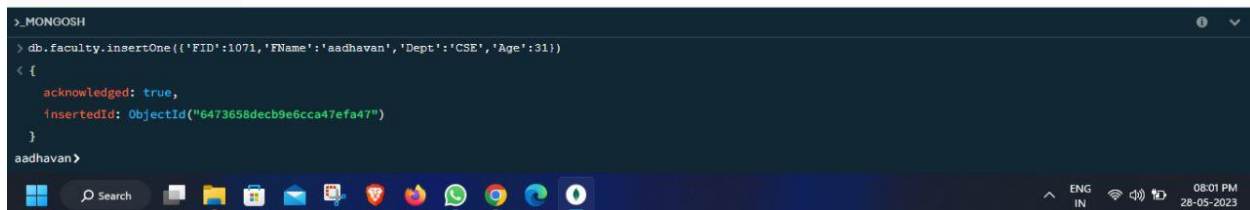
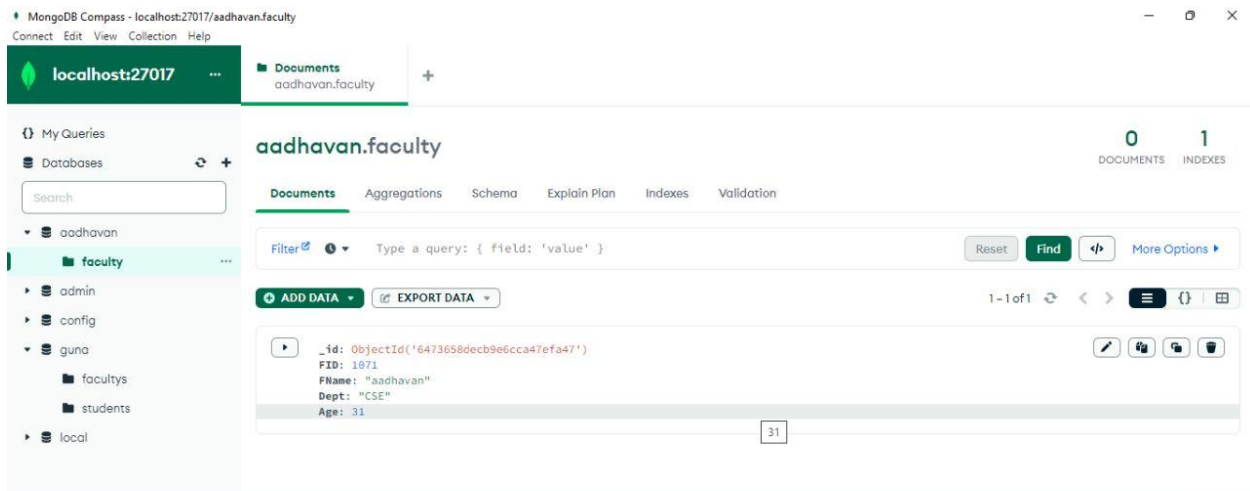
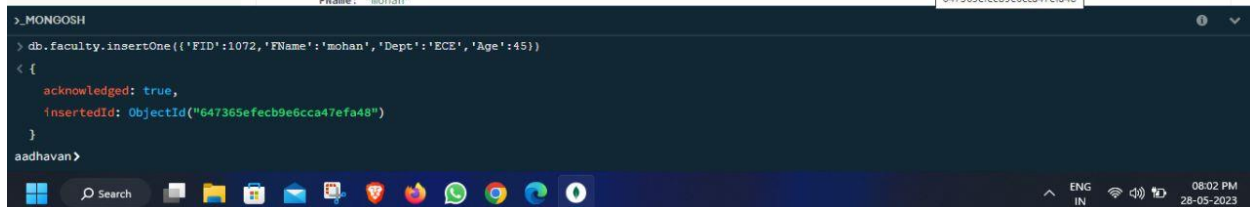
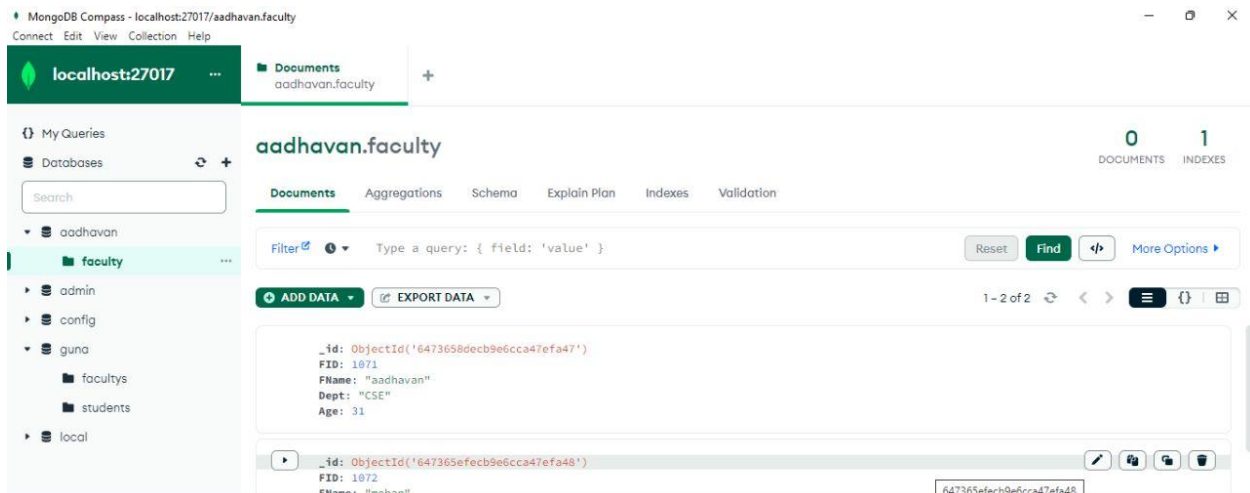


