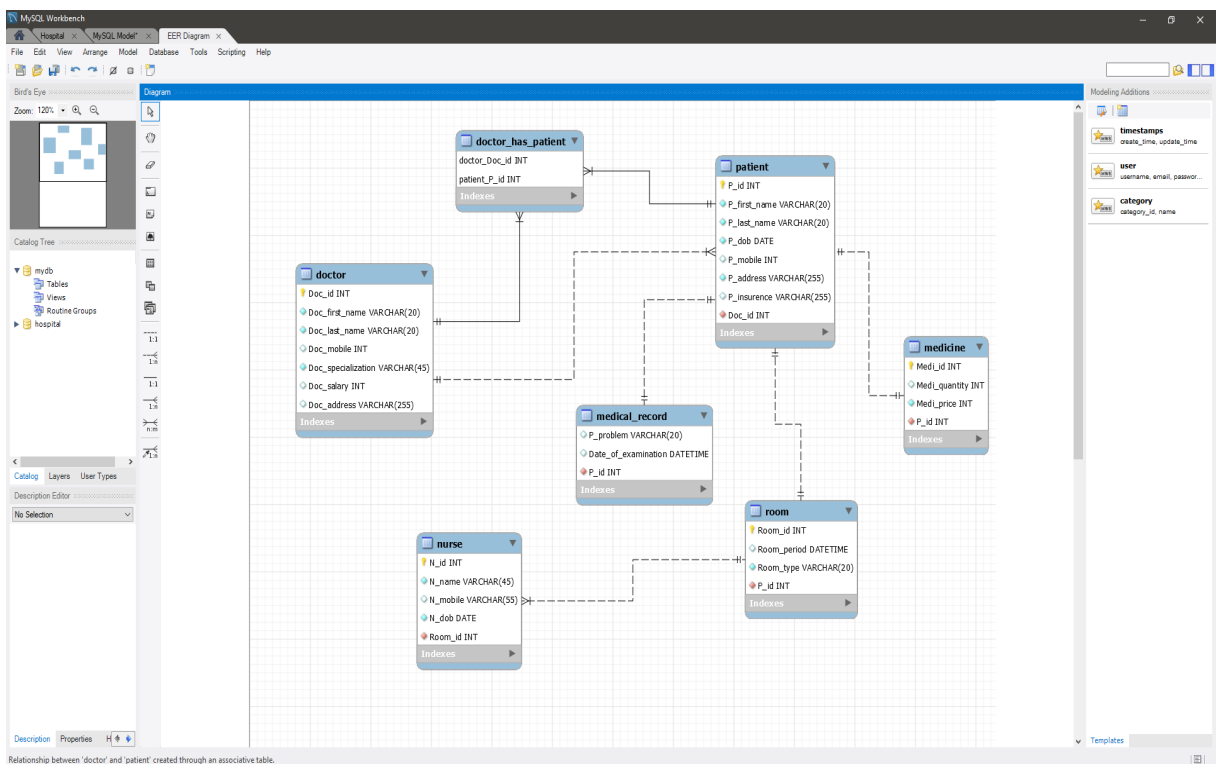


# DBMS ASSIGNMENT-2

## HOSPITAL DATABASE

1. Showcased a many-many relation between doctor and Patient using doctor\_has\_patients entity.
2.
  - Composite Keys : In doctor\_has\_patients : Primary Key (doctor.Doc\_id,patient.P\_id)
  - Weak Entity : doctor\_has\_patients , medicine, medical\_report, room



ER Diagram Of Hospital Database

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

Inserting Doctor's details into tables :

The screenshot shows the MySQL Workbench interface with the following SQL queries executed:

```

66 PRIMARY KEY (N_id),
67 CONSTRAINT FKDocRoom FOREIGN KEY (Room_id) REFERENCES Room (Room_id) ON DELETE RESTRICT ON UPDATE CASCADE
68 );
69
70 use hospital;
71
72 INSERT INTO Doctor
73 VALUES
74 (101, 'Ajit', 'Sharma', 7788498482, 'Cardiologist', 542135, null),
75 (102, 'Ramesh', 'Kumar', 6027849494, 'Audiologist', 5441235, 'Chennai');
76
77 SELECT * FROM Doctor;
  
```

The Result Grid shows the following data:

