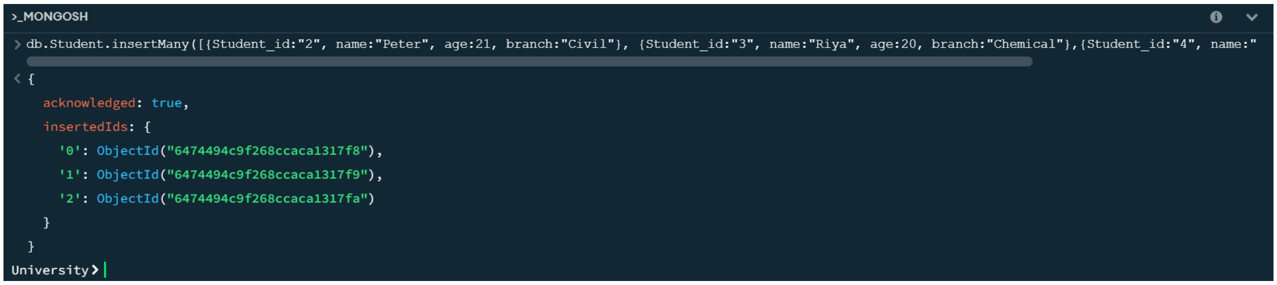
```
>_MONGOSH
> use University
< switched to db University
> db.Student.insertOne({Student_id:"1", name:"Kenny", age:20, branch:"CSE"})
< {
    acknowledged: true,
    insertedId: ObjectId("6474477d9f268ccaca1317f6")
  }
University>
```



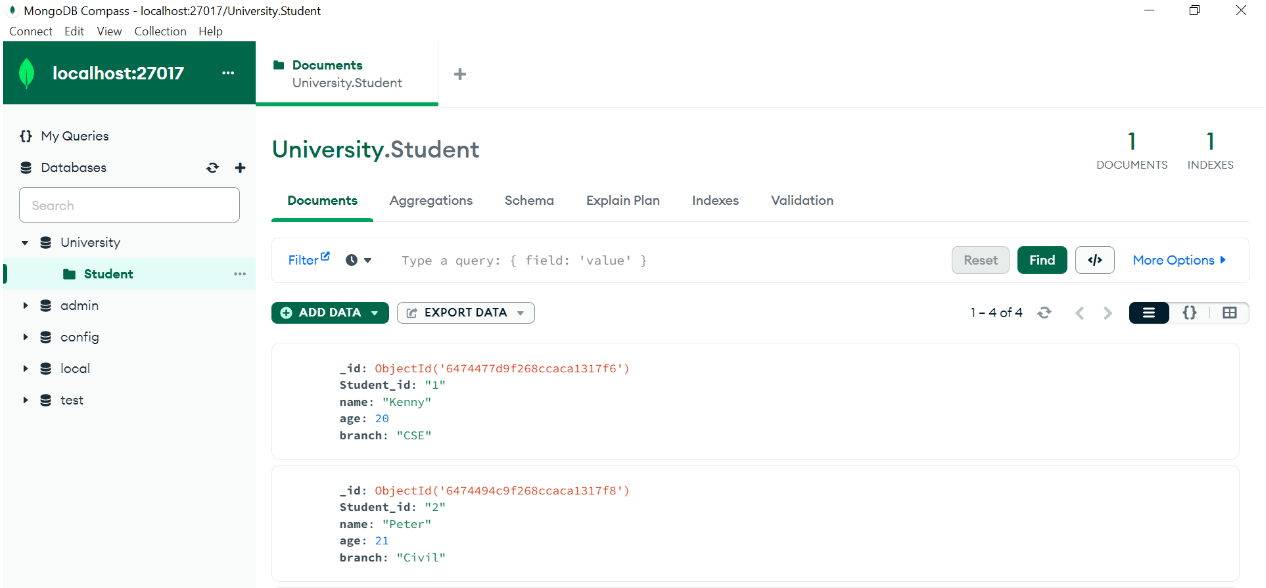
```
_id: ObjectId('6474477d9f268ccaca1317f6')
Student_id: "1"
name: "Kenny"
age: 20
branch: "CSE"
```

