

## SMARTBRIDGE ASSIGNMENT - 2

### Modern Application Development (Java Spring Boot)

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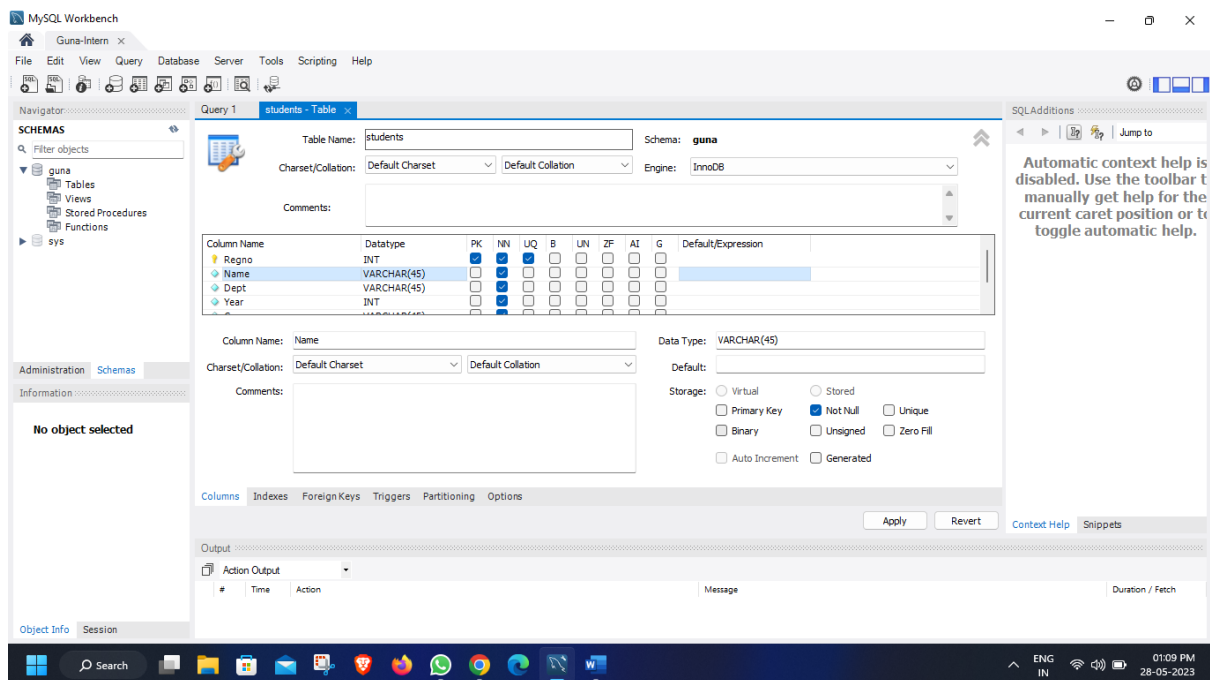
**Phone:** 9360468868

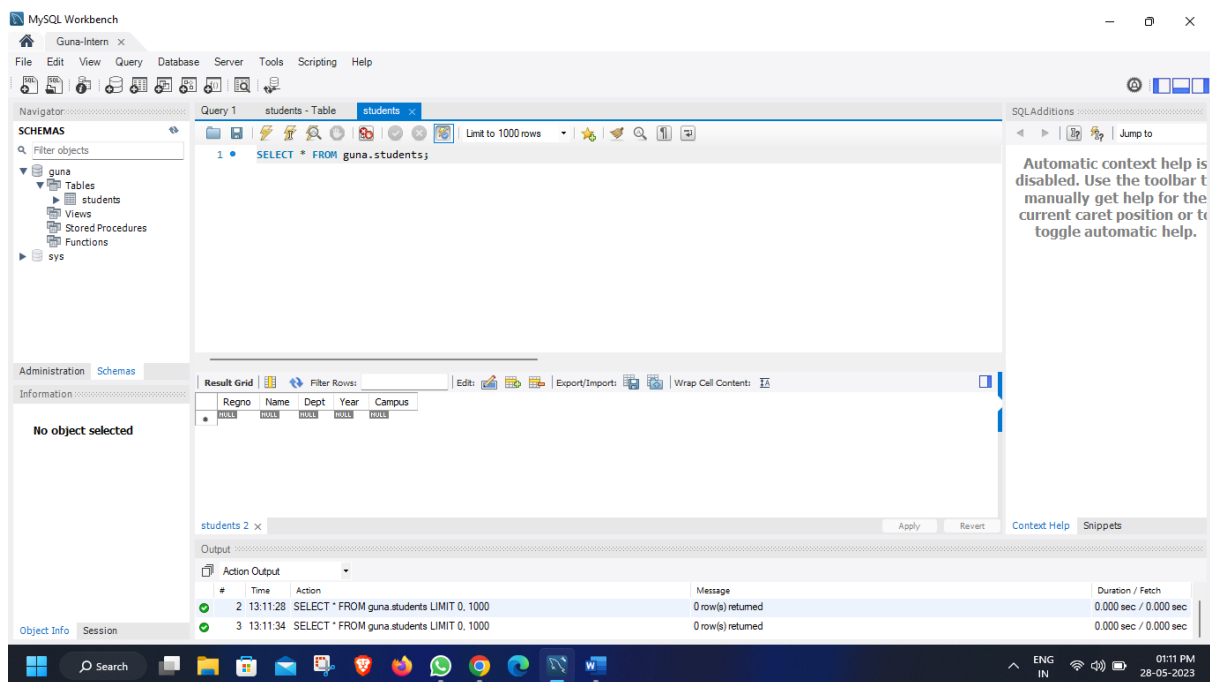
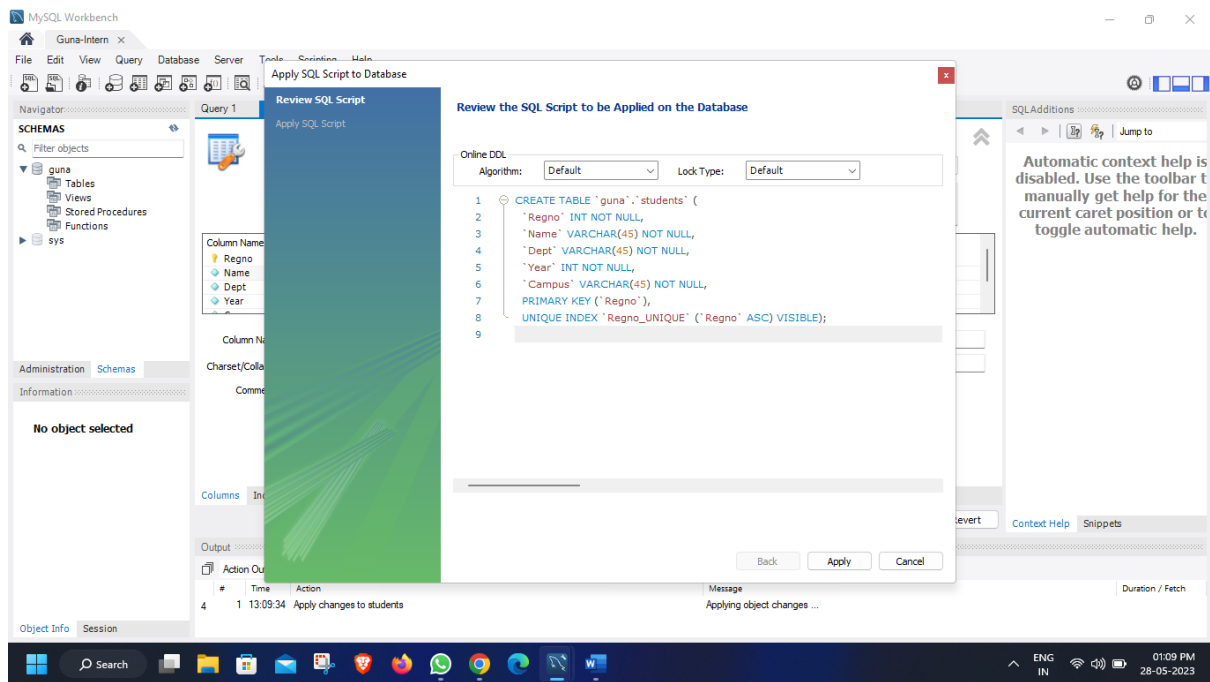
**Task:-**