Insert data in Mongo:

```
db.faculty.insertOne({'FID':1071,'FName':'aadhavan','Dept':'CSE','Age':31})
```



```
db.faculty.insertOne({'FID':1072,'FName':'mohan','Dept':'ECE','Age':45})
```



Update data:

```
db.faculty.updateOne({FID:1072},{ $set:{Dept:"IT"}})
```

The screenshot shows the MongoDB Compass interface for the 'aadhavan.faculty' collection. The left sidebar displays the database structure with 'aadhavan' as the selected database and 'faculty' as the selected collection. The main panel shows the 'Documents' tab with a single document displayed: `{_id: ObjectId('647365efecb9e6cca47efa48'), FID: 1072, FName: 'mohan', Dept: 'IT', Age: 45}`. Below the document list, the MongoDB shell output shows the result of the update operation: `> db.faculty.updateOne({FID:1072},{ $set:{Dept:'IT'}})` resulting in `{acknowledged: true, insertedId: null, matchedCount: 1, modifiedCount: 1, upsertedCount: 0}`. The taskbar at the bottom shows the Windows taskbar with various application icons and the system clock indicating 08:04 PM on 28-05-2023.

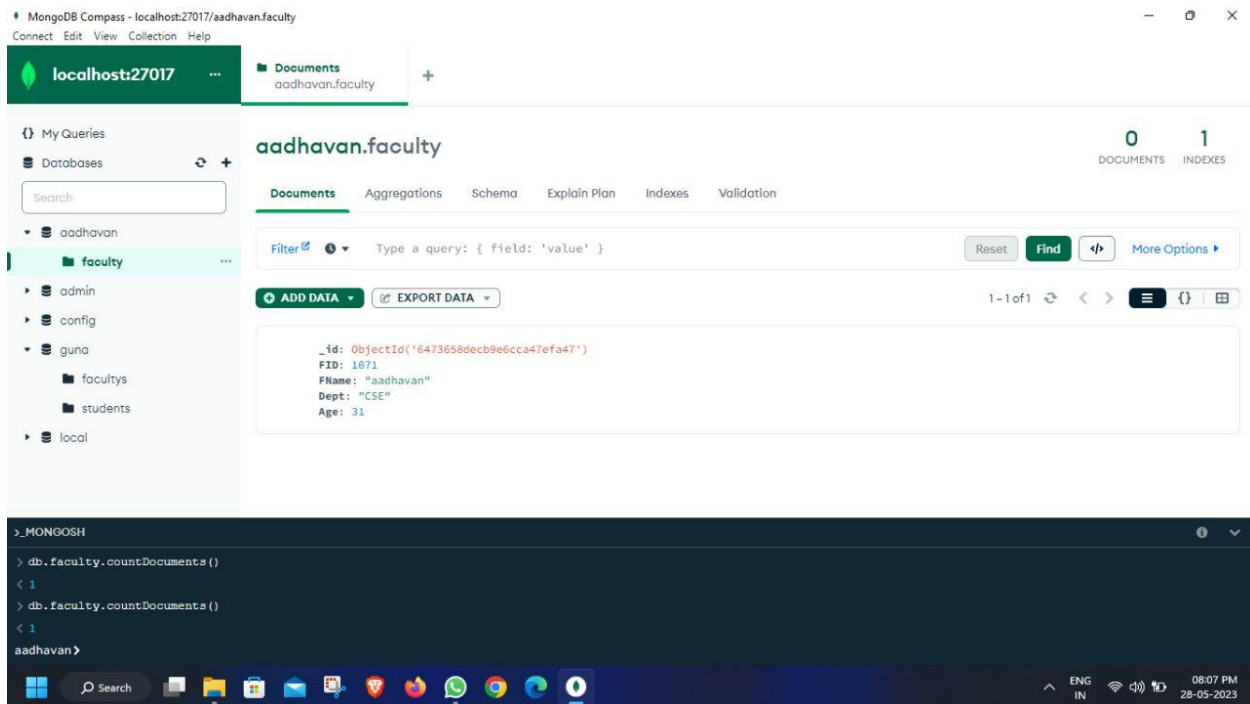
Delete data:

```
db.faculty.deleteOne({FID:1072})
```