Inserting multiple records:

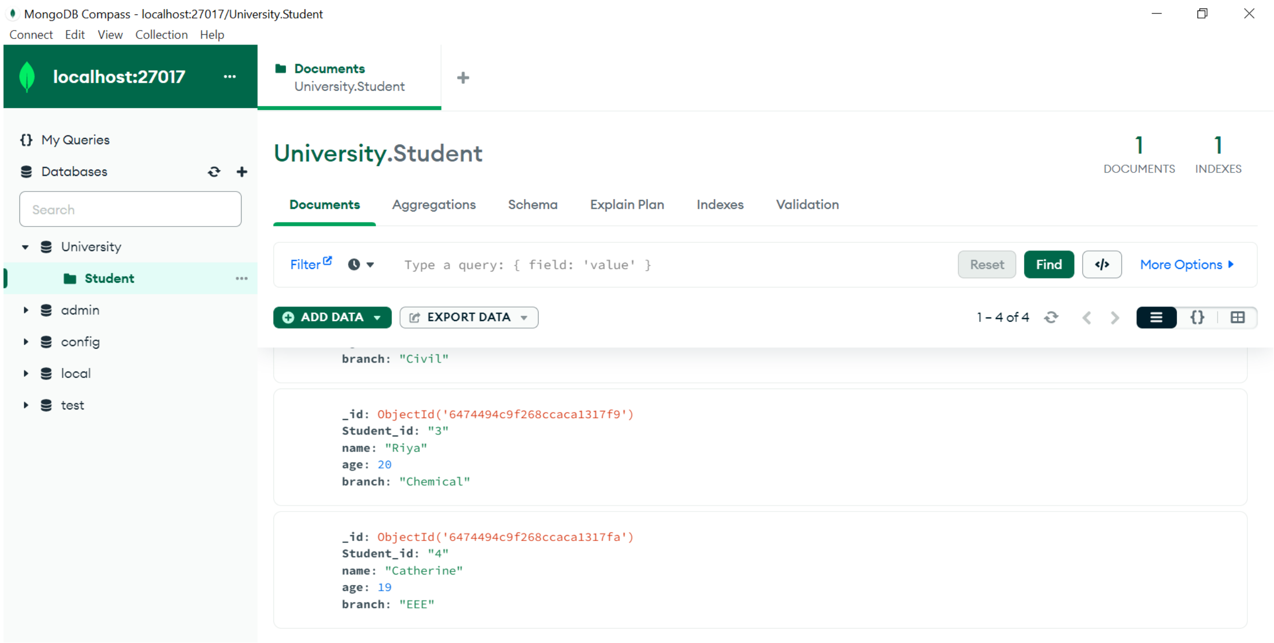
db.Student.insertMany([{Student_id:"2", name:"Peter", age:21, branch:"Civil"}, {Student_id:"3", name:"Riya", age:20, branch:"Chemical"},{Student_id:"4", name:"Catherine", age:19, branch:"EEE"}])



```
> db.Student.insertMany([{Student_id:"2", name:"Peter", age:21, branch:"Civil"}, {Student_id:"3", name:"Riya", age:20, branch:"Chemical"},{Student_id:"4", name:"
< {
    acknowledged: true,
    insertedIds: {
      '0': ObjectId("6474494c9f268ccaca1317f8"),
      '1': ObjectId("6474494c9f268ccaca1317f9"),
      '2': ObjectId("6474494c9f268ccaca1317fa")
    }
  }
University>
```



```
_id: ObjectId('6474477d9f268ccaca1317f6')
Student_id: "1"
name: "Kenny"
age: 20
branch: "CSE"

_id: ObjectId('6474494c9f268ccaca1317f8')
Student_id: "2"
name: "Peter"
age: 21
branch: "Civil"
```