**1.Create table, insert, update, delete and alter commands in MySQL.**

**Create Table:**

```
CREATE TABLE `guna`.`students` (  
  `Regno` INT NOT NULL,  
  `Name` VARCHAR(45) NOT NULL,  
  `Dept` VARCHAR(45) NOT NULL,  
  `Year` INT NOT NULL,  
  `Campus` VARCHAR(45) NOT NULL,  
  PRIMARY KEY (`Regno`),  
  UNIQUE INDEX `Regno_UNIQUE` (`Regno` ASC) VISIBLE);
```





## Insert Values:

```
insert into guna.students values(101,'gunasekaran','CSE',4,'VIT-Vellore');
insert into guna.students values(102,'sivaranjani','IT',1,'VIT-AP');
insert into guna.students values(103,'arjunan','ECE',3,'VIT-Chennai');
insert into guna.students values(104,'manimegalai','EEE',2,'VIT-Bhopal');
insert into guna.students values(105,'ammu','CSE',4,'VIT-Vellore');
insert into guna.students values(106,'siva','IT',1,'VIT-AP');
insert into guna.students values(107,'amrith','ECE',3,'VIT-Chennai');
insert into guna.students values(108,'ranjani','EEE',2,'VIT-Bhopal');
```

MySQL Workbench interface showing a query to insert 8 students into the 'students' table. The query is as follows:

```

1 • SELECT * FROM guna.students;
2 • insert into guna.students values(101,'gunasekaran','CSE',4,'VIT-Vellore');
3 • insert into guna.students values(102,'sivaranjani','IT',1,'VIT-AP');
4 • insert into guna.students values(103,'arjunan','ECE',3,'VIT-Chennai');
5 • insert into guna.students values(104,'manimegalai','EEE',2,'VIT-Bhopal');
6 • insert into guna.students values(105,'ammu','CSE',4,'VIT-Vellore');
7 • insert into guna.students values(106,'siva','IT',1,'VIT-AP');
8 • insert into guna.students values(107,'amrith','ECE',3,'VIT-Chennai');
9 • insert into guna.students values(108,'ranjani','EEE',2,'VIT-Bhopal');
10

```

The Result Grid shows the following data:

Regno	Name	Dept	Year	Campus
101	gunasekaran	CSE	4	VIT-Vellore
102	sivaranjani	IT	1	VIT-AP
103	arjunan	ECE	3	VIT-Chennai
104	manimegalai	EEE	2	VIT-Bhopal
105	ammu	CSE	4	VIT-Vellore
106	siva	IT	1	VIT-AP
107	amrith	ECE	3	VIT-Chennai
108	ranjani	EEE	2	VIT-Bhopal

The Output pane shows the execution of the insert statement:

```

# Time Action Message Duration / Fetch
13 13:20:52 insert into guna.students values(108,'ranjani','EEE',2,'VIT-Bhopal') 1 row(s) affected 0.016 sec

```

## Update:

update guna.students set Dept='Mech',Campus='VIT-Chennai' where Regno=106;  
 update guna.students set Name='priya' where Regno=108;

MySQL Workbench interface showing two update queries. The queries are as follows:

```

1 • SELECT * FROM guna.students;
2
3 • update guna.students set Dept='Mech',Campus='VIT-Chennai' where Regno=106;
4 • update guna.students set Name='priya' where Regno=108;
5
6
7
8
9
10

```

The Result Grid shows the updated data:

Regno	Name	Dept	Year	Campus
101	gunasekaran	CSE	4	VIT-Vellore
102	sivaranjani	IT	1	VIT-AP
103	arjunan	ECE	3	VIT-Chennai
104	manimegalai	EEE	2	VIT-Bhopal
105	ammu	CSE	4	VIT-Vellore
106	siva	Mech	1	VIT-Chennai
107	amrith	ECE	3	VIT-Chennai
108	priya	EEE	2	VIT-Bhopal

The Output pane shows the execution of both update statements:

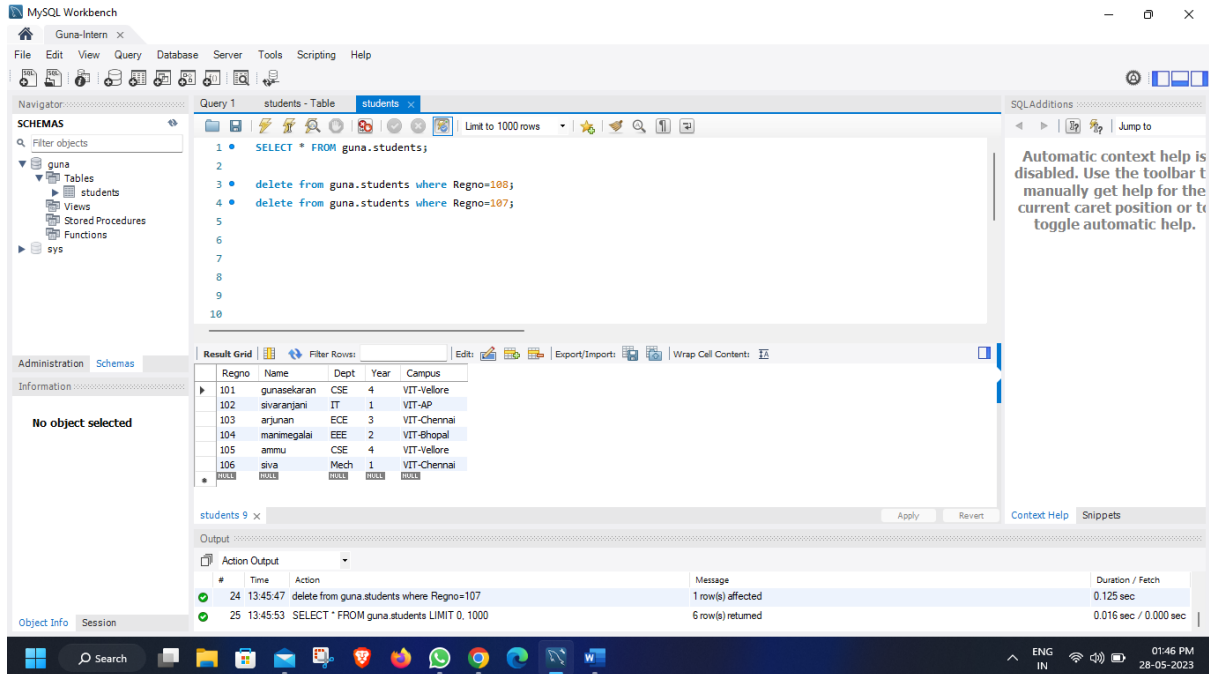
```

# Time Action Message Duration / Fetch
21 13:33:25 update guna.students set Name='priya' where Regno=108 1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0 0.047 sec
22 13:33:29 SELECT * FROM guna.students LIMIT 0, 1000 8 row(s) returned 0.000 sec / 0.000 sec

```

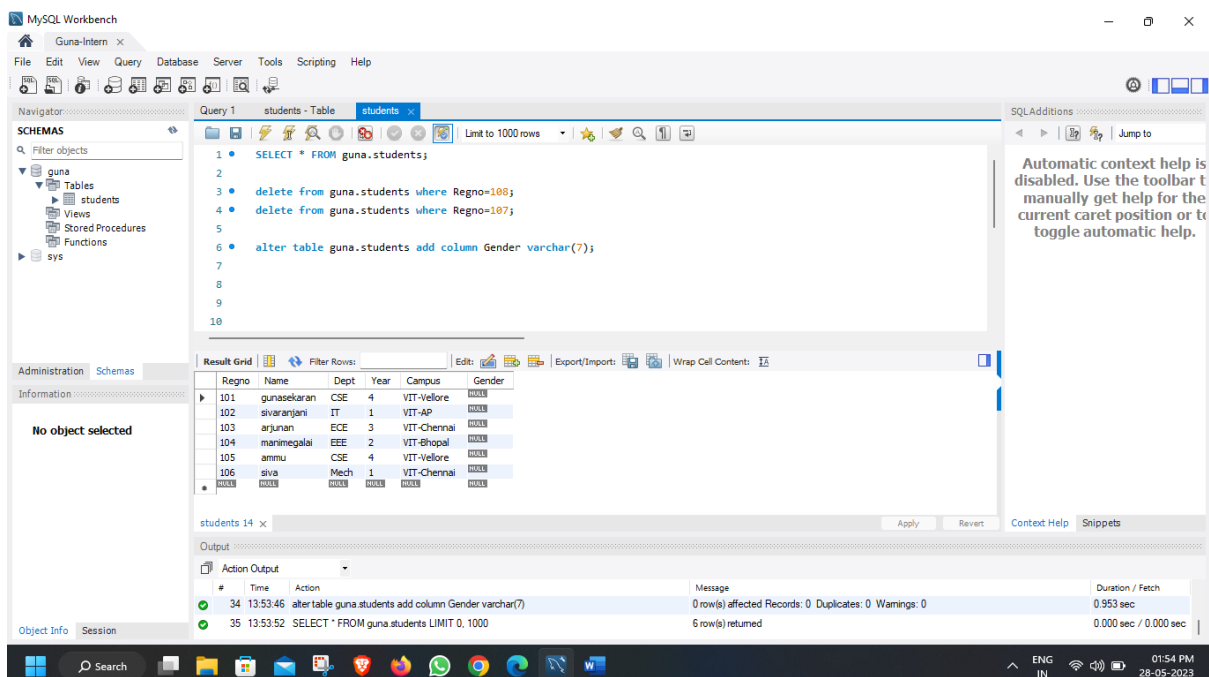
## Delete:

delete from guna.students where Regno=108;  
delete from guna.students where Regno=107;