Doc_id	Doc_first_name	Doc_last_name	Doc_mobile	Doc_specialization	Doc_salary	Doc_address
101	Ajit	Sharma	7788498482	Cardiologist	542135	
102	Ramesh	Kumar	6027849494	Audiologist	5441235	Chennai

The Output pane shows the following messages:

- 154 21:02:49 CREATE TABLE Medicine (Med\_id INT NOT NULL, Med\_quantity INT NULL DEFAULT NULL, Med\_price INT NOT NULL, P\_id INT NOT NULL, ...)
- 155 21:02:49 DROP TABLE IF EXISTS Nurse
- 156 21:02:50 CREATE TABLE Nurse (N\_id INT NOT NULL, N\_name VARCHAR(45) NOT NULL, N\_mobile VARCHAR(20) DEFAULT NULL, N\_job DATE, ...)
- 157 21:05:47 use hospital
- 158 21:06:00 INSERT INTO Doctor VALUES (101, 'Ajit', 'Sharma', 7788498482, 'Cardiologist', 542135, null), (102, 'Ramesh', 'Kumar', 6027849494, 'Audiologist', 5441235, 'Chennai');
- 159 21:06:20 SELECT \* FROM Doctor LIMIT 0, 1000

Inserting Patient's details into tables :

The screenshot shows the MySQL Workbench interface with the following SQL queries executed:

```

71
72 INSERT INTO Doctor
73 VALUES
74 (101, 'Ajit', 'Sharma', 7788498482, 'Cardiologist', 542135, null),
75 (102, 'Ramesh', 'Kumar', 6027849494, 'Audiologist', 5441235, 'Chennai');
76
77 SELECT * FROM Doctor;
78
79
80
81 ALTER TABLE Doctor add Doc_name VARCHAR(40) as (concat(Doc_first_name, ' ', Doc_last_name));
82
83 INSERT INTO Patient
84 VALUES
85 (1, 'Rajul', 'Raj', '1978-05-27', 6045218763, 'Bihar', 'qwertyuiop', 1802),
86 (2, 'Ramesh', 'Athe', '1999-11-01', 7740562398, 'Delhi', 'asdfghjkl', 1803);
87
88 SELECT * FROM Patient;
89
90
  
```

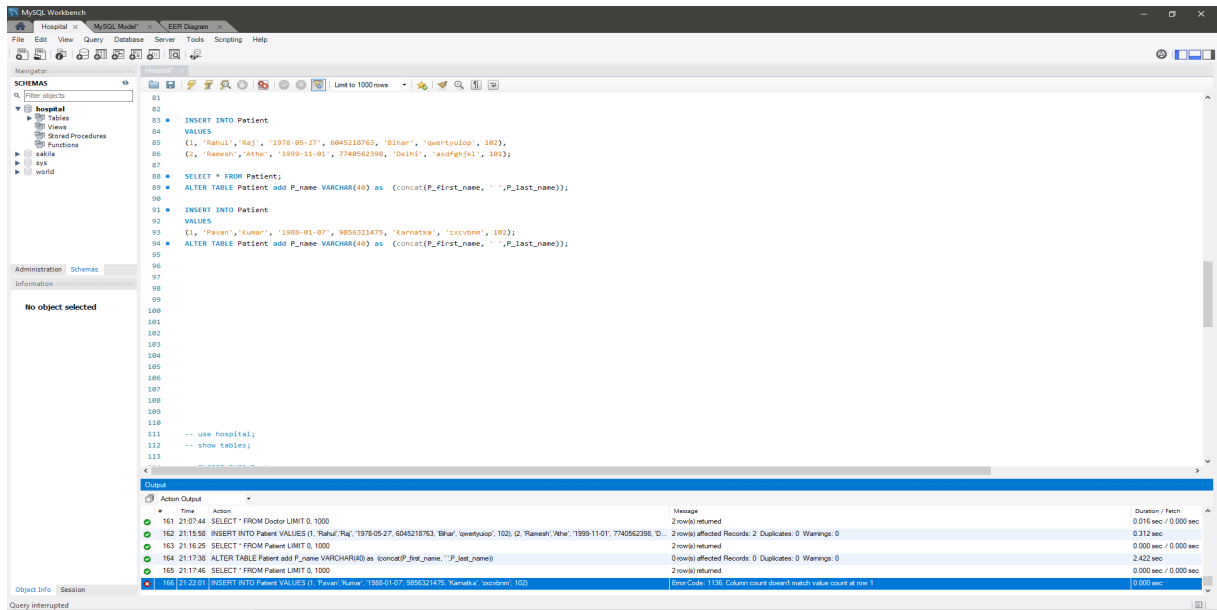
The Result Grid shows the following data:

P_id	P_first_name	P_last_name	P_dob	P_mobile	P_address	P_insurance	Doc_id
1	Rajul	Raj	1978-05-27	6045218763	Bihar	qwertyuiop	102
2	Ramesh	Athe	1999-11-01	7740562398	Delhi	asdfghjkl	101

The Output pane shows the following messages:

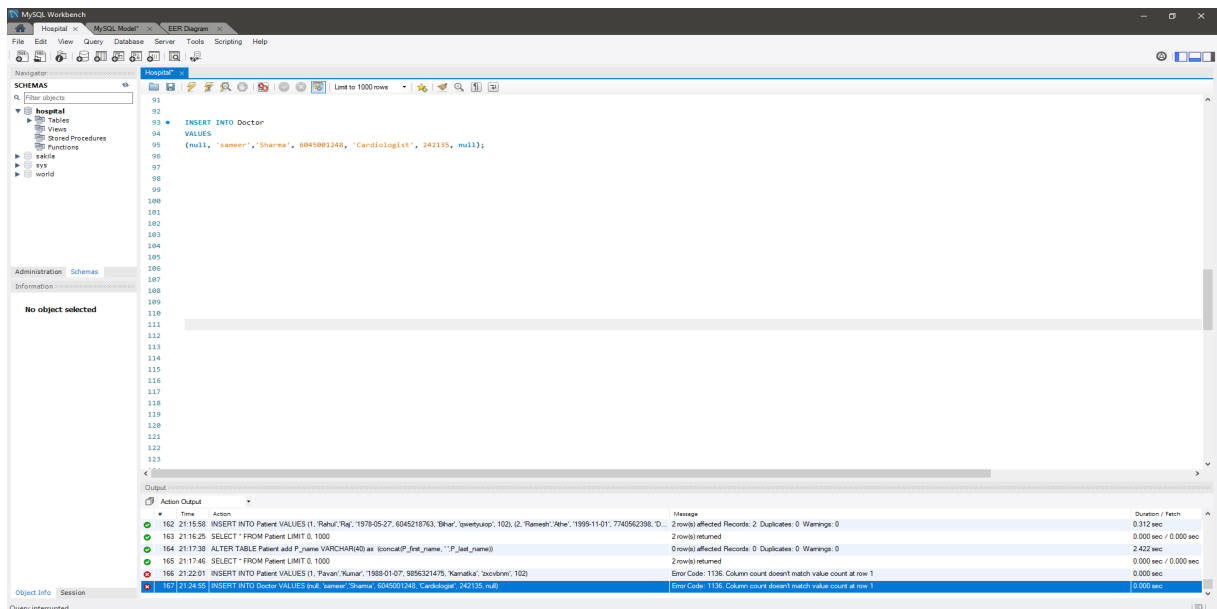
- 158 21:06:00 INSERT INTO Doctor VALUES (101, 'Ajit', 'Sharma', 7788498482, 'Cardiologist', 542135, null), (102, 'Ramesh', 'Kumar', 6027849494, 'Audiologist', 5441235, 'Chennai');
- 159 21:06:20 SELECT \* FROM Doctor LIMIT 0, 1000
- 160 21:07:38 ALTER TABLE Doctor add Doc\_name VARCHAR(40) as (concat(Doc\_first\_name, ' ', Doc\_last\_name));
- 161 21:07:44 SELECT \* FROM Doctor LIMIT 0, 1000
- 162 21:10:58 INSERT INTO Patient VALUES (1, 'Rajul', 'Raj', '1978-05-27', 6045218763, 'Bihar', 'qwertyuiop', 1802), (2, 'Ramesh', 'Athe', '1999-11-01', 7740562398, 'Delhi', 'asdfghjkl', 1803);
- 163 21:16:25 SELECT \* FROM Patient LIMIT 0, 1000