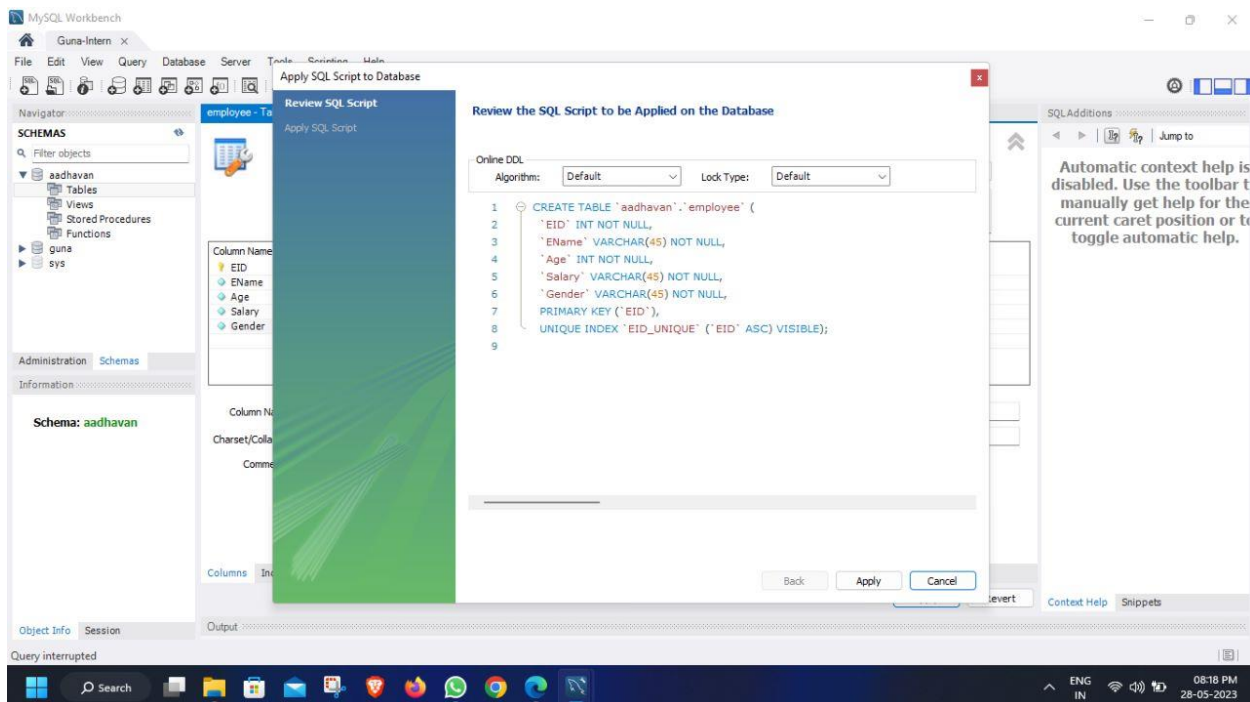
The screenshot shows the MongoDB Compass interface for the 'aadhavan.faculty' collection. The left sidebar displays the database structure with 'aadhavan' as the selected database and 'faculty' as the selected collection. The main panel shows the 'Documents' tab with a single document displayed: `{_id: ObjectId('6473658decb9e6cca47efa47'), FID: 1071, FName: 'aadhavan', Dept: 'CSE', Age: 31}`. Below the document list, the MongoDB shell output shows the result of the delete operation: `> db.faculty.deleteOne({FID:1072})` resulting in `{acknowledged: true, deletedCount: 1}`. The taskbar at the bottom shows the Windows taskbar with various application icons and the system clock indicating 08:06 PM on 28-05-2023.

count documents in database:

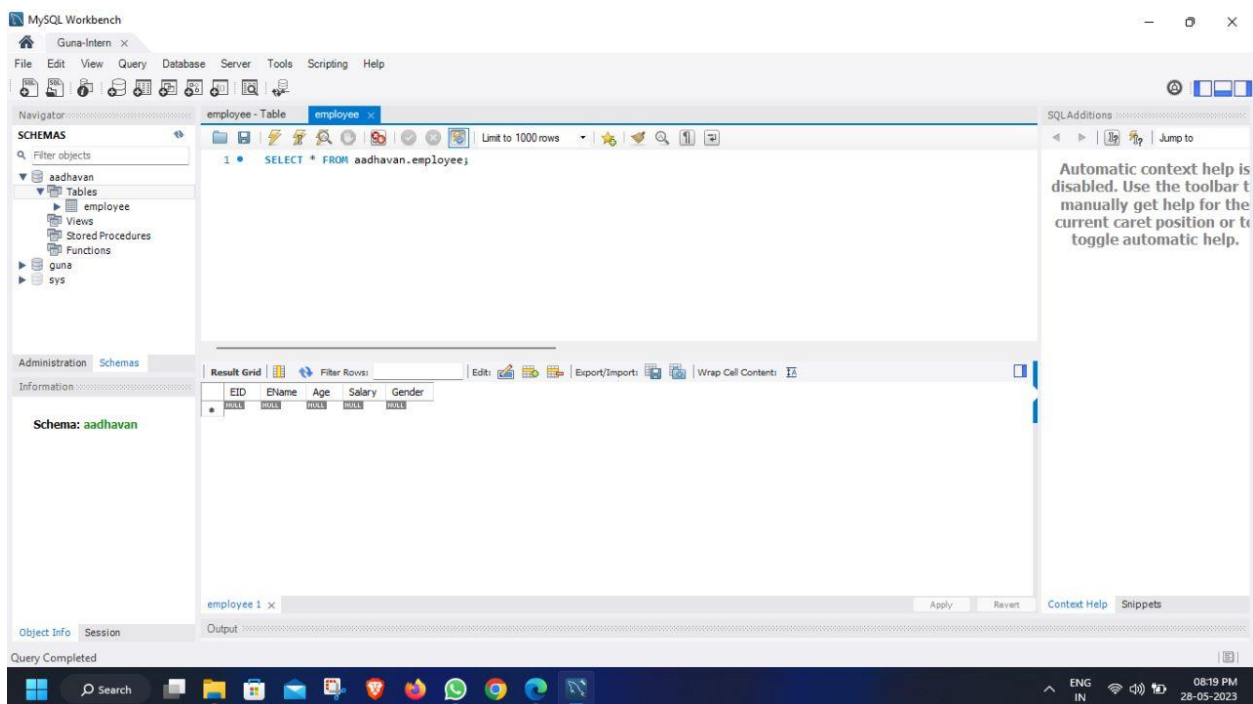
db.faculty.countDocuments()



create database in MySQL:



```
CREATE TABLE `aadhavan`.`employee` (  
  `EID` INT NOT NULL,  
  `ENAME` VARCHAR(45) NOT NULL,  
  `Age` INT NOT NULL,  
  `Salary` VARCHAR(45) NOT NULL,  
  `Gender` VARCHAR(45) NOT NULL,  
  PRIMARY KEY (`EID`),  
  UNIQUE INDEX `EID_UNIQUE` (`EID` ASC) VISIBLE);
```



Insert values:

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' panel with a tree view showing the 'aadhavan' database containing tables, views, stored procedures, and functions. The main editor window shows a SQL script with five INSERT statements. Below the script, the 'Result Grid' displays the contents of the 'employee' table. The bottom panel shows the 'Output' tab with a log of executed queries and their results.

SQL Script:

```
1 • SELECT * FROM aadhavan.employee;
2
3 • insert into aadhavan.employee values(1,'aadhavan',19,'75k','male');
4 • insert into aadhavan.employee values(2,'mohan',25,'55k','male');
5 • insert into aadhavan.employee values(3,'aadhi',30,'45k','male');
6 • insert into aadhavan.employee values(4,'mohana',29,'65k','female');
7 • insert into aadhavan.employee values(5,'priya',34,'70k','female');
```

Result Grid:

EID	EName	Age	Salary	Gender
1	aadhavan	19	75k	male
2	mohan	25	55k	male
3	aadhi	30	45k	male
4	mohana	29	65k	female
5	priya	34	70k	female

Action Output:

#	Time	Action	Message	Duration / Fetch
15	20:24:47	insert into aadhavan.employee values(5,'priya',34,'70k','female')	1 row(s) affected	0.172 sec
16	20:24:51	SELECT * FROM aadhavan.employee LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec

insert into aadhavan.employee values(1,'aadhavan',19,'75k','male');

insert into aadhavan.employee values(2,'mohan',25,'55k','male');

insert into aadhavan.employee values(3,'aadhi',30,'45k','male');

insert into aadhavan.employee values(4,'mohana',29,'65k','female');

insert into aadhavan.employee values(5,'priya',34,'70k','female');

Update values:

update aadhavan.employee set Age=21 where EID=1;

The screenshot shows the MySQL Workbench interface. The 'employee' table is selected in the 'employee - Table' tab. The SQL editor contains the following queries:

```
1 SELECT * FROM aadhavan.employee;
```

```
2
```

```
3 update aadhavan.employee set Age=21 where EID=1;
```

```
4
```

```
5
```

```
6
```

```
7
```

```
8
```

The 'Result Grid' shows the data for the 'employee' table:

EID	ENAME	Age	Salary	Gender
1	aadhavan	21	75k	male
2	mohan	25	55k	male
3	aadhi	30	45k	male
4	mohana	29	65k	female
5	priya	34	70k	female
*	NULL	NULL	NULL	NULL

The 'Action Output' pane shows the results of the update query:

#	Time	Action	Message	Duration / Fetch
17	20:27:19	update aadhavan.employee set Age=21 where EID=1	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.093 sec
18	20:27:23	SELECT * FROM aadhavan.employee LIMIT 0, 1000	5 row(s) returned	0.016 sec / 0.000 sec

Delete data

delete from aadhavan.employee where EID=5;

The screenshot shows the MySQL Workbench interface. The 'employee' table is selected in the 'employee - Table' tab. The SQL editor contains the following queries:

```
1 SELECT * FROM aadhavan.employee;
```

```
2
```

```
3 update aadhavan.employee set Age=21 where EID=1;
```

```
4
```

```
5 delete from aadhavan.employee where EID=5;
```

```
6
```

```
7
```

```
8
```

The 'Result Grid' shows the data for the 'employee' table:

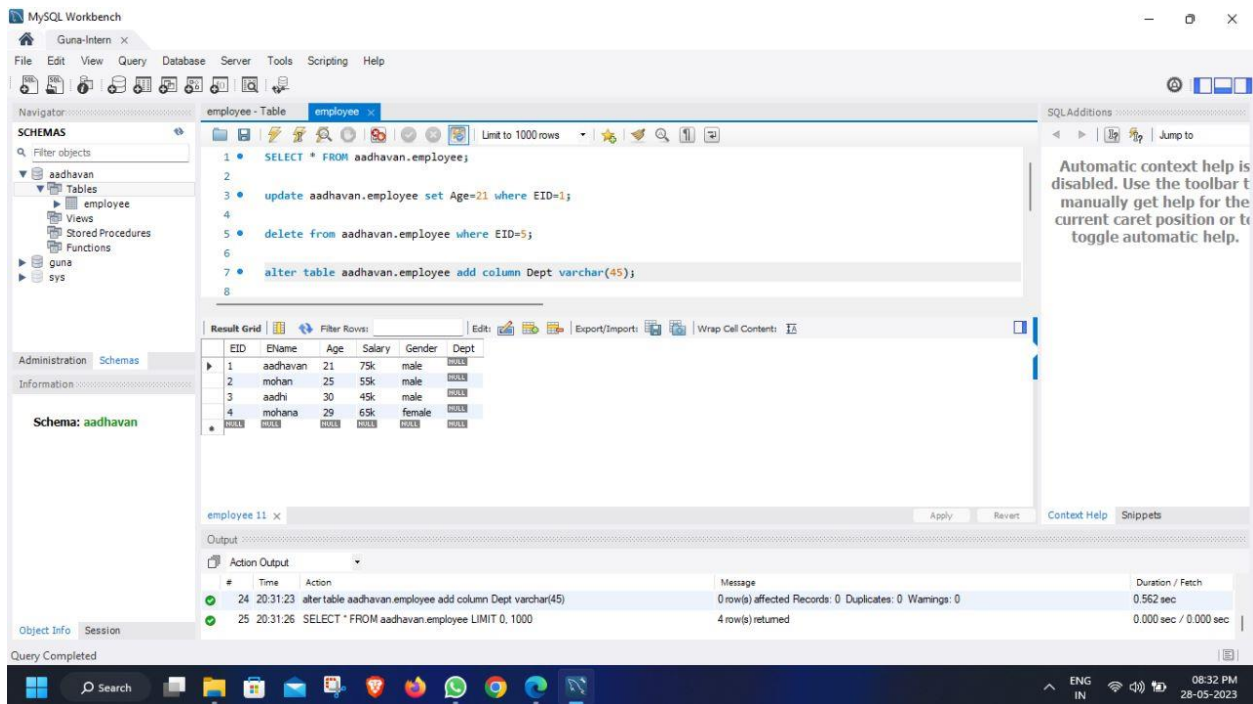
EID	ENAME	Age	Salary	Gender
1	aadhavan	21	75k	male
2	mohan	25	55k	male
3	aadhi	30	45k	male
4	mohana	29	65k	female
*	NULL	NULL	NULL	NULL

