HOSPITAL MANAGEMENT SYSTEM

DATABASE MANAGEMENT SYSTEMS (CSC2003)

– PROJECT COMPONENT - REVIEW REPORT

Submitted by

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Submitted To

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(Estd. u/s 3 of UGC Act 1956)

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1. INTRODUCTION

Increasing accidents and diseases in India it is mandatory to have more hospitals and doctors. In hospitals it's necessary to maintain the patients records who visited there hospital and the employees who are working in the hospitals. So the hospital management database will solve this problem by storing the information of hospital.

2. PROJECT SCOPE [LIST ALL THE FUNCTIONALITIES HERE]

The database can help in generating following information:

1. Patient's general information and medical history;
2. Patient's stay time on hospital and deposit;
3. Information on doctor's general information;
4. Doctor's prescriptions and remarks on patient's health;
5. Information on patient's total expenses for collective billing;
6. Information on tests carried upon patient and medicines purchased on his behalf.

3. KEY CONTACTS AND STAKEHOLDERS

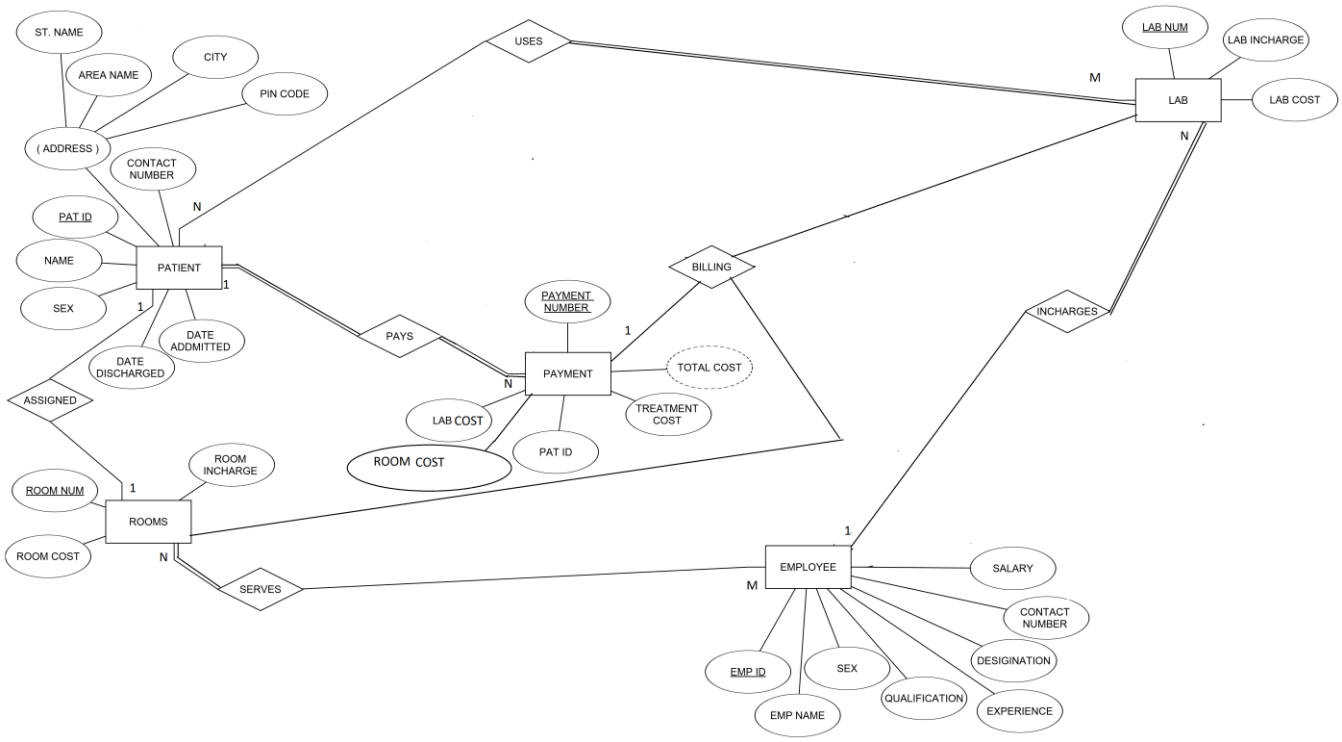
Name	Registration Number	Phone Number
SATHISH KUMAR P	17BCS0082	9486136916
EZHILARASAN P	17BCS0022	9159298650
AKASH R	17BCS0110	8610789194