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

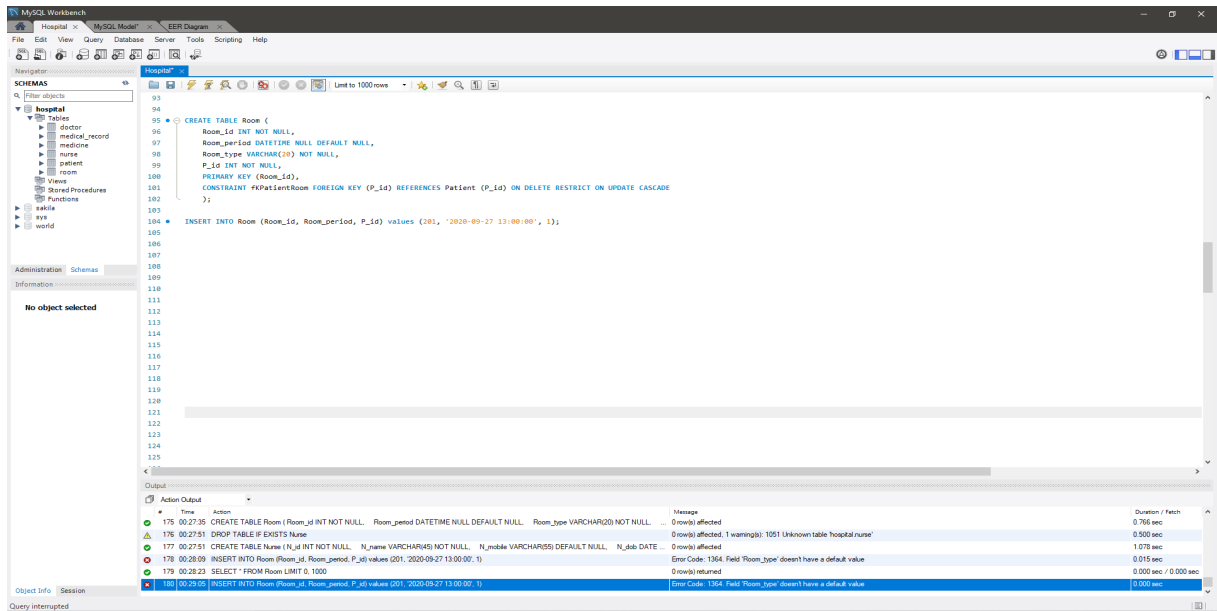


- Checking Not Null and Default Constraint :

(a) When Trying to insert null value for attribute Doc\_id of Doctor table which is specified as not null :