The 'Action Output' pane shows the results of the delete query:

#	Time	Action	Message	Duration / Fetch
22	20:29:29	SELECT * FROM aadhavan.employee LIMIT 0, 1000	4 row(s) returned	0.000 sec / 0.000 sec
23	20:29:43	SELECT * FROM aadhavan.employee LIMIT 0, 1000	4 row(s) returned	0.000 sec / 0.000 sec

Alter table

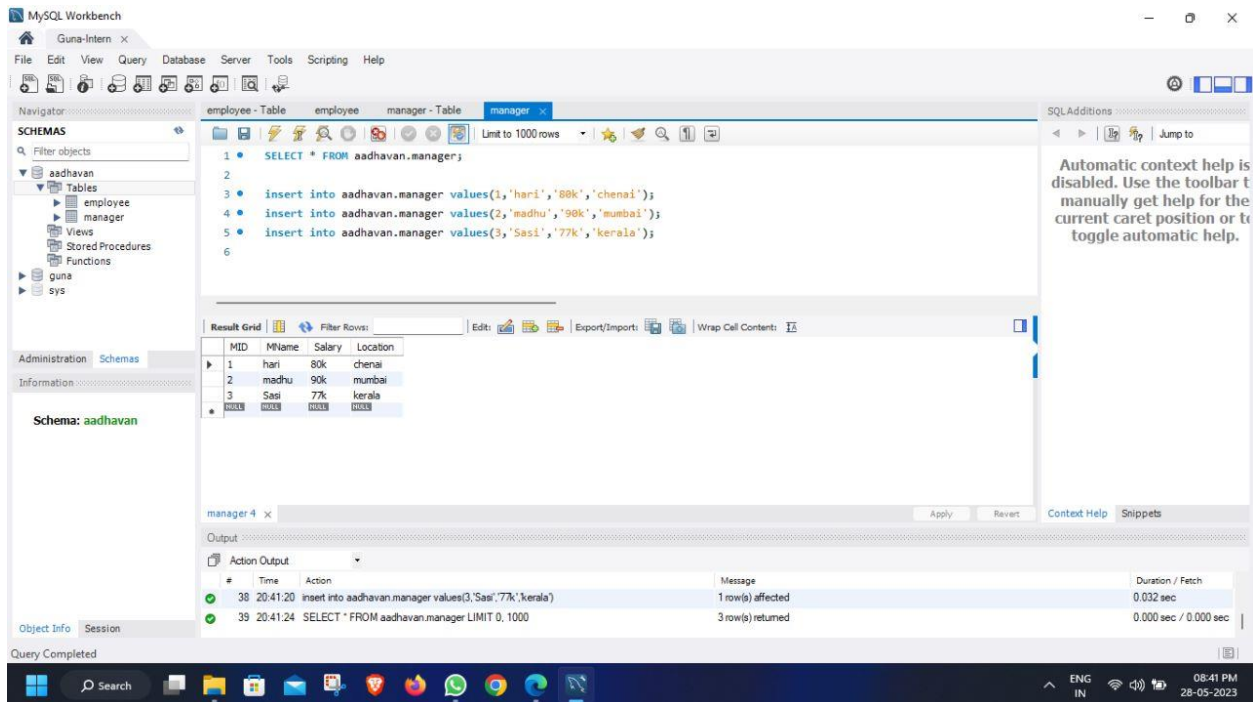
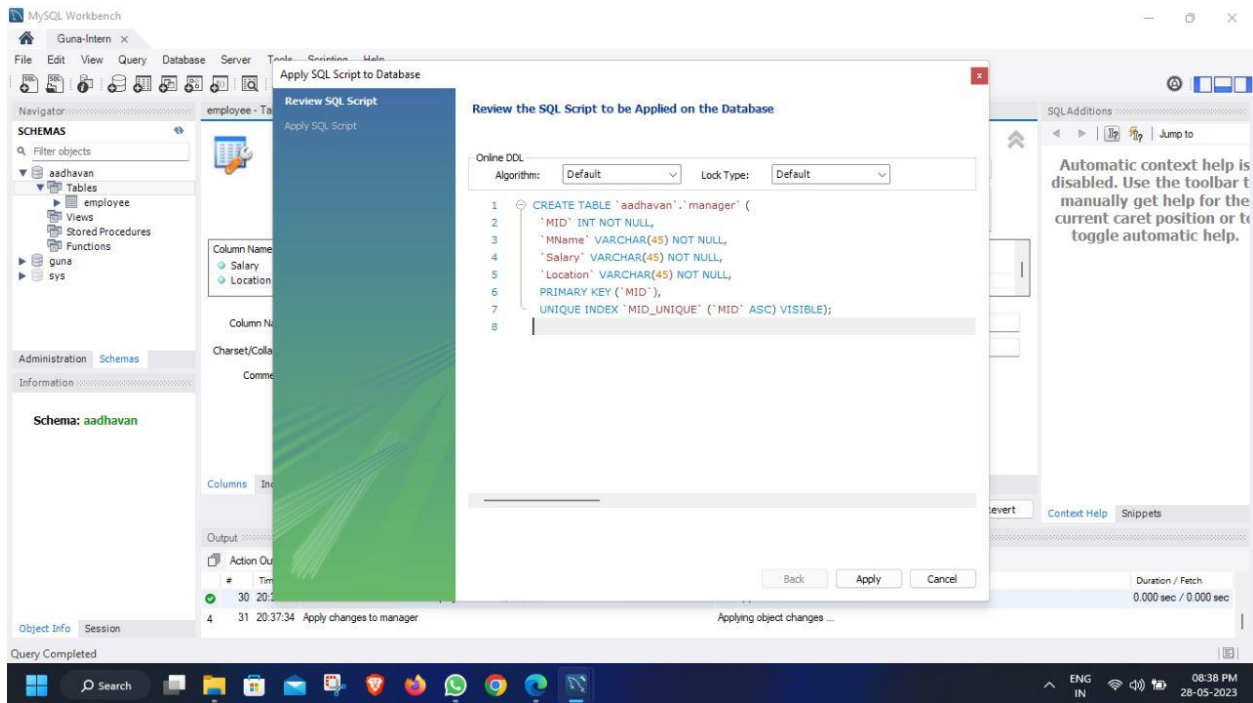
alter table aadhavan.employee add column Dept varchar(45);