4. PROJECT RESOURCE REQUIREMENTS

4.1 Software Resource Requirements

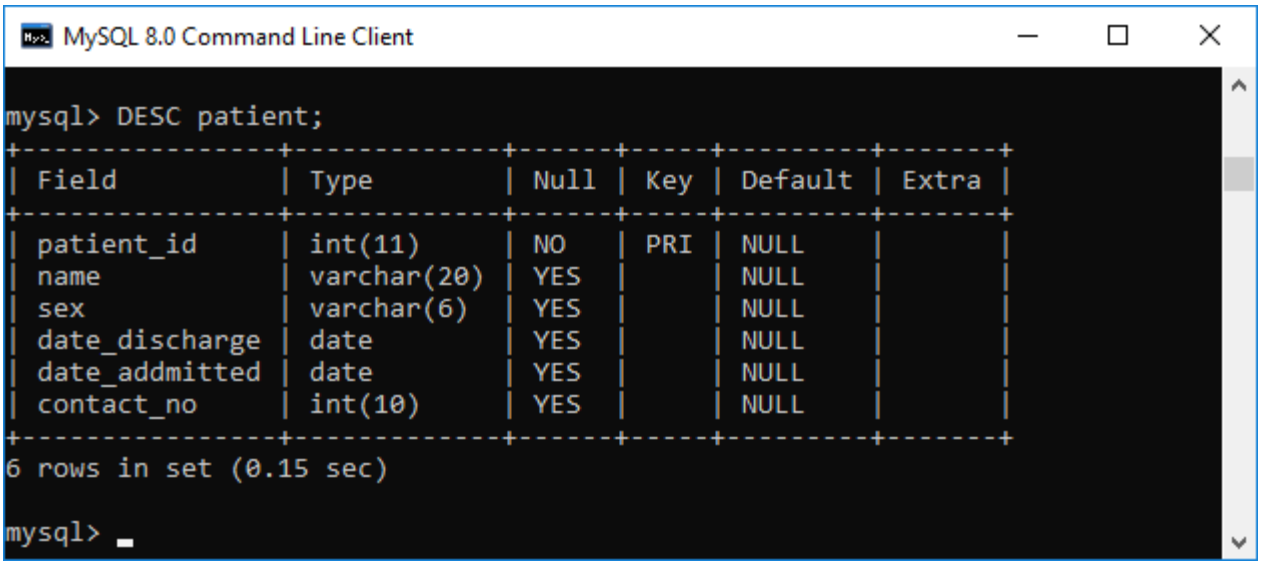
- Windows 10
- mysql

5. ER DIAGRAM

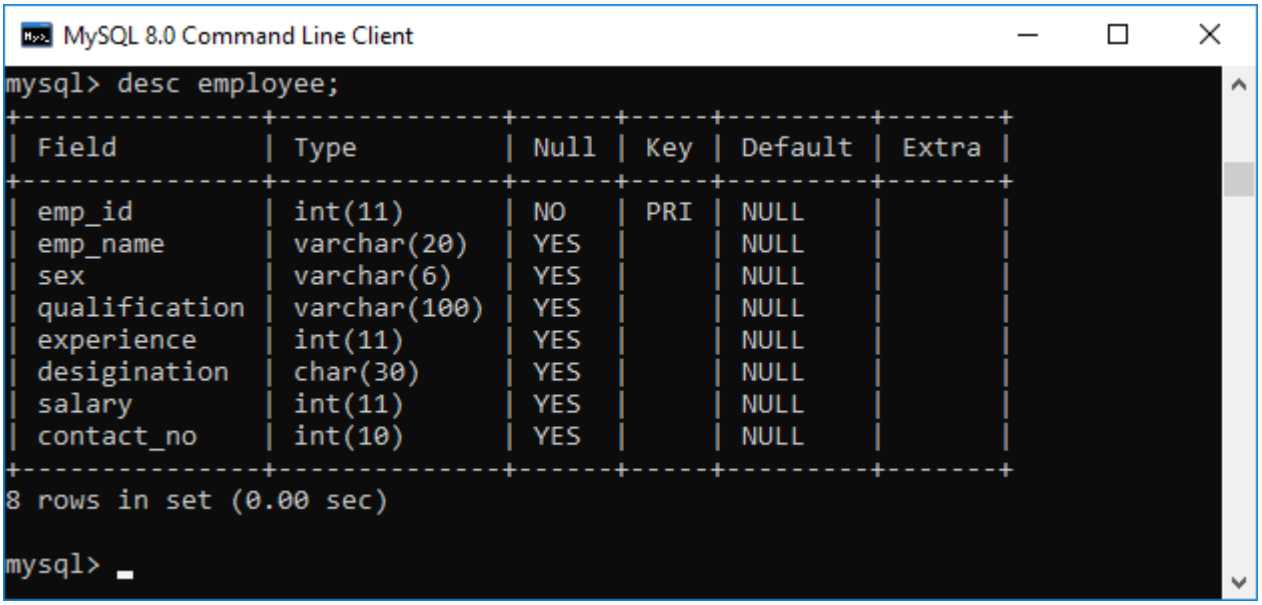

ST. NAME
CITY
AREA NAME
PIN CODE
(ADDRESS)
CONTACT NUMBER
PAT ID
NAME
SEX
PATIENT
DATE ADDMITTED
DATE DISCHARGED
ASSIGNED
USES
PAYS
BILLING
PAYMENT NUMBER
PAYMENT
TOTAL COST
LAB COST
TREATMENT COST
PAT ID
ROOM COST
LAB NUM
LAB INCHARGE
LAB
LAB COST
INCHARGES
ROOM INCHARGE
ROOM NUM
ROOMS
ROOM COST
SERVES
EMPLOYEE
SALARY
CONTACT NUMBER
DESIGINATION
EXPERIENCE
QUALIFICATION
SEX
EMP ID
EMP NAME
1
N
M

