

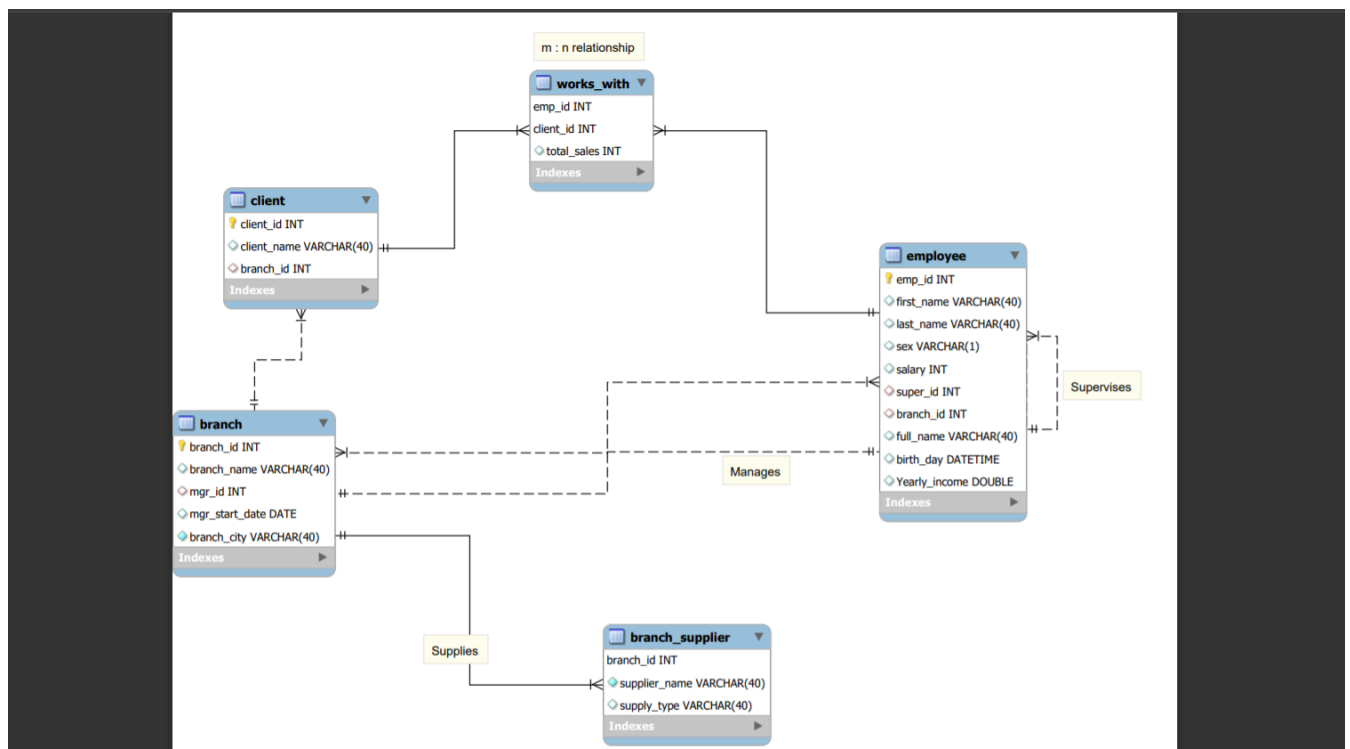
# DBMS Assignment-2

1. Showcased a many-many relation between clients and employees using works\_with entity.

## 2. Composite Keys :

In works\_with entity : Primary Key (emp\_id, cliend\_id)