2.joins

New table:

```
CREATE TABLE `aadhavan`.`manager` (  
  `MID` INT NOT NULL,  
  `MName` VARCHAR(45) NOT NULL,  
  `Salary` VARCHAR(45) NOT NULL,  
  `Location` VARCHAR(45) NOT NULL,  
  PRIMARY KEY (`MID`),  
  UNIQUE INDEX `MID_UNIQUE` (`MID` ASC) VISIBLE);
```



Inner join

SELECT * FROM aadhavan.employee INNER JOIN aadhavan.manager ON
aadhavan.employee.EID=aadhavan.manager.MID;

The screenshot shows the MySQL Workbench interface. The 'Schemas' pane on the left displays the 'aadhavan' database with tables 'employee' and 'manager'. The main editor contains the following SQL script:

```
1 SELECT * FROM aadhavan.manager;
2
3 insert into aadhavan.manager values(1,'hari','80k','chenai');
4 insert into aadhavan.manager values(2,'madhu','90k','mumbai');
5 insert into aadhavan.manager values(3,'Sasi','77k','kerala');
6
7 SELECT * FROM aadhavan.employee INNER JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID;
8
```

The 'Result Grid' shows the output of the inner join query, displaying columns EID, EName, Age, Salary, Gender, Dept, MID, MName, Salary, and Location. The results are as follows:

EID	EName	Age	Salary	Gender	Dept	MID	MName	Salary	Location
1	aadhavan	21	75k	male	Sales	1	hari	80k	chenai
2	mohan	25	55k	male	Accounting	2	madhu	90k	mumbai
3	aadhi	30	45k	male	Sales	3	Sasi	77k	kerala

The 'Output' pane at the bottom shows the execution log with two entries:

#	Time	Action	Message	Duration / Fetch
39	20:41:24	SELECT * FROM aadhavan.manager LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
40	20:43:11	SELECT * FROM aadhavan.employee INNER JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID	3 row(s) returned	0.000 sec / 0.000 sec

Left join

SELECT * FROM aadhavan.employee left JOIN aadhavan.manager ON
aadhavan.employee.EID=aadhavan.manager.MID;