6. TABLES AND CONSTRAINTS

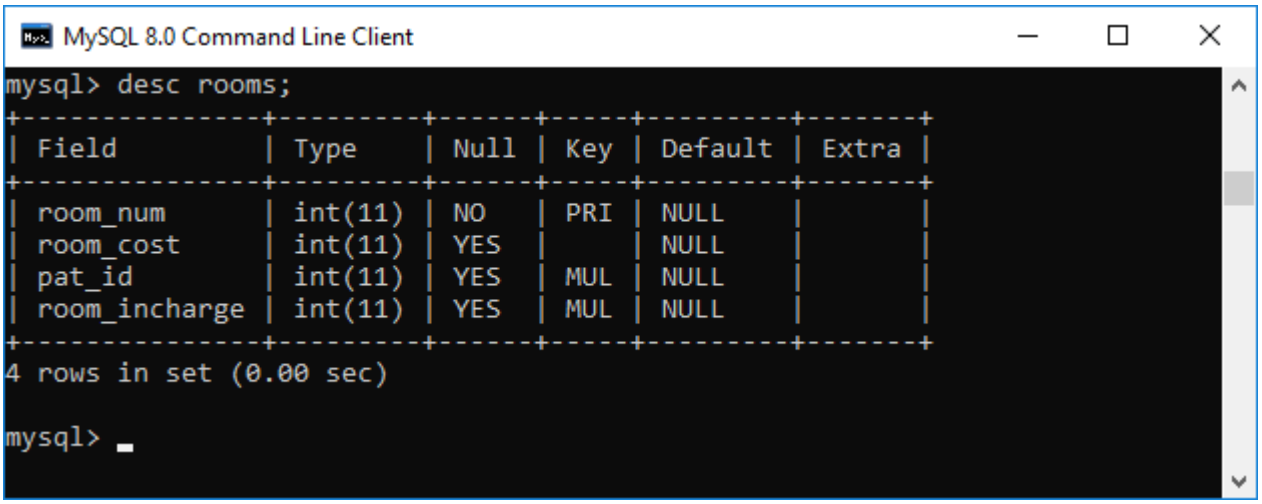
PATIENT:



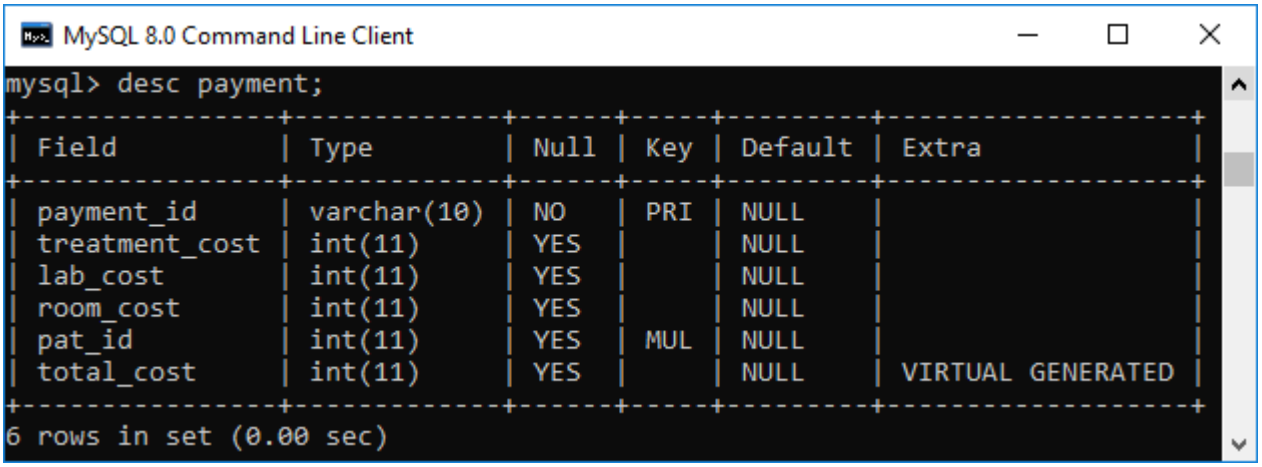
EMPLOYEE:



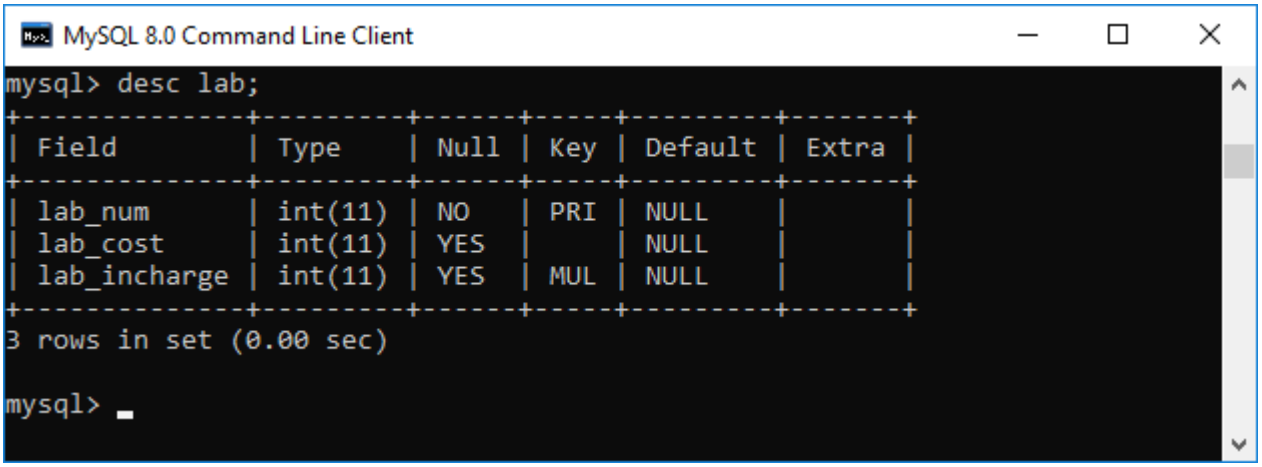
ROOMS:



PAYMENT:



LAB:



7. QUERIES AND SCREENSHOT

QUERIES FOR CREATING TABLES:

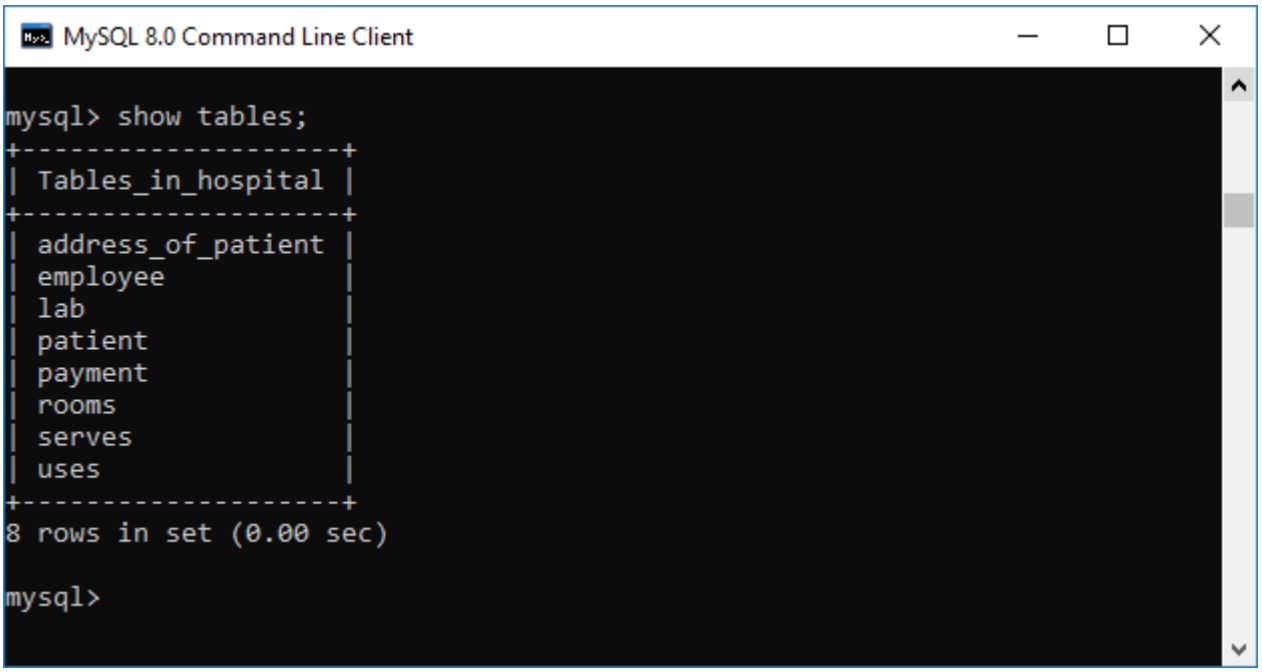
mysql> create table patient(patient_id int primary key,name varchar(20),sex varchar(6),date_discharge date,date_addmitted date,contact_no int(10));

mysql> create table employee(emp_id int primary key,emp_name varchar(20),sex varchar(6),qualification varchar(100),experience int,desigination char(30),salary int,contact_no int(10));

mysql> create table rooms(room_num int primary key,room_cost int,room_incharge varchar(20),pat_id int);