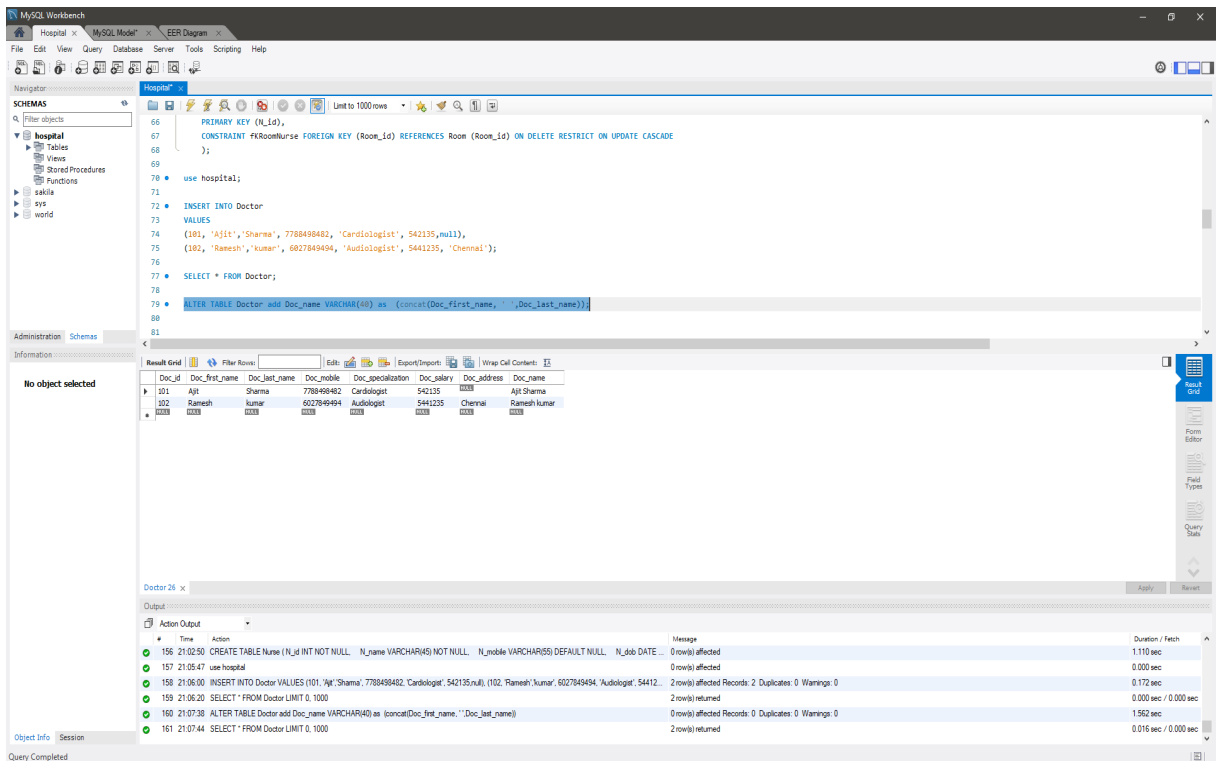


- (b) When Trying to insert values into room table in which the attribute room\_type doesn't have any default value :



#### 4. Derived Attributes :

- Doc.name attribute of Doctor table:  
Dependant on/Derived from concatenation of Doc\_first\_name and Doc\_last\_name attributes of Doctor table.



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

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

MySQL Workbench

Hospital x MySQL Model x EER Diagram x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

hospital

- Tables
  - doctor
  - medical\_record
  - medicine
  - nurse
  - patient
  - room
- Views
- Stored Procedures
- Functions
- schema
- sys
- world

Administration Schemas

Information

No object selected

Limit to 1000 rows

```

82 VALUES
83 (1, 'Rahul', 'Raj', '1978-05-27', 6045218763, 'Bihar', 'qwertyuiop', 180),
84 (2, 'Ramesh', 'Athe', '1999-11-01', 7740562398, 'Delhi', 'asdfghjkl', 180);
85
86 ALTER TABLE Patient add P_name VARCHAR(40) as (concat(P_first_name, ' ', P_last_name));
87 DROP TABLE Room;
88
89
90 SELECT * FROM Patient;
91
92 SELECT * FROM Doctor;
93
94 INSERT INTO Patient
95 VALUES
96 (3, 'Amit', 'Modi', '1983-01-01', 9876543210, 'UP', 'qwertyuiop', 180);
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114

```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
216	00:56:09	INSERT INTO Patient VALUES (1, 'Rahul', 'Raj', '1978-05-27', 6045218763, 'Bihar', 'qwertyuiop', 180); (2, 'Ramesh', 'Athe', '1999-11-01', 7740562398, 'Delhi', 'asdfghjkl', 180);	2 row(s) affected; Records: 2 Duplicates: 0 Warnings: 0	0.765 sec
217	00:56:15	INSERT INTO Patient VALUES (1, 'Rahul', 'Raj', '1978-05-27', 6045218763, 'Bihar', 'qwertyuiop', 180); (2, 'Ramesh', 'Athe', '1999-11-01', 7740562398, 'Delhi', 'asdfghjkl', 180);	Error Code: 1062. Duplicate entry '1' for key 'patient.PRIMARY'	0.000 sec
218	00:56:34	SELECT * FROM Patient LIMIT 0. 1000	2 row(s) returned	0.000 sec / 0.000 sec
219	00:56:22	SELECT * FROM Doctor LIMIT 0. 1000	2 row(s) returned	0.016 sec / 0.000 sec
220	00:56:33	SELECT * FROM Patient LIMIT 0. 1000	2 row(s) returned	0.000 sec / 0.000 sec
221	00:59:02	INSERT INTO Patient VALUES (3, 'Amit', 'Modi', '1983-01-01', 9876543210, 'UP', 'qwertyuiop', 180);	Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails ('hospital', 'patient', CONSTRAINT 'fkDoctorPatients' FOREIGN KEY (Doc_id) REFERENCES doctor (Doc_id) ON DELETE RESTRICT ON UPDATE CASCADE)	0.016 sec

Object Info Session

Query interrupted