The screenshot shows the MySQL Workbench interface. The 'Schemas' pane on the left displays the 'aadhavan' database with tables 'employee' and 'manager'. The main editor contains the following SQL script:

```
1 SELECT * FROM aadhavan.manager;
2
3 insert into aadhavan.manager values(1,'hari','80k','chenai');
4 insert into aadhavan.manager values(2,'madhu','90k','mumbai');
5 insert into aadhavan.manager values(3,'Sasi','77k','kerala');
6
7 SELECT * FROM aadhavan.employee left JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID;
8
```

The 'Result Grid' shows the output of the left join query, displaying columns EID, EName, Age, Salary, Gender, Dept, MID, MName, Salary, and Location. The results are as follows:

EID	EName	Age	Salary	Gender	Dept	MID	MName	Salary	Location
1	aadhavan	21	75k	male	Sales	1	hari	80k	chenai
2	mohan	25	55k	male	Accounting	2	madhu	90k	mumbai
3	aadhi	30	45k	male	Sales	3	Sasi	77k	kerala
4	mohana	29	65k	female	Accounting				

The 'Output' pane at the bottom shows the execution log with two entries:

#	Time	Action	Message	Duration / Fetch
40	20:43:11	SELECT * FROM aadhavan.employee INNER JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID	3 row(s) returned	0.000 sec / 0.000 sec
41	20:44:06	SELECT * FROM aadhavan.employee left JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID	4 row(s) returned	0.015 sec / 0.000 sec

Right join

SELECT * FROM aadhavan.employee right JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID;

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 SELECT * FROM aadhavan.manager;
2
3 insert into aadhavan.manager values(1,'hari','80k','chenai');
4 insert into aadhavan.manager values(2,'madhu','90k','mumbai');
5 insert into aadhavan.manager values(3,'Sasi','77k','kerala');
6
7 SELECT * FROM aadhavan.employee right JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID;
8
```

The Result Grid shows the following data:

EID	ENAME	Age	Salary	Gender	Dept	MID	MName	Salary	Location
1	aadhavan	21	75k	male	Sales	1	hari	80k	chenai
2	mohan	25	55k	male	Accounting	2	madhu	90k	mumbai
3	aadhi	30	45k	male	Sales	3	Sasi	77k	kerala

The Output pane shows the following messages:

```
41 20:44:06 SELECT * FROM aadhavan.employee left JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID; 4 row(s) returned 0.015 sec / 0.000 sec
42 20:44:41 SELECT * FROM aadhavan.employee right JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID; 3 row(s) returned 0.000 sec / 0.000 sec
```

Full join:

SELECT * FROM aadhavan.employee FULL JOIN aadhavan.manager;

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 SELECT * FROM aadhavan.manager;
2
3 insert into aadhavan.manager values(1,'hari','80k','chenai');
4 insert into aadhavan.manager values(2,'madhu','90k','mumbai');
5 insert into aadhavan.manager values(3,'Sasi','77k','kerala');
6
7 SELECT * FROM aadhavan.employee FULL JOIN aadhavan.manager;
8
```

The Result Grid shows the following data:

EID	ENAME	Age	Salary	Gender	Dept	MID	MName	Salary	Location
1	aadhavan	21	75k	male	Sales	3	Sasi	77k	kerala
1	aadhavan	21	75k	male	Sales	2	madhu	90k	mumbai
1	aadhavan	21	75k	male	Sales	1	hari	80k	chenai
2	mohan	25	55k	male	Accounting	3	Sasi	77k	kerala
2	mohan	25	55k	male	Accounting	2	madhu	90k	mumbai
2	mohan	25	55k	male	Accounting	1	hari	80k	chenai
3	aadhi	30	45k	male	Sales	3	Sasi	77k	kerala
3	aadhi	30	45k	male	Sales	2	madhu	90k	mumbai
3	aadhi	30	45k	male	Sales	1	hari	80k	chenai
4	mohana	29	65k	female	Accounting	3	Sasi	77k	kerala
4	mohana	29	65k	female	Accounting	2	madhu	90k	mumbai
4	mohana	29	65k	female	Accounting	1	hari	80k	chenai

The Output pane shows the following messages:

```
41 20:44:06 SELECT * FROM aadhavan.employee left JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID; 4 row(s) returned 0.015 sec / 0.000 sec
42 20:44:41 SELECT * FROM aadhavan.employee right JOIN aadhavan.manager ON aadhavan.employee.EID=aadhavan.manager.MID; 3 row(s) returned 0.000 sec / 0.000 sec
```