

# DBMS Assignment 2

1. Showcase one Many-Many relation.

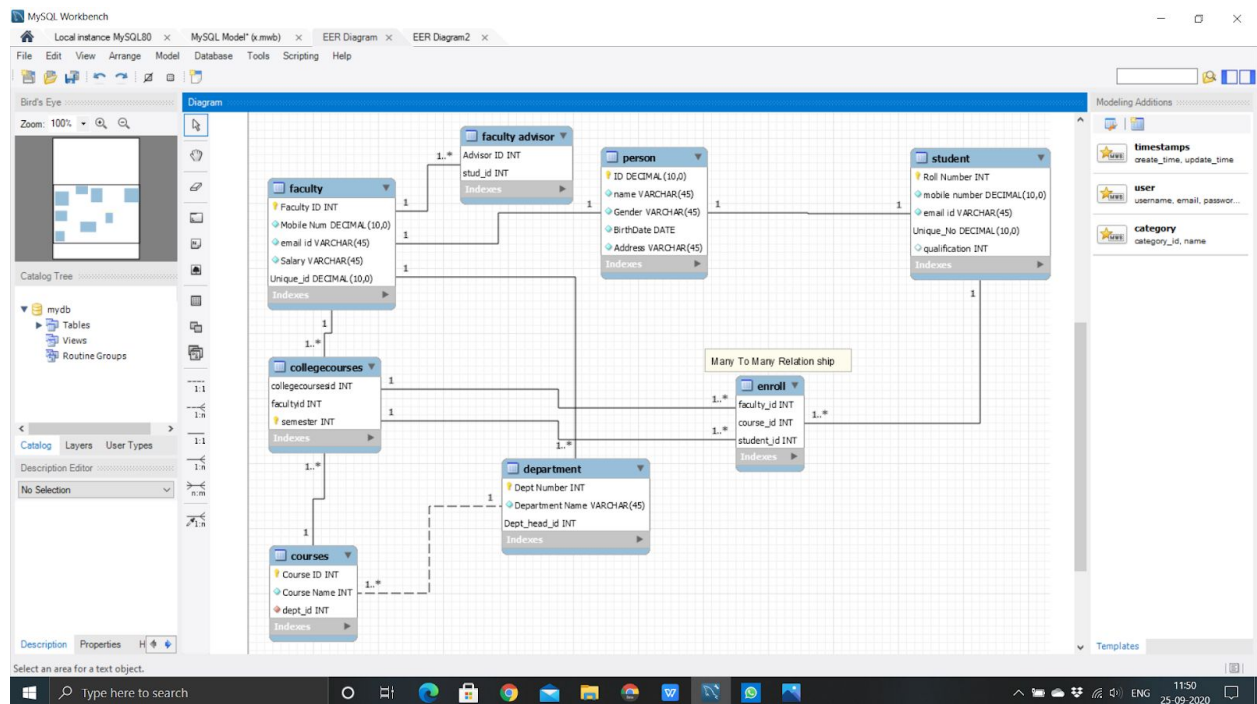
2. Represent Composite key and Weak Entity in your Database.

**Composite Key:**

In enroll entity :primary key(faculty\_id,course\_id,student\_id)