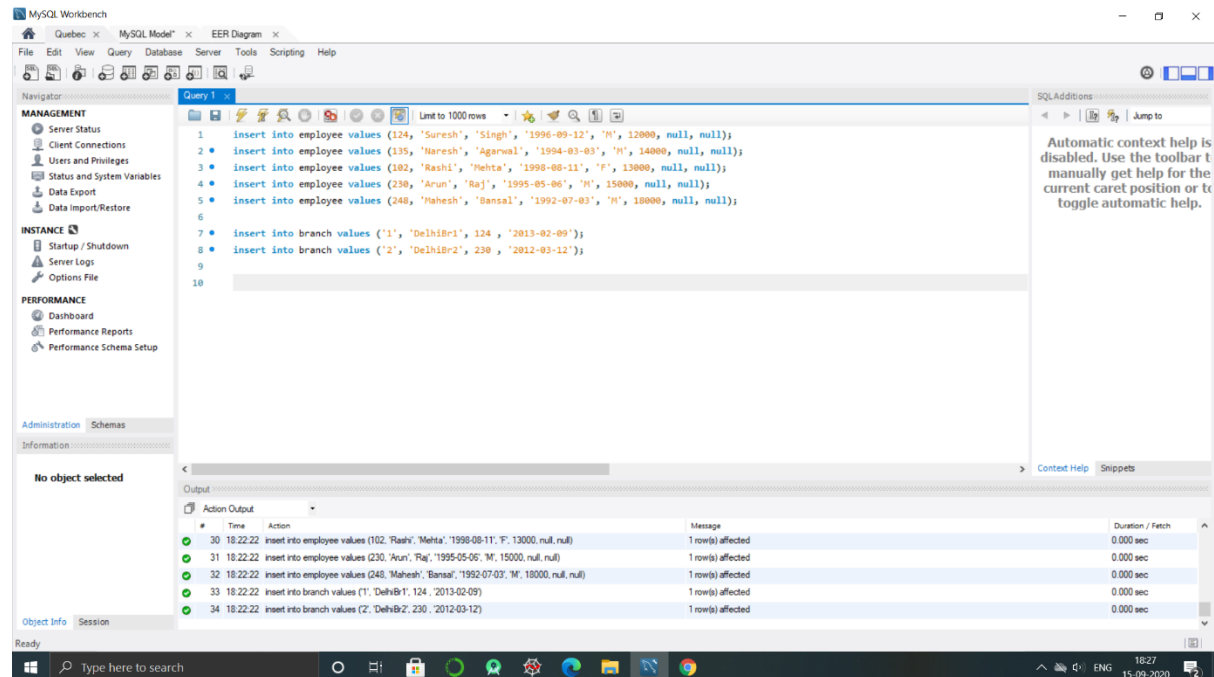
**Weak Entity :** branch\_supplier , works\_with