## Alter:

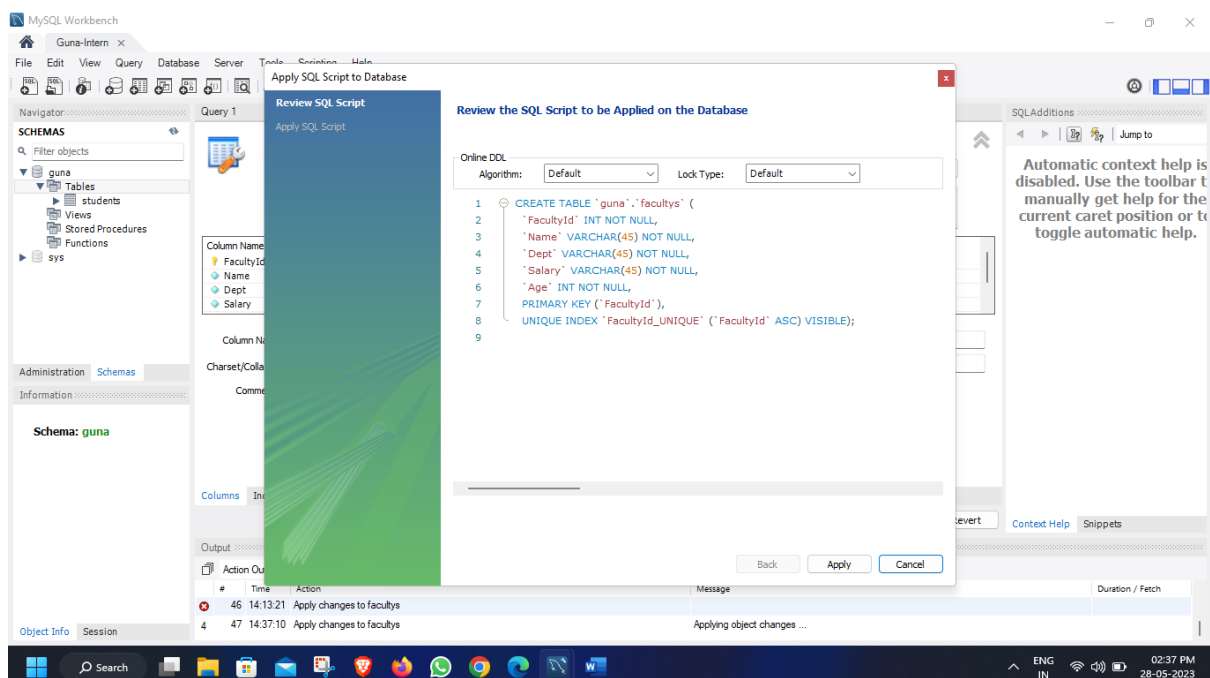
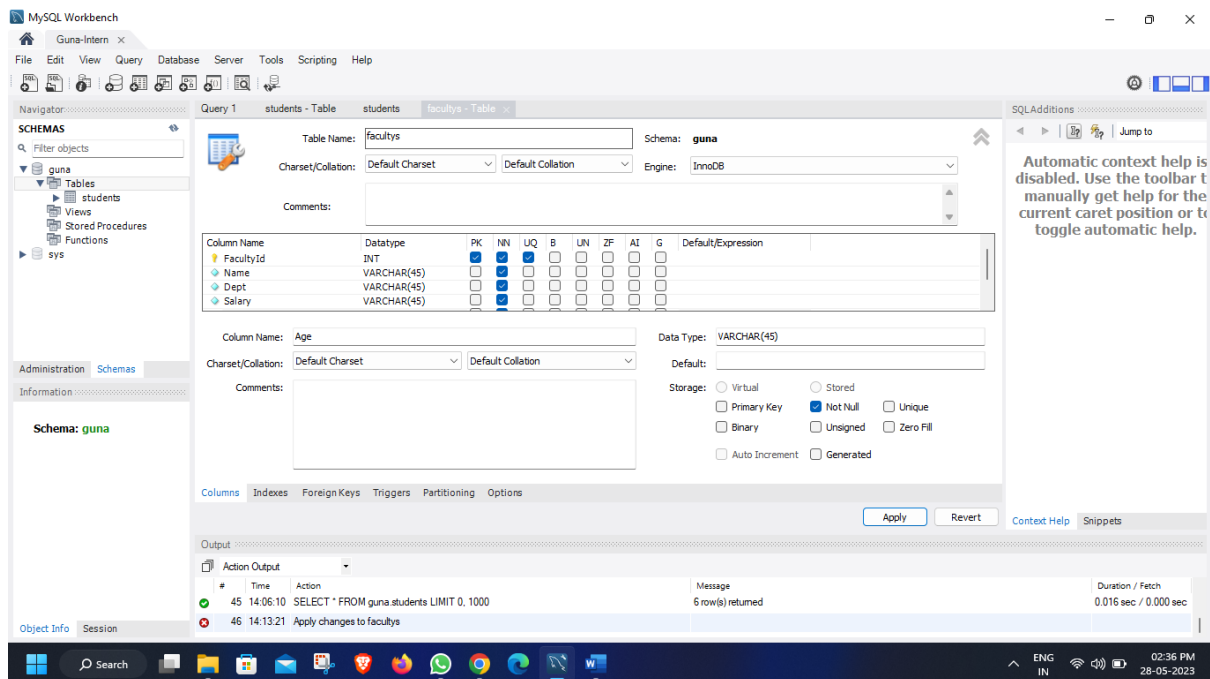
alter table guna.students add column Gender varchar(7);



## 2.Create table and perform joins in MySQL.

### Create Table:

```
CREATE TABLE `guna`.`facultys` (  
  `FacultyId` INT NOT NULL,  
  `Name` VARCHAR(45) NOT NULL,  
  `Dept` VARCHAR(45) NOT NULL,  
  `Salary` VARCHAR(45) NOT NULL,  
  `Age` INT NOT NULL,  
  PRIMARY KEY (`FacultyId`),  
  UNIQUE INDEX `FacultyId_UNIQUE` (`FacultyId` ASC) VISIBLE);
```



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

```

1 • SELECT * FROM guna.facultys;
2
3 • SELECT * FROM guna.students LEFT JOIN guna.facultys ON guna.students.StudentId=guna.facultys.FacultyId;
4
5
6
7
8

```

FacultyId	Name	Dept	Salary	Age
101	guna	CSE	45k	35
102	ranjani	IT	40k	27
103	mani	ECE	50k	40
104	arjun	EEE	60k	45
105	anhu	CSE	35k	30
106	sri	IT	75k	35
107	anbu	CSE	25k	25
108	srija	IT	75k	44

Output

#	Time	Action	Message	Duration / Fetch
64	15:00:08	SELECT * FROM guna.students LEFT JOIN guna.facultys ON guna.students.StudentId=guna...	6 row(s) returned	0.031 sec / 0.000 sec
65	15:00:40	SELECT * FROM guna.facultys LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec

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

```

1 • SELECT * FROM guna.students;
2
3
4
5
6
7
8
9
10

```

StudentId	Name	Dept	Year	Campus	Gender
101	gunasekaran	CSE	4	VIT-Vellore	male
102	sivaranjani	IT	1	VIT-AP	female
103	arjunan	ECE	3	VIT-Chennai	male
104	marimegalai	EEE	2	VIT-Bhopal	female
105	ammu	CSE	4	VIT-Vellore	female
106	siva	Mech	1	VIT-Chennai	male

Output

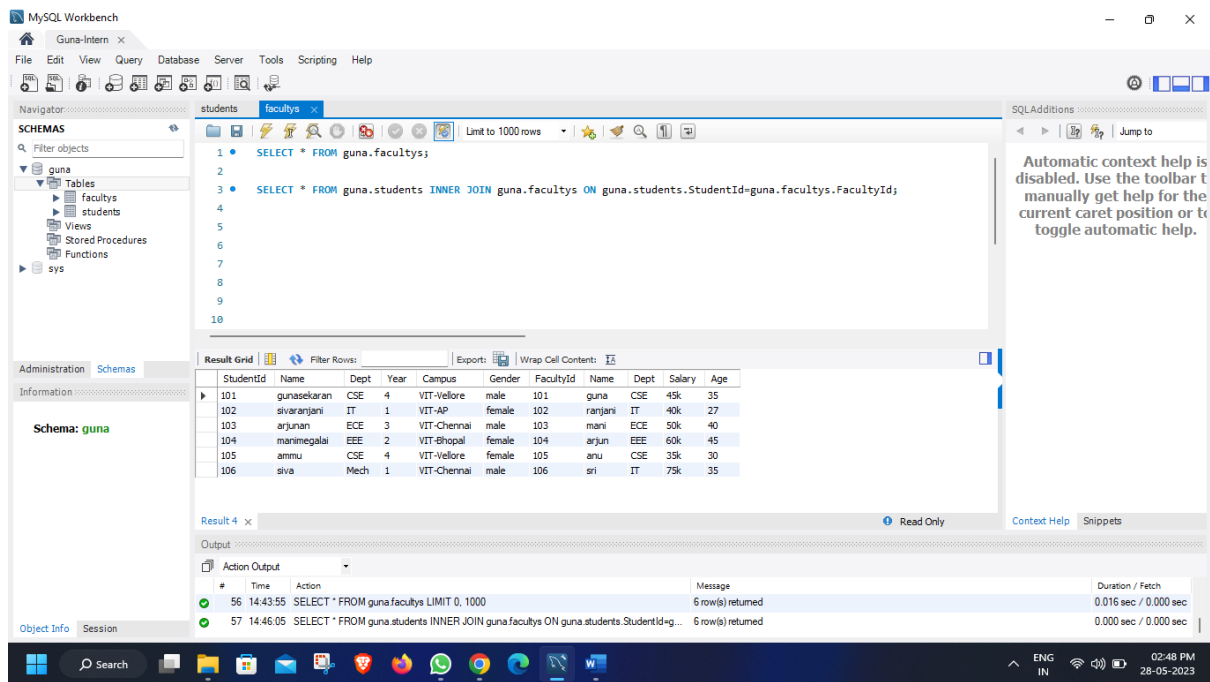
#	Time	Action	Message	Duration / Fetch
64	15:00:08	SELECT * FROM guna.students LEFT JOIN guna.facultys ON guna.students.StudentId=guna...	6 row(s) returned	0.031 sec / 0.000 sec
65	15:00:40	SELECT * FROM guna.facultys LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec

## Inner Join:

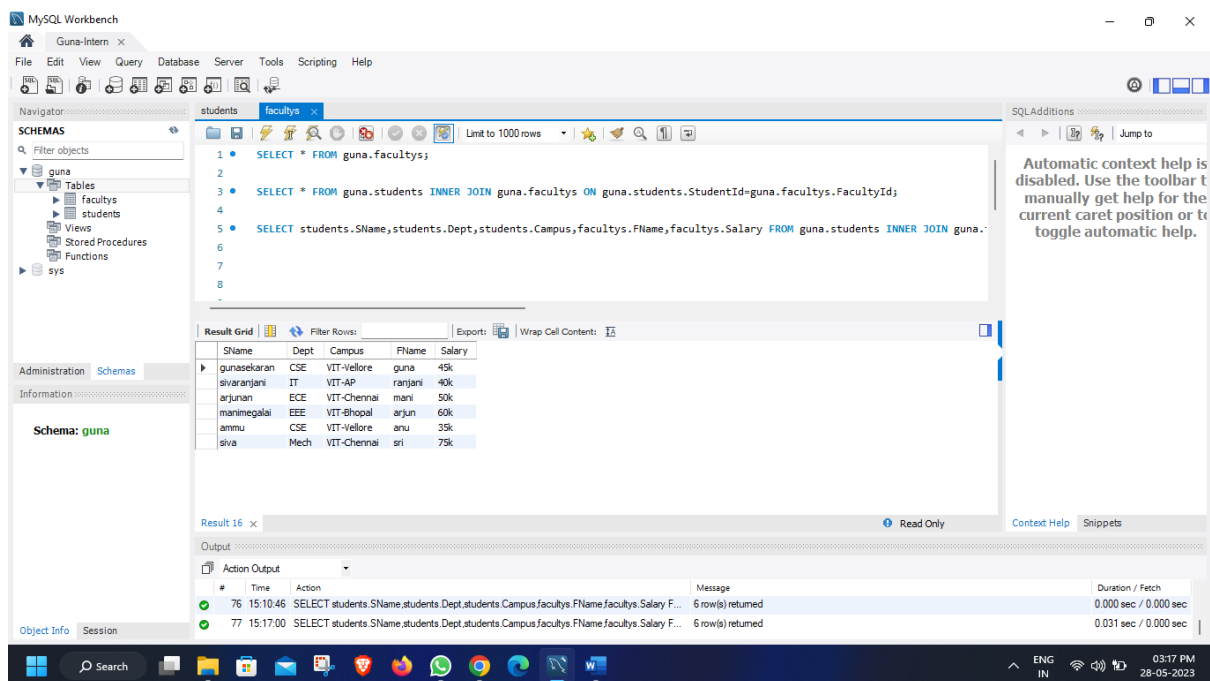
SELECT \* FROM guna.students INNER JOIN guna.facultys ON guna.students.StudentId=guna.facultys.FacultyId;

(or)

SELECT students.SName,students.Dept,students.Campus,facultys.FName,facultys.Salary  
FROM guna.students INNER JOIN guna.facultys ON guna.students.StudentId=guna.facultys.FacultyId;



(or)