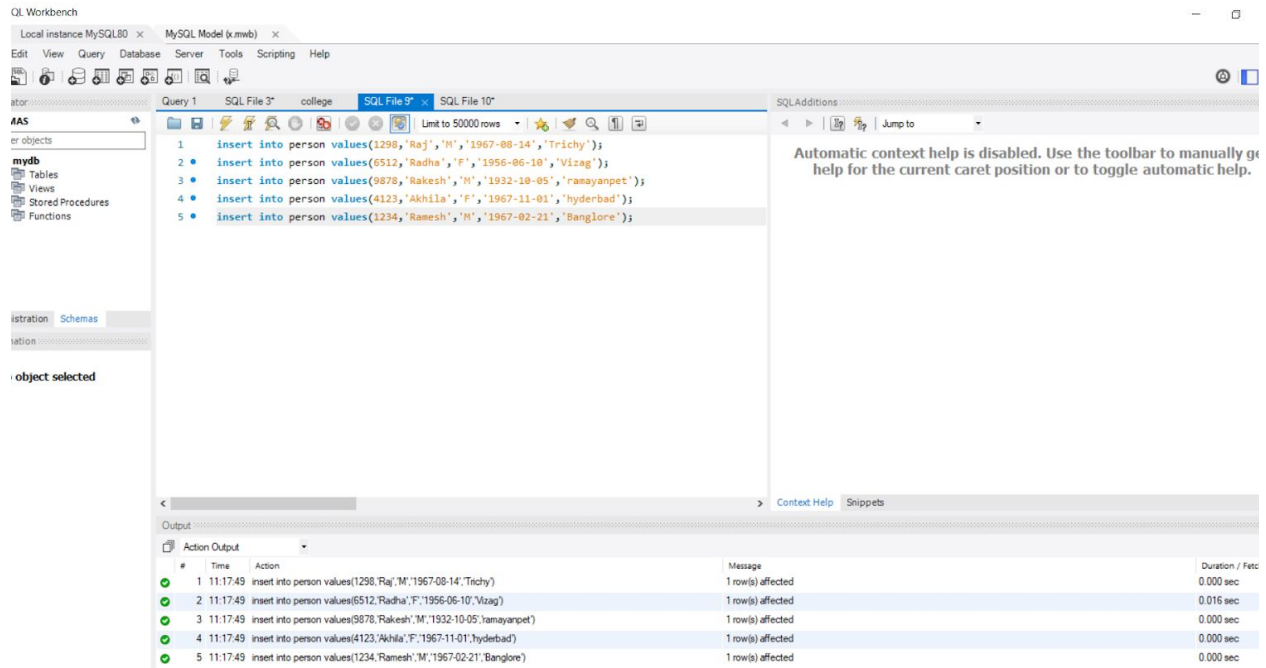
**Weak entity:**

College Courses,Enroll,Faculty Advisor.



### 3. Show Violation of Primary Key, Unique Not Null and default key constraints through Insertion.

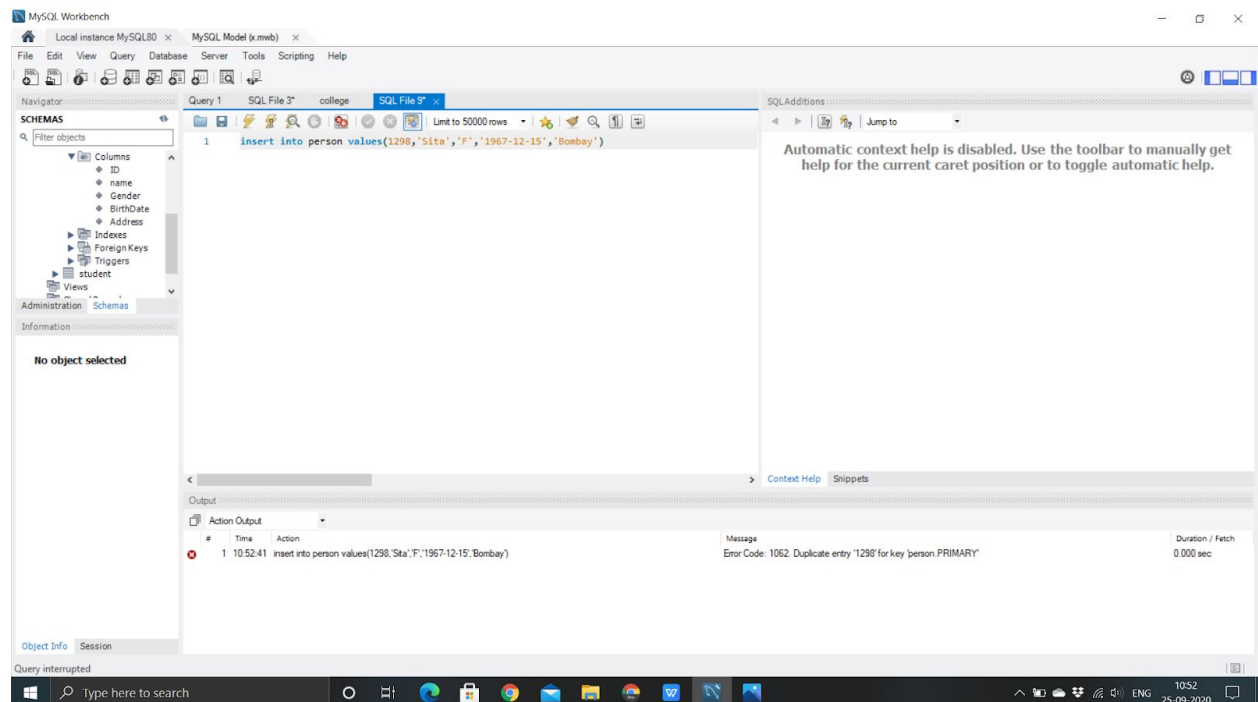
a) Primary Key Violation by inserting duplicate values for ID  
Inserted Values in person table