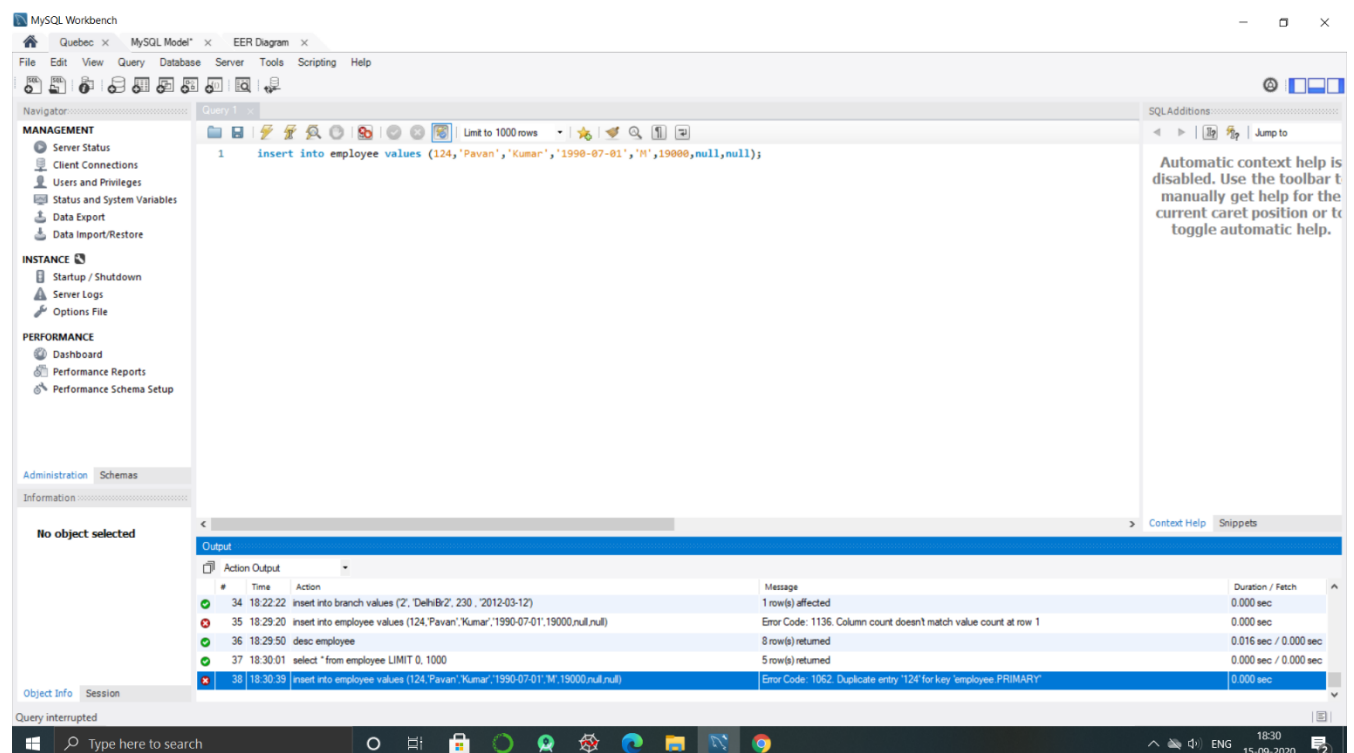
ER Diagram Of Company Database

### 3. a. Checking Primary Key and Unique Constraint :

Inserting Data into tables :

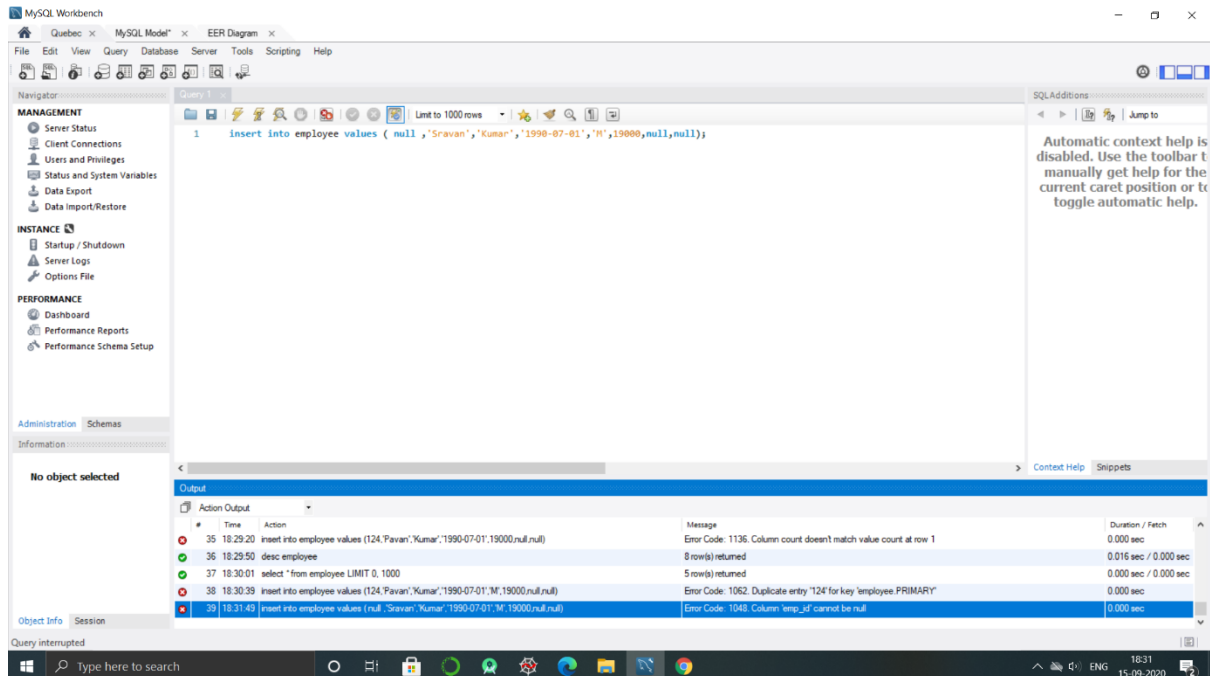


When Trying to insert duplicate value for attribute emp\_id of employee table which is a primary key :