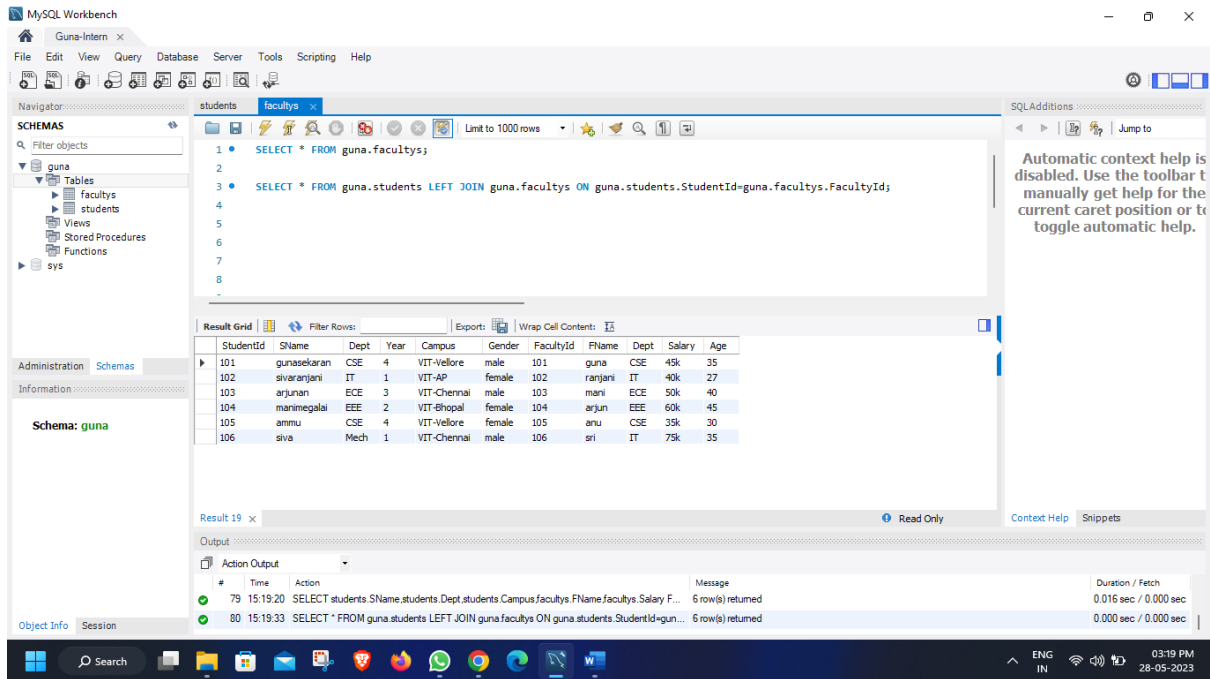


## Left Join:

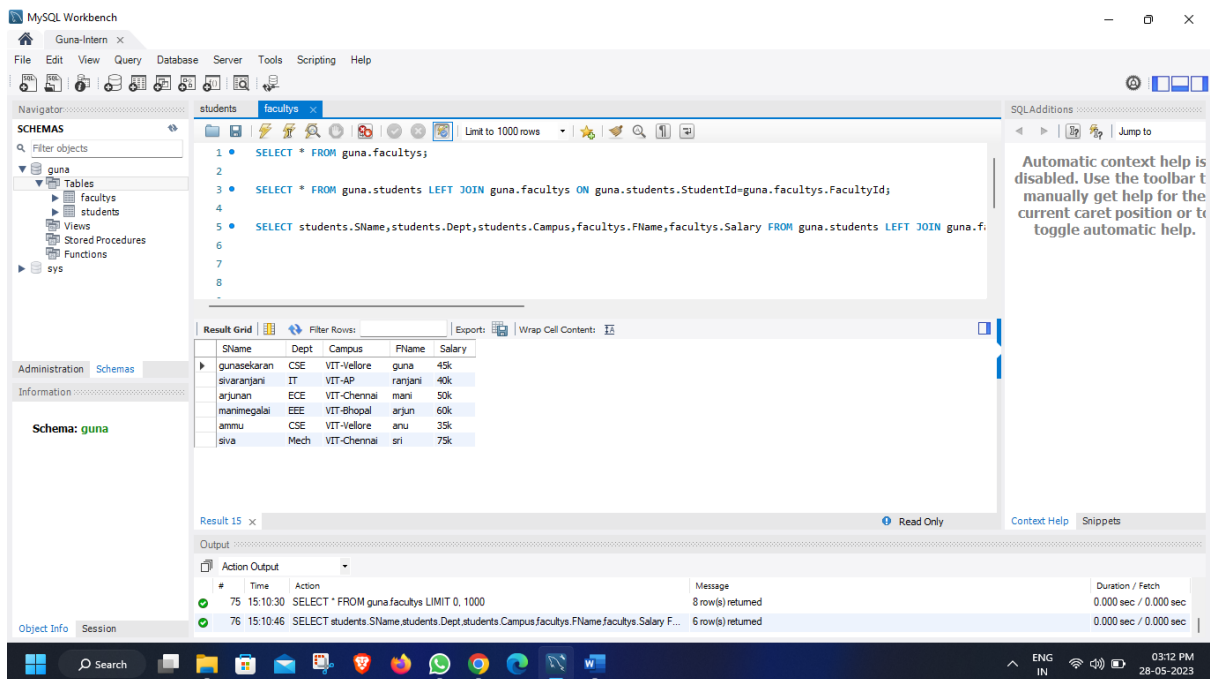
SELECT \* FROM guna.students LEFT JOIN guna.facultys ON guna.students.StudentId=guna.facultys.FacultyId;

(or)

SELECT students.SName,students.Dept,students.Campus,facultys.FName,facultys.Salary FROM guna.students LEFT JOIN guna.facultys ON guna.students.StudentId=guna.facultys.FacultyId;



(or)



## Right Join:

```
SELECT * FROM guna.students RIGHT JOIN guna.facultys ON guna.students.StudentId=guna.facultys.FacultyId;
```

(or)

```
SELECT students.SName,students.Dept,students.Campus,students.FacultyId,students.FName,students.Salary FROM guna.students RIGHT JOIN guna.facultys ON guna.students.StudentId=guna.facultys.FacultyId;
```



MySQL Workbench

Guna-Intern x

File Edit View Query Database Server Tools Scripting Help

Navigator: students facultys

Limit to 1000 rows

1 • SELECT \* FROM guna.facultys;

2

3 • SELECT \* FROM guna.students RIGHT JOIN guna.facultys ON guna.students.StudentId=guna.facultys.FacultyId;

4

5

6

7

8

-

Result Grid

StudentId	SName	Dept	Year	Campus	Gender	FacultyId	FName	Dept	Salary	Age
101	gunasekaran	CSE	4	VIT-Vellore	male	101	guna	CSE	45k	35
102	sivaranjani	IT	1	VIT-AP	female	102	ranjani	IT	40k	27
103	arjunan	ECE	3	VIT-Chennai	male	103	mani	ECE	50k	40
104	manimegalai	EEE	2	VIT-Bhopal	female	104	arjun	EEE	60k	45
105	ammu	CSE	4	VIT-Vellore	female	105	anu	CSE	35k	30
106	siva	Mech	1	VIT-Chennai	male	106	sri	IT	75k	35
NULL	NULL	NULL	NULL	NULL	NULL	107	ambu	CSE	25k	25
NULL	NULL	NULL	NULL	NULL	NULL	108	srija	IT	75k	44

Result 21 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
81	15:26:58	SELECT * FROM guna.students RIGHT JOIN guna.facultys ON guna.students.StudentId=g...	8 row(s) returned	0.032 sec / 0.000 sec
82	15:30:21	SELECT * FROM guna.students RIGHT JOIN guna.facultys ON guna.students.StudentId=g...	8 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

ENG IN 03:30 PM 28-05-2023

(or)

MySQL Workbench

Guna-Intern x

File Edit View Query Database Server Tools Scripting Help

Navigator: students facultys

Limit to 1000 rows

1 • SELECT \* FROM guna.facultys;

2

3 • SELECT \* FROM guna.students RIGHT JOIN guna.facultys ON guna.students.StudentId=guna.facultys.FacultyId;

4

5 • SELECT students.SName,students.Dept,students.Campus,facultys.FName,facultys.Salary FROM guna.students RIGHT JOIN guna...