The screenshot shows the MySQL Workbench interface with a query window containing five INSERT statements. The output window displays the results of these statements, all of which were successful.

#	Time	Action	Message	Duration / Fetch
1	11:17:49	insert into person values(1298,'Raj','M','1967-08-14','Trichy')	1 row(s) affected	0.000 sec
2	11:17:49	insert into person values(6512,'Radha','F','1956-06-10','Vizag')	1 row(s) affected	0.016 sec
3	11:17:49	insert into person values(9878,'Rakesh','M','1932-10-05','ramayanpet')	1 row(s) affected	0.000 sec
4	11:17:49	insert into person values(4123,'Akhila','F','1967-11-01','hyderabad')	1 row(s) affected	0.000 sec
5	11:17:49	insert into person values(1234,'Ramesh','M','1967-02-21','Banglore')	1 row(s) affected	0.000 sec

*Inserted duplicate value of ID in person gets violated.*

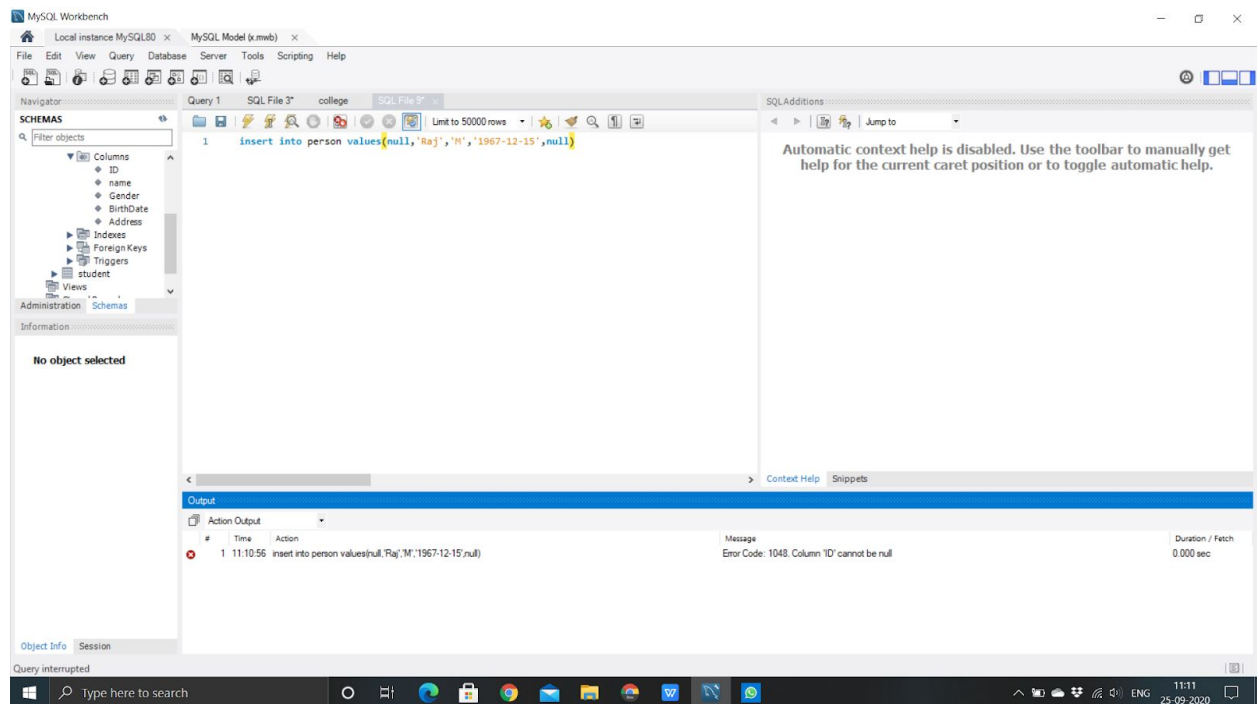


The screenshot shows the MySQL Workbench interface with a query window containing a single INSERT statement. The output window displays an error message indicating a primary key violation.

#	Time	Action	Message	Duration / Fetch
1	10:52:41	insert into person values(1298,'Sita','F','1967-12-15','Bombay')	Error Code: 1062. Duplicate entry '1298' for key 'person PRIMARY'	0.000 sec

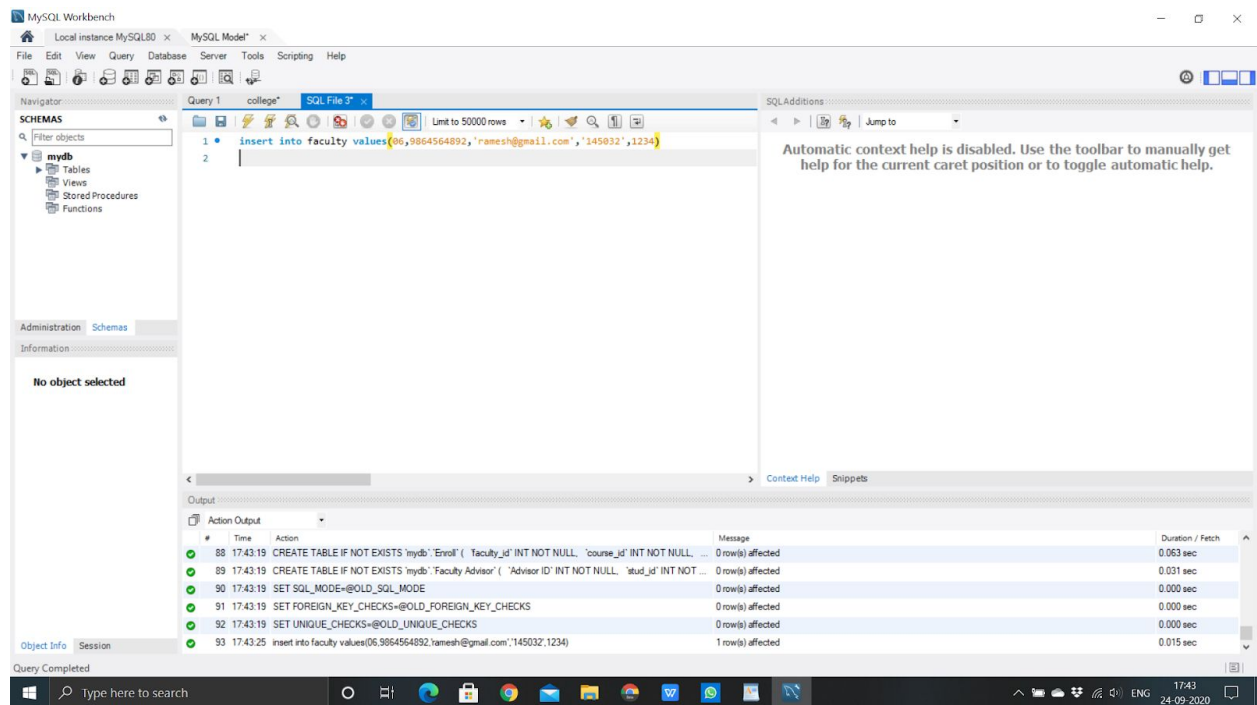
b)

1) Trying to insert null value in attribute ID which is not specified as null.