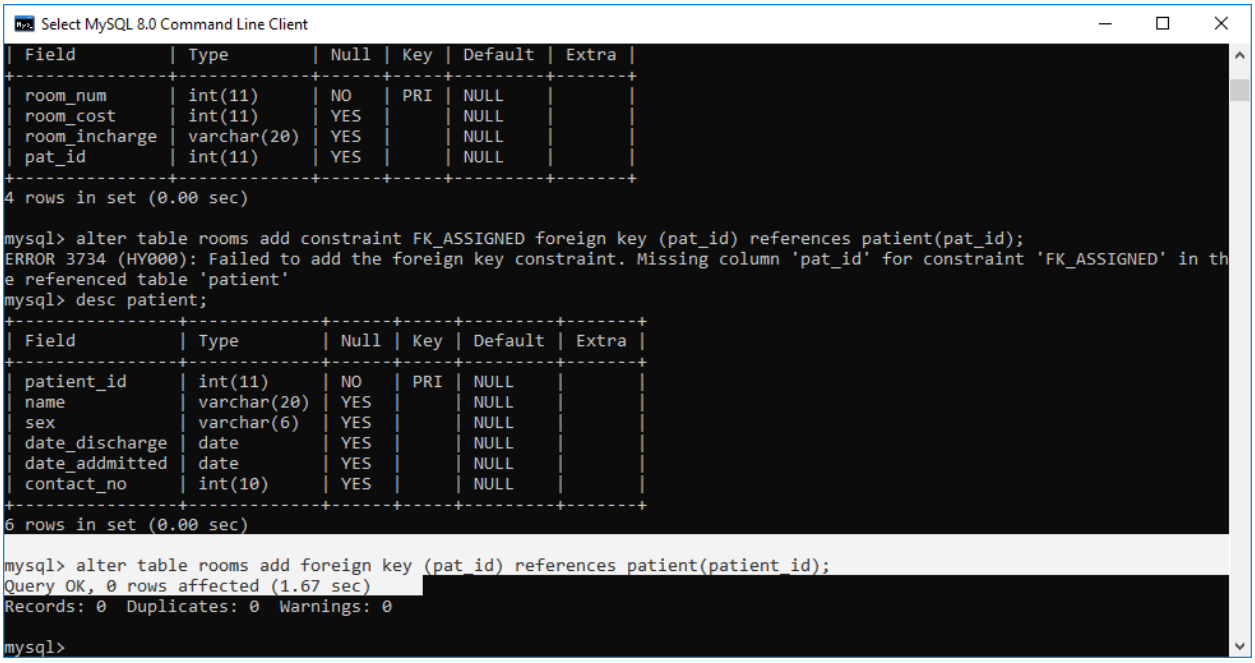
mysql> create table lab(lab_num int primary key,lab_cost int,lab_incharge varchar(20),emp_id int);

mysql> create table payment(payment_id varchar(10) primary key,treatment_cost int,lab_cost int,room_cost int,pat_id int);
mysql> alter table payment add column total_cost int as (treatment_cost+lab_cost+room_cost);



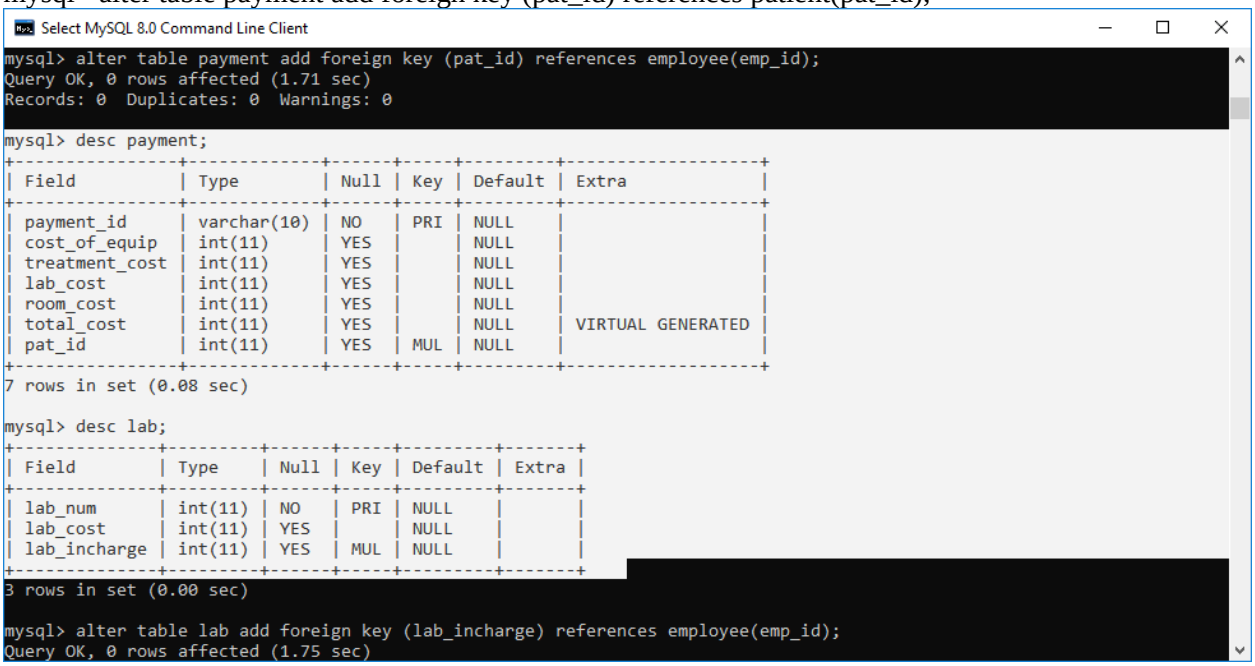
QURIES FOR ASSIGNING FOREIGN KEYS IN 1:1 RELATION

mysql> alter table rooms add foreign key (pat_id) references patient(patient_id);