6

7

8

-

Result Grid

SName	Dept	Campus	FName	Salary
gunasekaran	CSE	VIT-Vellore	guna	45k
sivaranjani	IT	VIT-AP	ranjani	40k
arjunan	ECE	VIT-Chennai	mani	50k
manimegalai	EEE	VIT-Bhopal	arjun	60k
ammu	CSE	VIT-Vellore	anu	35k
siva	Mech	VIT-Chennai	sri	75k
NULL	NULL	NULL	ambu	25k
NULL	NULL	NULL	srija	75k

Result 22 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
82	15:30:21	SELECT * FROM guna.students RIGHT JOIN guna.facultys ON guna.students.StudentId=g...	8 row(s) returned	0.000 sec / 0.000 sec
83	15:31:02	SELECT students.SName,students.Dept,students.Campus,facultys.FName,facultys.Salary F...	8 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

ENG IN 03:31 PM 28-05-2023

## Full Join:

SELECT \* FROM guna.students FULL JOIN guna.facultys;

The screenshot shows the MySQL Workbench interface with the 'guna' schema selected. The SQL editor contains the following query:

```
1 • SELECT * FROM guna.facultys;
2 • SELECT * FROM guna.students FULL JOIN guna.facultys;
3
```

The 'Result Grid' displays the output of the query, showing columns: StudentId, SName, Dept, Year, Campus, Gender, FacultyId, FName, Dept, Salary, and Age. The results are as follows:

StudentId	SName	Dept	Year	Campus	Gender	FacultyId	FName	Dept	Salary	Age
106	siva	Mech	1	VIT-Chennai	male	101	guna	CSE	45k	35
105	ammu	CSE	4	VIT-Vellore	female	101	guna	CSE	45k	35
104	marimegalai	EEE	2	VIT-Bhopal	female	101	guna	CSE	45k	35
103	arjunan	ECE	3	VIT-Chennai	male	101	guna	CSE	45k	35
102	sivaranjani	IT	1	VIT-AP	female	101	guna	CSE	45k	35
101	gunasekaran	CSE	4	VIT-Vellore	male	101	guna	CSE	45k	35
106	siva	Mech	1	VIT-Chennai	male	102	ranjani	IT	40k	27
105	ammu	CSE	4	VIT-Vellore	female	102	ranjani	IT	40k	27
104	marimegalai	EEE	2	VIT-Bhopal	female	102	ranjani	IT	40k	27
103	arjunan	ECE	3	VIT-Chennai	male	102	ranjani	IT	40k	27
102	sivaranjani	IT	1	VIT-AP	female	102	ranjani	IT	40k	27
101	gunasekaran	CSE	4	VIT-Vellore	male	102	ranjani	IT	40k	27
106	siva	Mech	1	VIT-Chennai	male	103	mani	ECE	50k	40
105	ammu	CSE	4	VIT-Vellore	female	103	mani	ECE	50k	40
104	marimegalai	EEE	2	VIT-Bhopal	female	103	mani	ECE	50k	40
103	arjunan	ECE	3	VIT-Chennai	male	103	mani	ECE	50k	40
102	sivaranjani	IT	1	VIT-AP	female	103	mani	ECE	50k	40
101	gunasekaran	CSE	4	VIT-Vellore	male	103	mani	ECE	50k	40
106	siva	Mech	1	VIT-Chennai	male	104	arjun	EEE	60k	45
105	ammu	CSE	4	VIT-Vellore	female	104	arjun	EEE	60k	45

The screenshot shows the MySQL Workbench interface with the 'guna' schema selected. The SQL editor contains the following query:

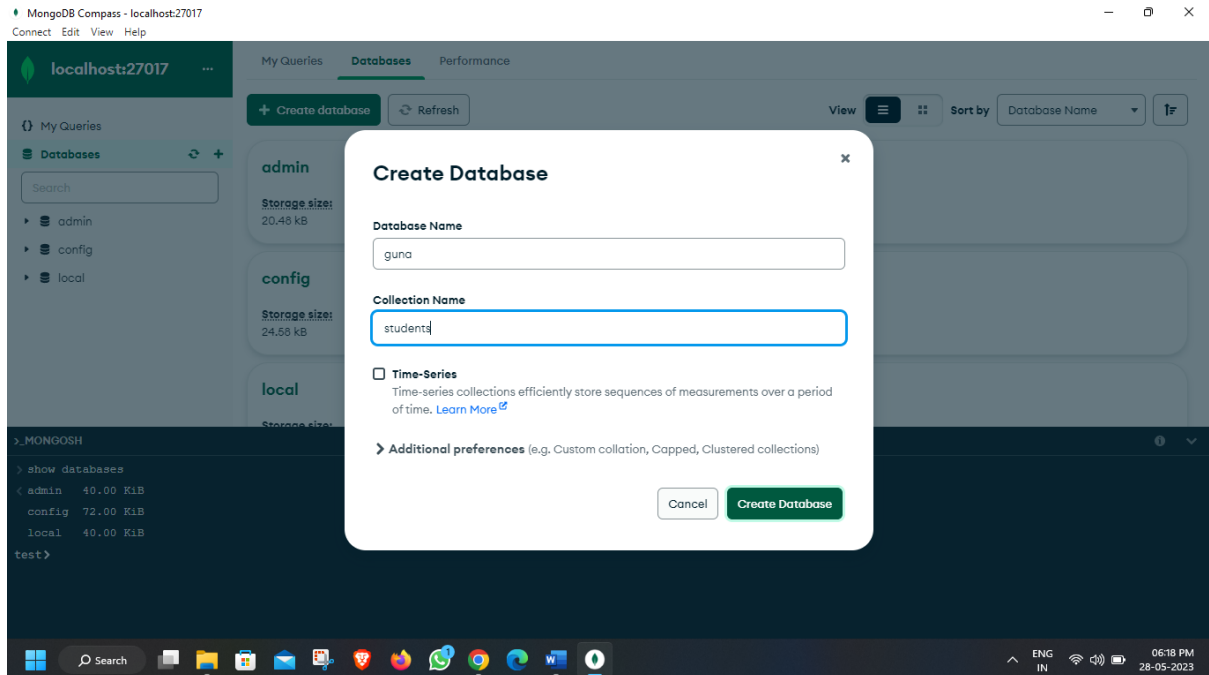
```
1 • SELECT * FROM guna.facultys;
2 • SELECT * FROM guna.students FULL JOIN guna.facultys;
3
```

The 'Result Grid' displays the output of the query, showing columns: StudentId, SName, Dept, Year, Campus, Gender, FacultyId, FName, Dept, Salary, and Age. The results are as follows:

StudentId	SName	Dept	Year	Campus	Gender	FacultyId	FName	Dept	Salary	Age
104	marimegalai	EEE	2	VIT-Bhopal	female	104	arjun	EEE	60k	45
103	arjunan	ECE	3	VIT-Chennai	male	104	arjun	EEE	60k	45
102	sivaranjani	IT	1	VIT-AP	female	104	arjun	EEE	60k	45
101	gunasekaran	CSE	4	VIT-Vellore	male	104	arjun	EEE	60k	45
106	siva	Mech	1	VIT-Chennai	male	105	anu	CSE	35k	30
105	ammu	CSE	4	VIT-Vellore	female	105	anu	CSE	35k	30
104	marimegalai	EEE	2	VIT-Bhopal	female	105	anu	CSE	35k	30
103	arjunan	ECE	3	VIT-Chennai	male	105	anu	CSE	35k	30
102	sivaranjani	IT	1	VIT-AP	female	105	anu	CSE	35k	30
101	gunasekaran	CSE	4	VIT-Vellore	male	105	anu	CSE	35k	30
106	siva	Mech	1	VIT-Chennai	male	106	sri	IT	75k	35
105	ammu	CSE	4	VIT-Vellore	female	106	sri	IT	75k	35
104	marimegalai	EEE	2	VIT-Bhopal	female	106	sri	IT	75k	35
103	arjunan	ECE	3	VIT-Chennai	male	106	sri	IT	75k	35
102	sivaranjani	IT	1	VIT-AP	female	106	sri	IT	75k	35
101	gunasekaran	CSE	4	VIT-Vellore	male	106	sri	IT	75k	35
106	siva	Mech	1	VIT-Chennai	male	107	anbu	CSE	25k	25
105	ammu	CSE	4	VIT-Vellore	female	107	anbu	CSE	25k	25
104	marimegalai	EEE	2	VIT-Bhopal	female	107	anbu	CSE	25k	25
103	arjunan	ECE	3	VIT-Chennai	male	107	anbu	CSE	25k	25