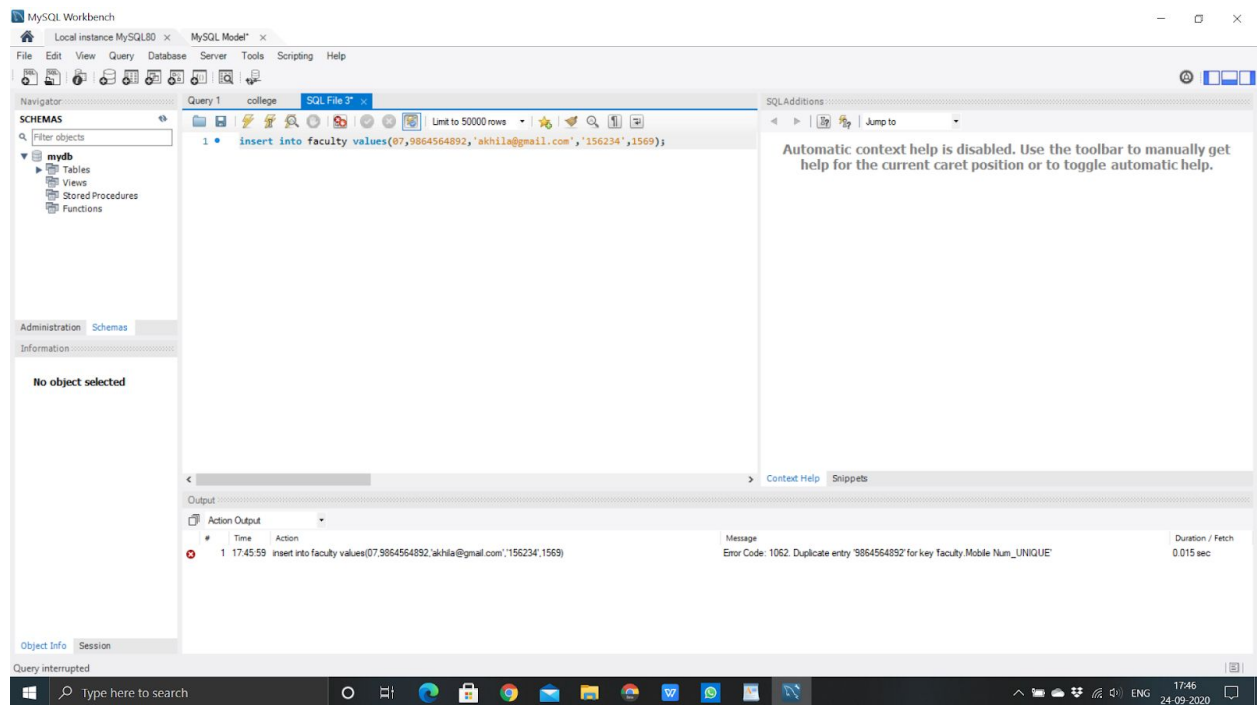


2) Unique Constraint.

Here, the mobile number attribute is unique but entered duplicate which led to violation of uniqueness.