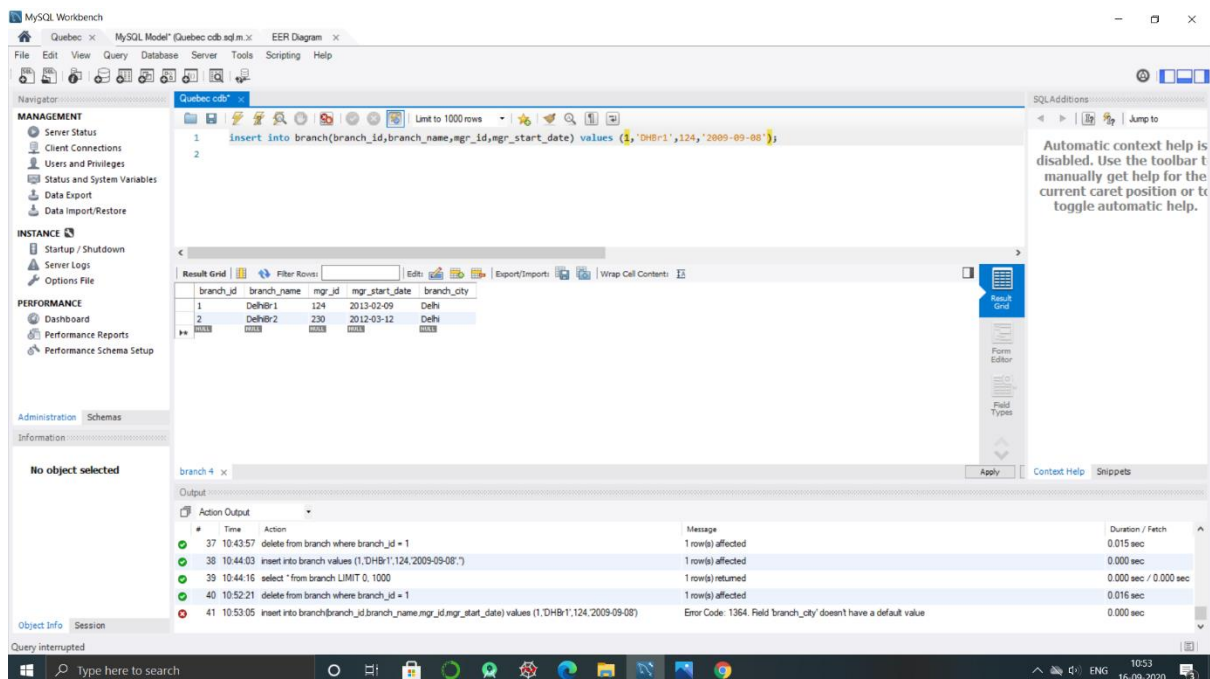


## b. Checking Not Null and Default Constraint :

1. When Trying to insert null value for attribute emp\_id of employee table which is specified as not null :



2. When Trying to insert values into branch table in which the attribute branch\_city doesn't have any default value :



#### 4. Derived Attributes :

##### a. full\_name attribute of employee table :

Dependant on/Derived from concatenation of first\_name and last\_name attributes of employee table.

The screenshot shows the MySQL Workbench interface. In the central editor, the following SQL queries are entered:

```
1 alter table employee add full_name varchar(40) as (concat(first_name,' ',last_name));
2
3 select * from employee;
```

The 'Result Grid' displays the data for the 'employee' table, including columns for emp\_id, first\_name, last\_name, birth\_day, sex, salary, super\_id, branch\_id, and full\_name. The 'full\_name' column contains concatenated values of first and last names.