### 3.Create table and insert, update, delete commands in Mongo.

#### Create Database:

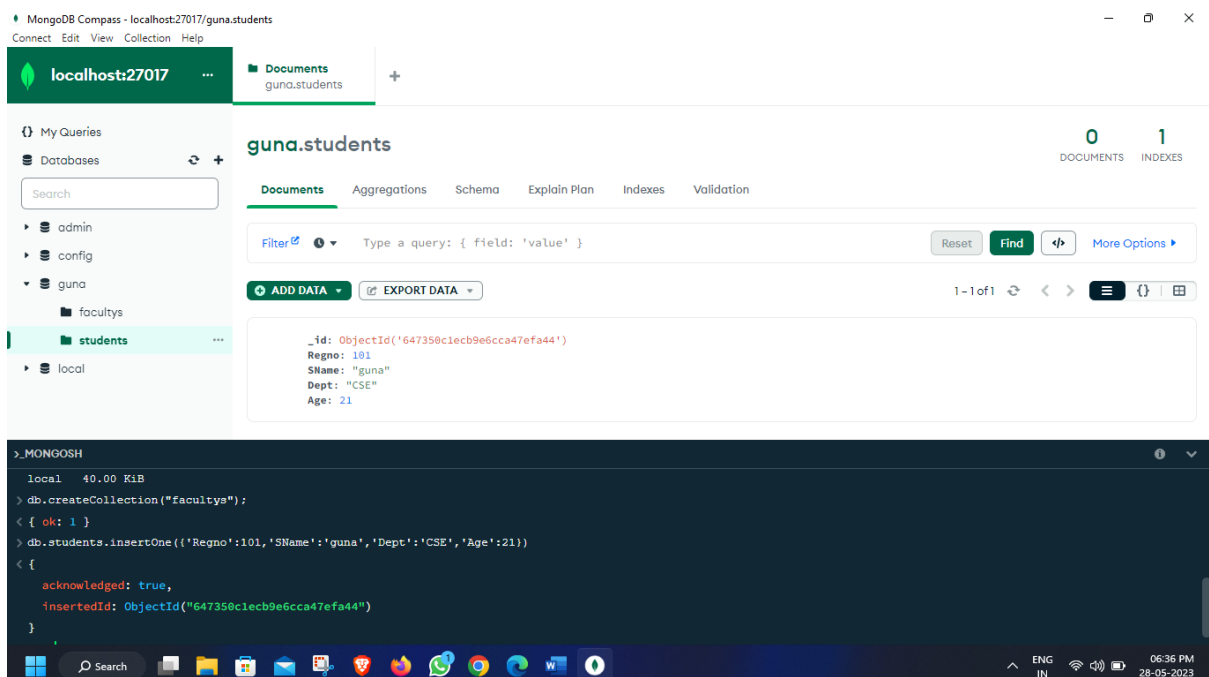


#### Create Collections:

```
db.createCollection("faculty");
```

#### Insert Values:

```
db.students.insertOne({'Regno':101,'SName':'guna','Dept':'CSE','Age':21})
```



MongoDB Compass - localhost:27017/guna.students

Connect Edit View Collection Help

localhost:27017 Documents guna.students

My Queries Databases Search

- admin
- config
- guna
  - facultys
  - students**
  - local

guna.students

Documents Aggregations Schema Explain Plan Indexes Validation

Filter Type a query: { field: 'value' } Reset Find More Options

ADD DATA EXPORT DATA 1 - 3 of 3

<pre>{   "_id": ObjectId('647358c1ecb9e6cca47efa44'),   "Regno": 101,   "SName": "guna",   "Dept": "CSE",   "Age": 21 }</pre>
<pre>{   "_id": ObjectId('64735419ecb9e6cca47efa45'),   "Regno": 102,   "SName": "ammu",   "Dept": "IT",   "Age": 19 }</pre>
<pre>{   "_id": ObjectId('64735461ecb9e6cca47efa46'),   "Regno": 103,   "SName": "siva",   "Dept": "ECE" }</pre>

> MONGOSH

ENG IN 06:47 PM 28-05-2023

## Update Values:

```
db.students.updateOne({Regno:102},{ $set: {Dept:"EEE"}})
```

MongoDB Compass - localhost:27017/guna.students

Connect Edit View Collection Help

localhost:27017 Documents guna.students

My Queries Databases Search

- admin
- config
- guna
  - facultys
  - students**
  - local

guna.students

Documents Aggregations Schema Explain Plan Indexes Validation

Filter Type a query: { field: 'value' } Reset Find More Options

ADD DATA EXPORT DATA 1 - 3 of 3

<pre>{   "_id": ObjectId('64735419ecb9e6cca47efa45'),   "Regno": 102,   "SName": "ammu",   "Dept": "EEE",   "Age": 19 }</pre>
---

> MONGOSH

```
> db.students.updateOne({Regno:102},{ $set: {Dept:"EEE"}})
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

guna>

ENG IN 06:51 PM 28-05-2023

## Delete values:

`db.students.deleteOne({ Regno: 103 })`

The screenshot shows the MongoDB Compass interface. On the left, the 'students' collection is selected under the 'guna' database. The main panel displays the 'Documents' tab for 'guna.students', showing two documents. The first document has 'Regno: 101' and 'SName: "guna"'. The second document has 'Regno: 102' and 'SName: "ammu"'. Below the interface, a terminal window shows the command `> db.students.deleteOne({ Regno: 103 })` being executed, resulting in `acknowledged: true, deletedCount: 1`.

## Count of Documents:

`db.students.countDocuments()`

The screenshot shows the MongoDB Compass interface. On the left, the 'students' collection is selected under the 'guna' database. The main panel displays the 'Documents' tab for 'guna.students', showing two documents. The first document has 'Regno: 101' and 'SName: "guna"'. The second document has 'Regno: 102' and 'SName: "ammu"'. Below the interface, a terminal window shows the command `> db.students.countDocuments()` being executed, resulting in `< 2`.