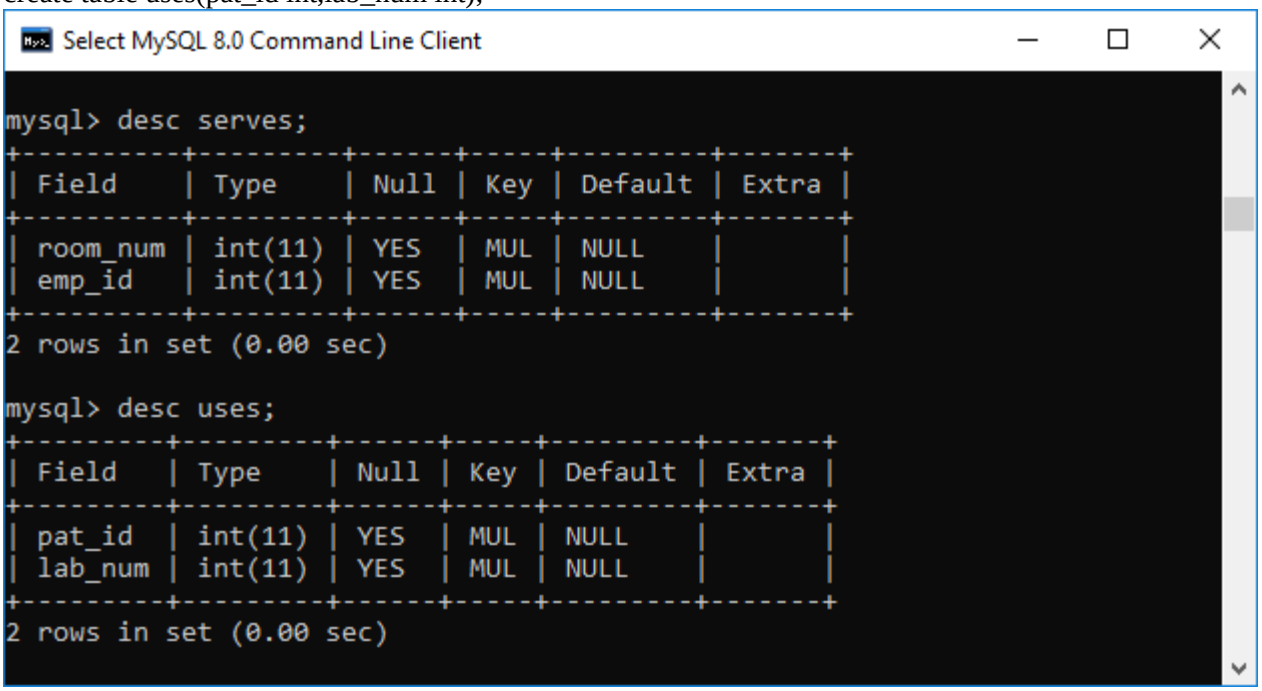
QURIES FOR ASSIGNING FOREIGN KEYS IN 1:N AND N:1 RELATION

mysql> alter table lab add foreign key (lab_incharge) references employee(emp_id);
mysql> alter table payment add foreign key (pat_id) references patient(pat_id);



QURIES IN RELATION M:N

Create table serves(room_num int,emp_id int);
create table uses(pat_id int,lab_num int);



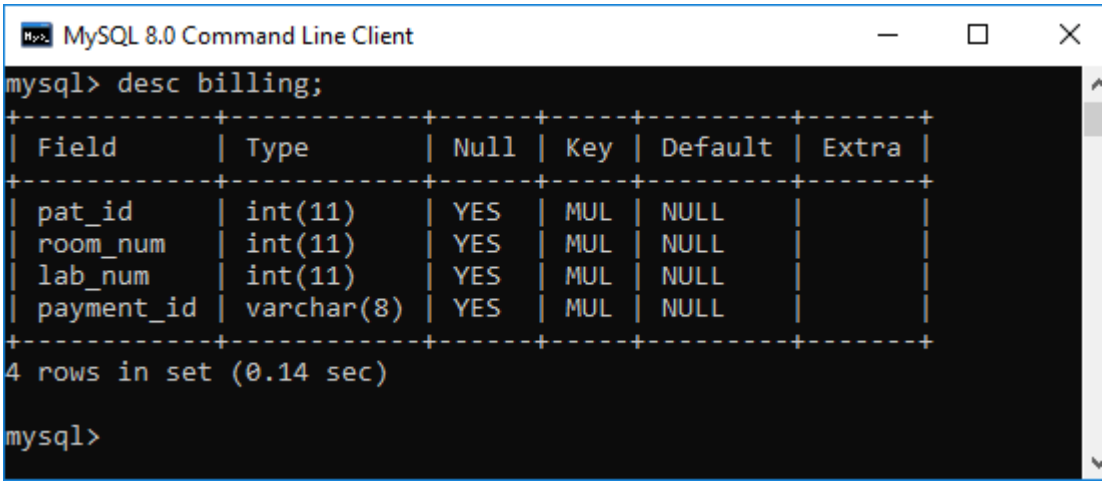
QURIES FOR N-ARRAY RELATION RELATION:

Here we have n-array relations with patient,rooms,lab,payment so we create a new table “billing”

mysql> create table billing(pat_id int,room_num int,lab_num int,payment_id varchar(8));