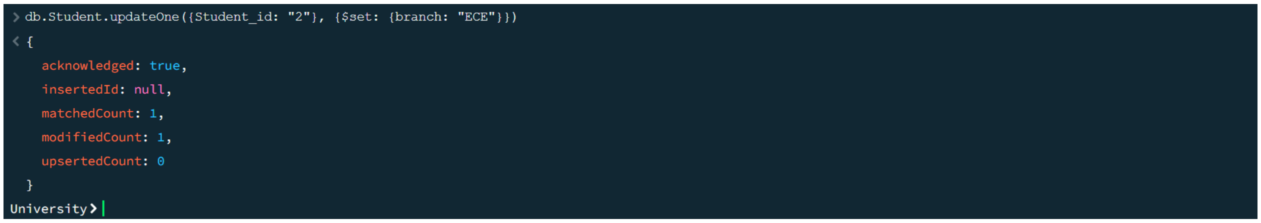
```
branch: "Civil"
```

```
_id: ObjectId('6474494c9f268ccaca1317f9')
Student_id: "3"
name: "Riya"
age: 20
branch: "Chemical"
```

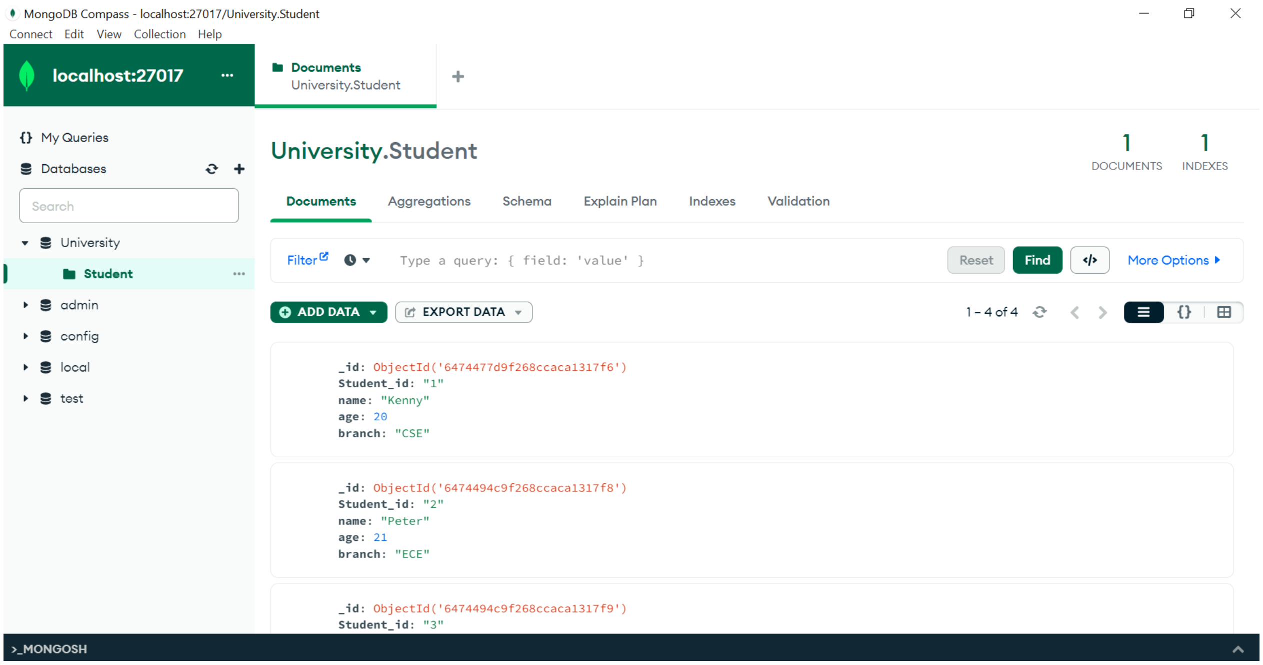
```
_id: ObjectId('6474494c9f268ccaca1317fa')
Student_id: "4"
name: "Catherine"
age: 19
branch: "EEE"
```

Update commands

```
db.Student.updateOne({Student_id: "2"}, {$set: {branch: "ECE"}})
```



```
> db.Student.updateOne({Student_id: "2"}, {$set: {branch: "ECE"}})
< {
    acknowledged: true,
    insertedId: null,
    matchedCount: 1,
    modifiedCount: 1,
    upsertedCount: 0
  }
University>
```