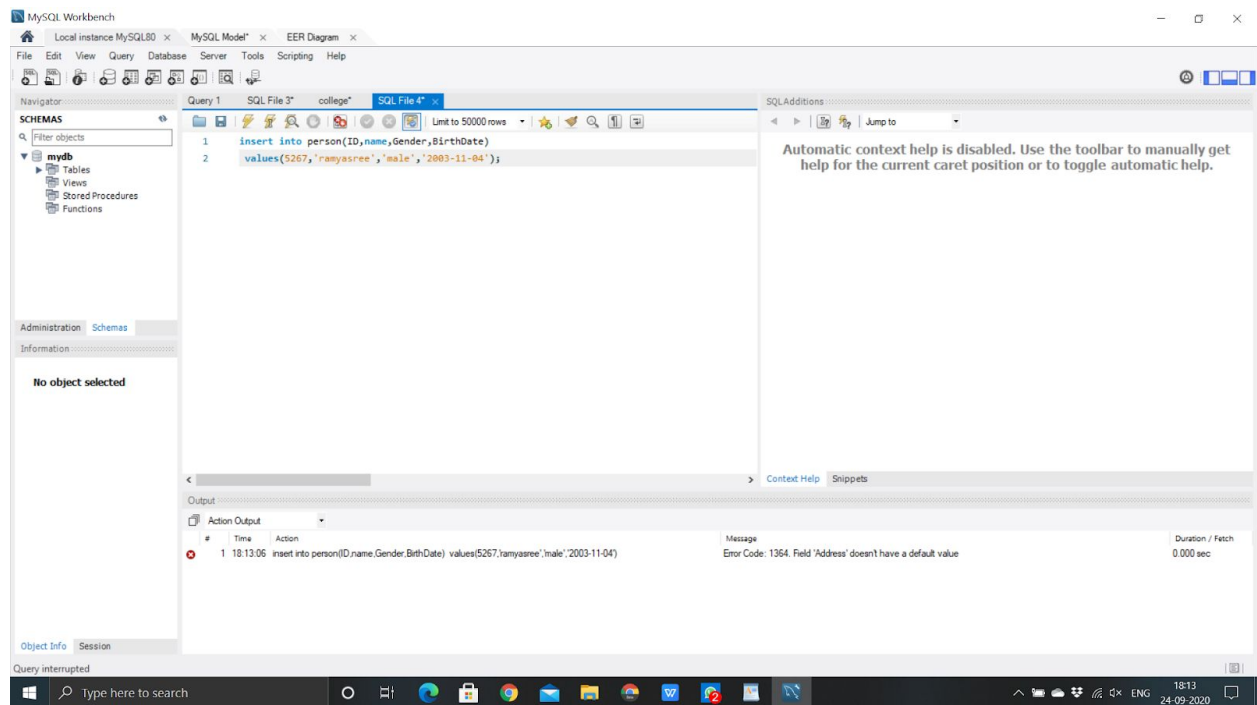


We can see violation in the below snap.



### c)Default

Trying to insert values into a person table where the attribute address doesn't have any default value.



#### 4) One Derived attribute should be added to the Database design.

Adding derived attribute age in person table.

The screenshot shows the MySQL Workbench interface. The 'Schemas' pane on the left displays the 'mydb' database with various tables. The 'Query' pane in the center contains the following SQL script:

```
1 • alter table person add age numeric as(year('2020-09-25')-year(BirthDate));
2
3 • select * from person;
```

The 'Result Grid' pane shows the output of the second query, displaying a table with columns: ID, name, Gender, BirthDate, Address, and age. The data rows are:

ID	name	Gender	BirthDate	Address	age
1234	Ramesh	M	1967-02-21	Banglore	53
1298	Raj	M	1967-08-14	Trichy	53
4123	Akhila	F	1967-11-01	hyderabad	53
6512	Radha	F	1956-06-10	Vizag	64
9878	Rakesh	M	1932-10-05	ramayanpet	88

The 'Output' pane at the bottom shows the execution log:

#	Time	Action	Message	Duration / Fetch
1	11:40:35	alter table person add age numeric as(year('2020-09-25')-year(BirthDate));	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.031 sec
2	11:40:35	select * from person LIMIT 0, 50000	5 row(s) returned	0.000 sec / 0.000 sec

## 5) Insert tuples into the table and see how foreign key constraint works if you try to insert into dependent table first.

Inserting Values in table the faculty where attribute **unique\_id** is dependent on attribute **ID** of person table.