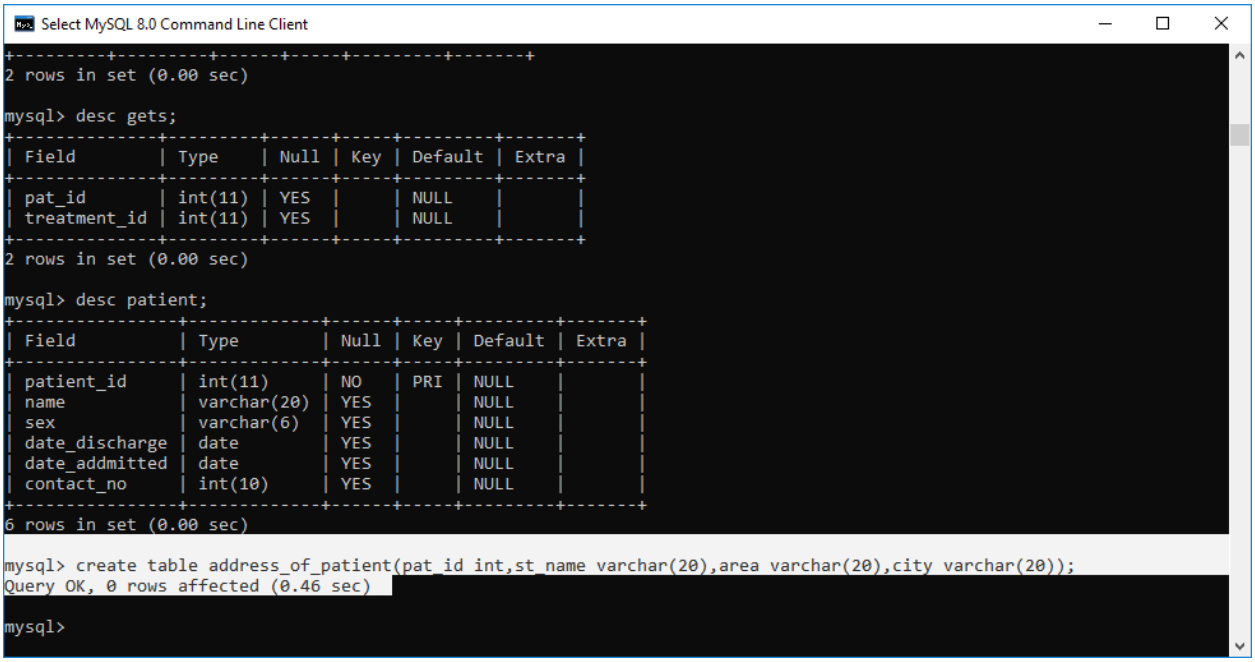
Connecting the foreign key

mysql> alter table billing add foreign key (pat_id) references patient(patient_id);
mysql> alter table billing add foreign key (room_num) references rooms(room_num);
mysql> alter table billing add foreign key (lab_num) references lab(lab_num);
mysql> alter table billing add foreign key (payment_id) references payment(payment_id);



QURIES FOR MULTIVALUED ATTRIBUTE:

mysql> create table address_of_patient(pat_id int,st_name varchar(20),area varchar(20),city varchar(20));



INSERTING VALUES

insert into employee (emp_id,emp_name,sex,qualification,experience,desigination,salary,contact_no) values(115,'ankitha','female','nursing',1,'nurse',1000,95865631);

mysql> insert into employee (emp_id,emp_name,sex,qualification,experience,desigination,salary,contact_no) values(111,'chandra','male','mbbs',2,'doctor',10000,96325841);

mysql> insert into employee (emp_id,emp_name,sex,qualification,experience,desigination,salary,contact_no) values(112,'prakash','male','mbbs',5,'doctor',5000,95625841);

mysql> insert into employee (emp_id,emp_name,sex,qualification,experience,desigination,salary,contact_no) values(113,'ajith','male','mbbs',1,'doctor',10000,95625631);

mysql> insert into employee (emp_id,emp_name,sex,qualification,experience,desigination,salary,contact_no) values(114,'ajith','male','nursing',1,'ward boy',1000,95225631);

PATIENT:

mysql> insert into patient (patient_id,name,sex,date_addmitted,date_discharge,contact_no) values
    -> (2,'akash','male','2018/09/08','2018/10/08',564789321);

mysql> insert into patient (patient_id,name,sex,date_addmitted,date_discharge,contact_no) values
    -> (3,'ezil','male','2018/10/20','2018/09/07',685321497);

```
mysql> insert into patient (patient_id,name,sex,date_addmitted,date_discharge,contact_no) values
    -> (4,'arasi','female','2018/09/01','2018/09/22',658932741)
    -> (1,'sathish','male','2018/10/01','2018/10/08',985674231);
mysql> insert into patient (patient_id,name,sex,date_addmitted,date_discharge,contact_no) values
    -> (5,'akask','male','2018/09/20','2018/10/01',65465545);
```