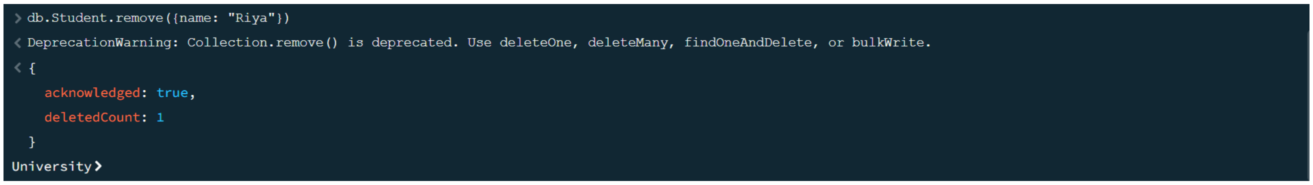


```
_id: ObjectId('6474477d9f268ccaca1317f6')
Student_id: "1"
name: "Kenny"
age: 20
branch: "CSE"

_id: ObjectId('6474494c9f268ccaca1317f8')
Student_id: "2"
name: "Peter"
age: 21
branch: "ECE"

_id: ObjectId('6474494c9f268ccaca1317f9')
Student_id: "3"
```

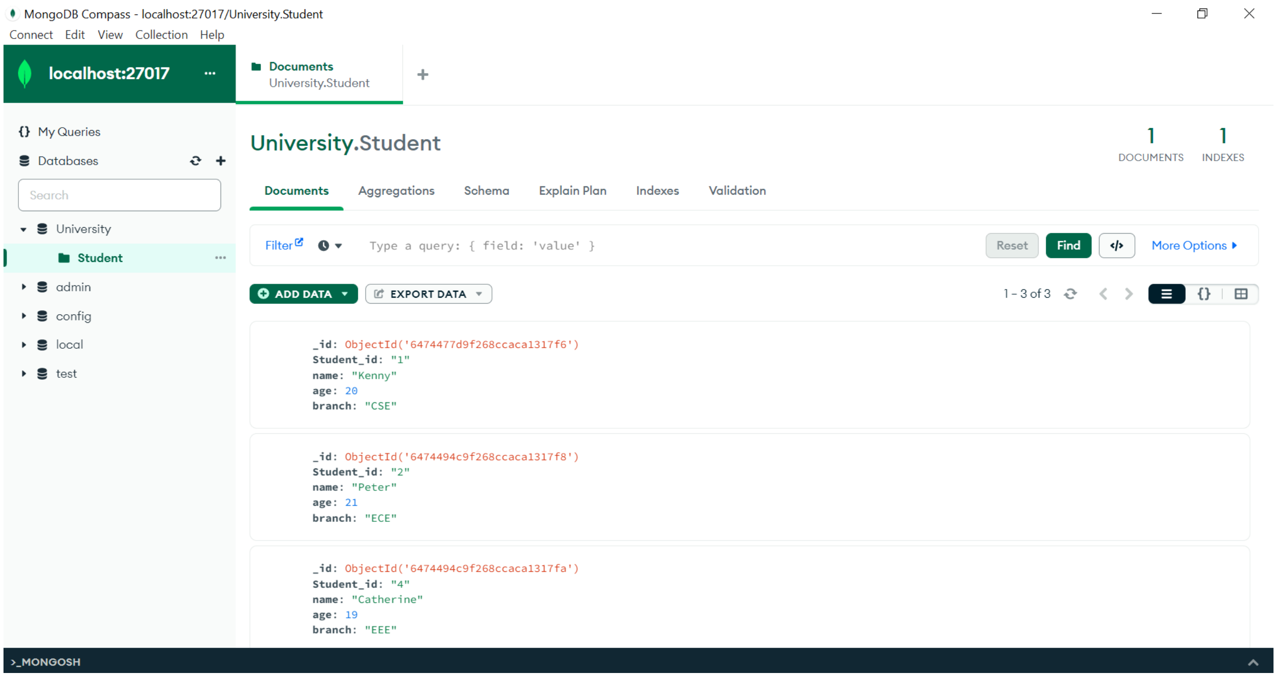
- **Delete commands**

Delete with condition:

db.Student.remove({name: "Riya"})



```
> db.Student.remove({name: "Riya"})
< DeprecationWarning: Collection.remove() is deprecated. Use deleteOne, deleteMany, findOneAndDelete, or bulkWrite.
< {
    acknowledged: true,
    deletedCount: 1
  }
University>
```