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

- 71 13.25.14 alter table employee add Age smallint as (datediff(birth\_day,date())/365) 0.000 sec
- 72 13.26.31 alter table employee add Age smallint as (datediff(birth\_day,date())/365) 0.000 sec
- 73 15.07.06 desc employee 0 row(s) returned 0.015 sec / 0.000 sec
- 74 15.08.43 alter table employee add full\_name varchar(40) as (concat(first\_name,' ',last\_name)) 0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0 0.078 sec
- 75 15.09.13 select \* from employee LIMIT 0, 1000 5 row(s) returned 0.000 sec / 0.000 sec

##### b. Yearly\_income attribute of employee table :

Dependant on / derived from salary column of the employee table as  $\text{Yearly\_income} = \text{salary} * 12$ .

#### 1.Query/Expression:

The screenshot shows the MySQL Workbench interface. In the central editor, the following SQL queries are entered:

```
1 alter table employee add Yearly_income double as (salary*12);
2
```

The 'Result Grid' displays the data for the 'employee' table, including columns for emp\_id, first\_name, last\_name, birth\_day, sex, salary, super\_id, branch\_id, and full\_name. The 'Yearly\_income' column is highlighted in blue.

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

- 127 16.08.19 alter table employee drop column Age 0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0 0.187 sec
- 128 16.08.48 select \* from employee LIMIT 0, 1000 0 row(s) returned 0.000 sec / 0.000 sec
- 129 16.09.45 alter table employee add Age int as (datediff(CURDATE(),birth\_day)/365) Error Code: 3763. Expression of generated column 'Age' contains a disallowed function: curdate. 0.000 sec
- 130 16.12.31 alter table employee add Age double as (datediff(CURDATE(),birth\_day)/365) Error Code: 3763. Expression of generated column 'Age' contains a disallowed function: curdate. 0.000 sec
- 131 16.24.21 alter table employee add Yearly\_income double as (salary\*12) 0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0 0.078 sec

## Insertion :

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

```
1 insert into employee(emp_id,first_name,last_name,sex,salary,super_id,branch_id,birth_day) values (102,'Rashi','Mehta','F',20000,null,1,'1994-02-0
```

The right sidebar displays the "INSERT Syntax" documentation, explaining the syntax and usage of the INSERT statement.

The "Output" tab shows the execution results of the SQL statement:

#	Time	Action	Message	Duration / Fetch
129	16:09:45	alter table employee add Age int as (datediff(CURDATE(),birth_day)/365)	Error Code: 3763. Expression of generated column 'Age' contains a disallowed function: curdate.	0.000 sec
130	16:12:31	alter table employee add Age double as (datediff(CURDATE(),birth_day)/365)	Error Code: 3763. Expression of generated column 'Age' contains a disallowed function: curdate.	0.000 sec
131	16:24:31	alter table employee add Yearly_income double as (salary*12)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.078 sec
132	16:26:29	select * from employee LIMIT 0, 1000	0 row(s) returned	0.016 sec / 0.000 sec
133	16:32:57	insert into employee(emp_id,first_name,last_name,sex,salary,super_id,branch_id,birth_day) values (102,'Rashi',...	1 row(s) affected	0.000 sec

## Result :

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

```
1 select * from employee;
```

The right sidebar displays the "No Context Help" message.

The "Result Grid" shows the execution results of the SQL statement:

emp_id	first_name	last_name	sex	salary	super_id	branch_id	full_name	birth_day	Yearly_income
102	Rashi	Mehta	F	20000		1	Rashi Mehta	1994-02-03 05:36:23	240000

The "Output" tab shows the execution results of the SQL statement:

#	Time	Action	Message	Duration / Fetch
130	16:12:31	alter table employee add Age double as (datediff(CURDATE(),birth_day)/365)	Error Code: 3763. Expression of generated column 'Age' contains a disallowed function: curdate.	0.000 sec
131	16:24:31	alter table employee add Yearly_income double as (salary*12)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.078 sec
132	16:26:29	select * from employee LIMIT 0, 1000	0 row(s) returned	0.016 sec / 0.000 sec
133	16:32:57	insert into employee(emp_id,first_name,last_name,sex,salary,super_id,branch_id,birth_day) values (102,'Rashi',...	1 row(s) affected	0.000 sec
134	16:33:48	select * from employee LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

## 5. Inserting tuples into dependant table of a foreign key constraint first.

Employee table is dependant on branch table for getting branch\_id which is the foreign key of the table. If we insert data into branch\_id column of employee table without inserting any data into branch table then :