ROOMS:

```
mysql> insert into rooms(room_num,room_cost,pat_id,room_incharge) values(101,10000,1,114);
Query OK, 1 row affected (0.49 sec)

mysql> insert into rooms(room_num,room_cost,pat_id,room_incharge) values(102,5000,3,115);

mysql> insert into rooms(room_num,room_cost,pat_id,room_incharge) values(103,15000,4,114);
```

LAB:

```
mysql> insert into lab(lab_num,lab_cost,pat_id,lab_incharge) values(201,10000,1,114);

mysql> insert into lab(lab_num,lab_cost,pat_id,lab_incharge) values(202,15000,4,115);

mysql> insert into lab(lab_num,lab_cost,pat_id,lab_incharge) values(203,10000,1,114);
```

PAYMENT:

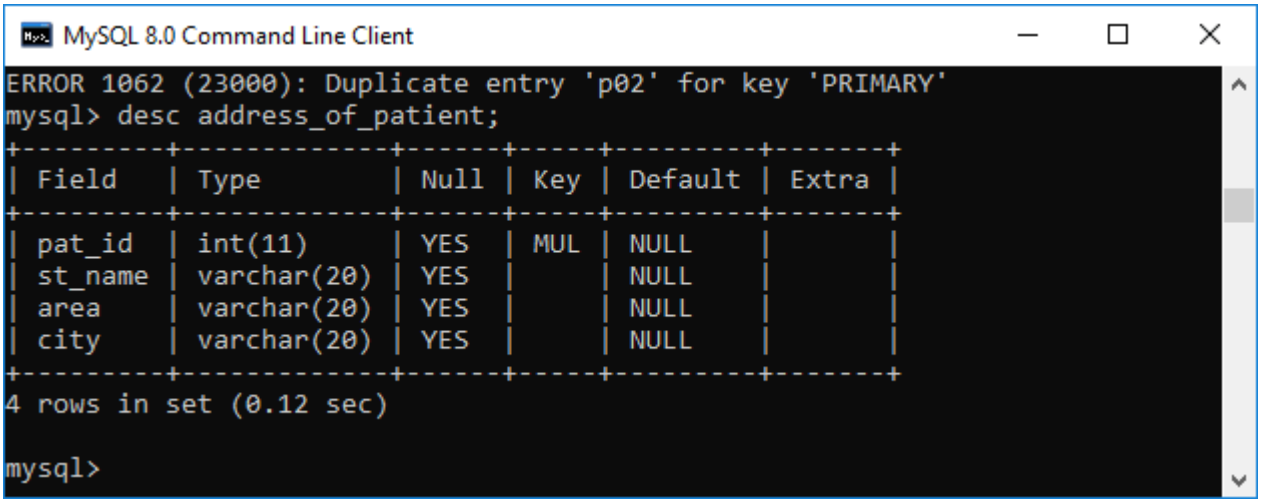
```
insert into payment (payment_id,treatment_cost,lab_cost,room_cost,pat_id) values('p01',1000,20000,10000,2);

mysql> insert into payment (payment_id,treatment_cost,lab_cost,room_cost,pat_id) values('p02',1500,0,0,2);

mysql> insert into payment (payment_id,treatment_cost,lab_cost,room_cost,pat_id) values('p03',1000,0,0,3);

mysql> insert into payment (payment_id,treatment_cost,lab_cost,room_cost,pat_id)
values('p04',1500,15000,15000,4);

mysql> insert into payment (payment_id,treatment_cost,lab_cost,room_cost,pat_id) values('p05',18000,0,0,5);\
```

8. NORMALIZATION FORM OF EACH SCHEMA

1NF:

In this schema we have composite attribute so that is deleted from its entity and made as separate table.

mysql>alter table patient drop column address;
mysql> create table address_of_patient(pat_id int,st_name varchar(20),area varchar(20),city varchar(20));



2NF:

In table patient,
Patient_id is the primary key which determines all the other non-prime attribute,
Patient_id → Patient_id
Patient_id →name
Patient_id →sex
Patient_id →date_discharge
Patient_id →date_addmitted
Patient_id →contact_no

As same as in the employee table,
Emp_id is the primary key which determines all the other non-prime attribute,
Emp_id→ Emp_id
Emp_id→emp_name
Emp_id→sex
Emp_id→qualification
Emp_id→experience
Emp_id→desigination
Emp_id→salary
Emp_id→contact_no
As the primary attribute in the table is determines all other non-prime attributes respectively.

3NF:

This schema satisfies the both 1NF, 2NF and this schema does not have any transitive dependency.
Hence this schema is in 3NF.

9. WORK BREAK DOWN

Team Member Registration Number	Name	Work Assigned
17BCS0082	SATHISH KUAMR	DATABASE CREATION, DOCUMENT CREATION
17BCS0022	EZILARASAN	ER DIAGRAM IMPLEMENTATION
17BCS0110	AKASH	NORMALISATION

10. REVIEW EVALUATION

COMPONENT	MARKS	MEMBER 1	MEMBER 2	MEMBER 3
REPORT				
ER DIAGRAM				
SCHEMA PREPARATION				
NORMALIZATION OF SCHEMA				
TABLE CREATION				
DATA MANIPULATION				
PRESENTATION				
REPORT PREPARATION				
TOTAL	100 MARKS			