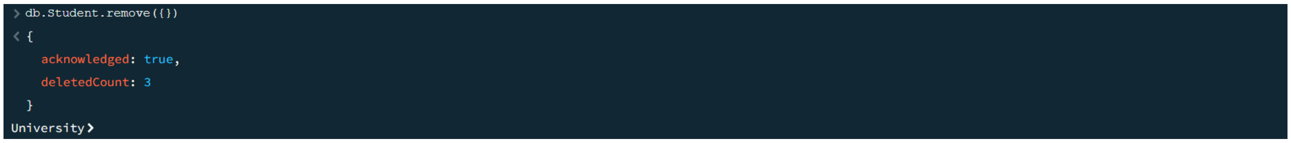
```
_id: ObjectId('6474477d9f268ccaca1317f6')
Student_id: "1"
name: "Kenny"
age: 20
branch: "CSE"
```

```
_id: ObjectId('6474494c9f268ccaca1317f8')
Student_id: "2"
name: "Peter"
age: 21
branch: "ECE"
```

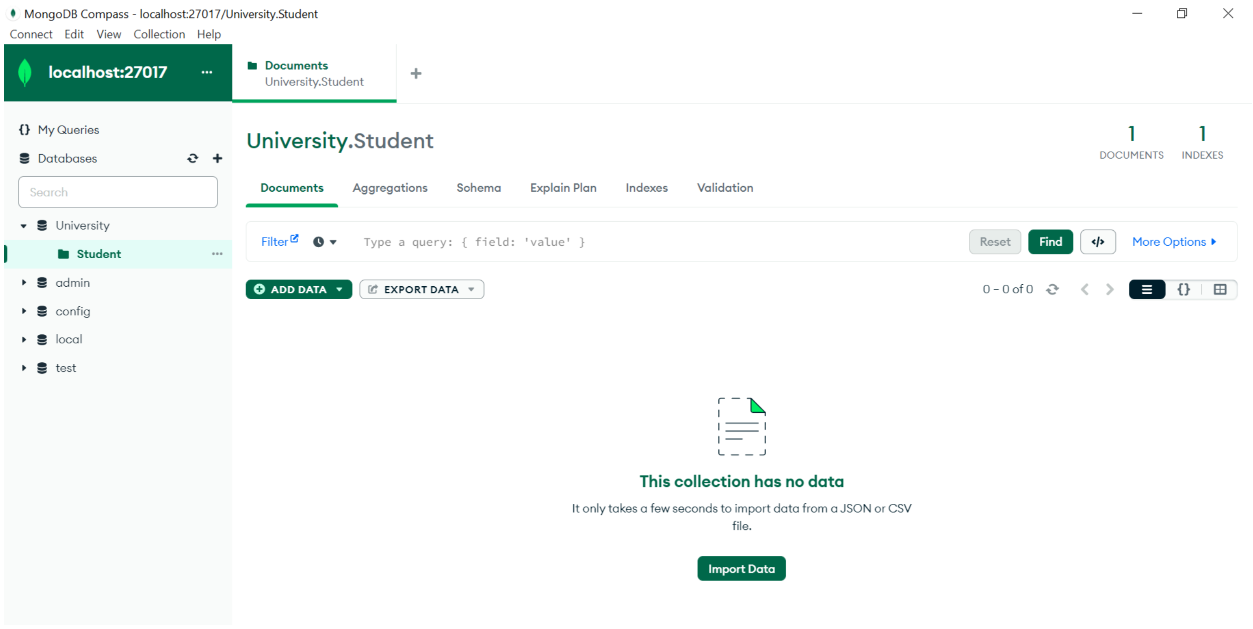
```
_id: ObjectId('6474494c9f268ccaca1317fa')
Student_id: "4"
name: "Catherine"
age: 19
branch: "EEE"
```

Delete all records:

db.Student.remove({})



```
> db.Student.remove({})
< {
    acknowledged: true,
    deletedCount: 3
  }
University>
```



This collection has no data

It only takes a few seconds to import data from a JSON or CSV file.