EDGE: BU-CSE Digital Skills Training

University of Barishal (BU)

FINAL PROJECT REPORT

Course Name: Database (MySQL/Oracle/SQL Server)

Batch No: 01

Project Name: Database on “Hospital Management System”

Submitted to:

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EDGE: BU-CSE Digital Skills Training, University of Barishal (BU)

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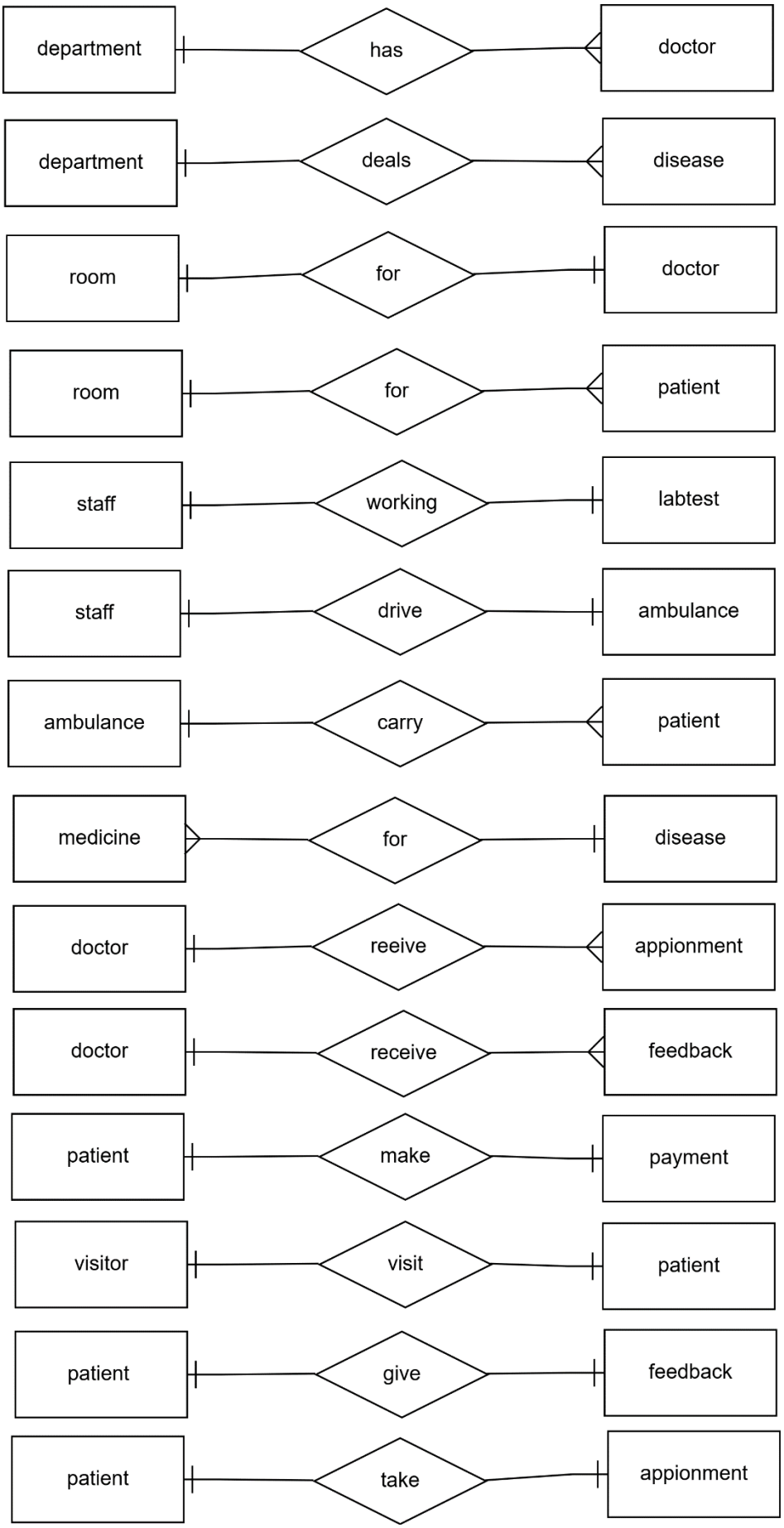
Database: hospital_management_system

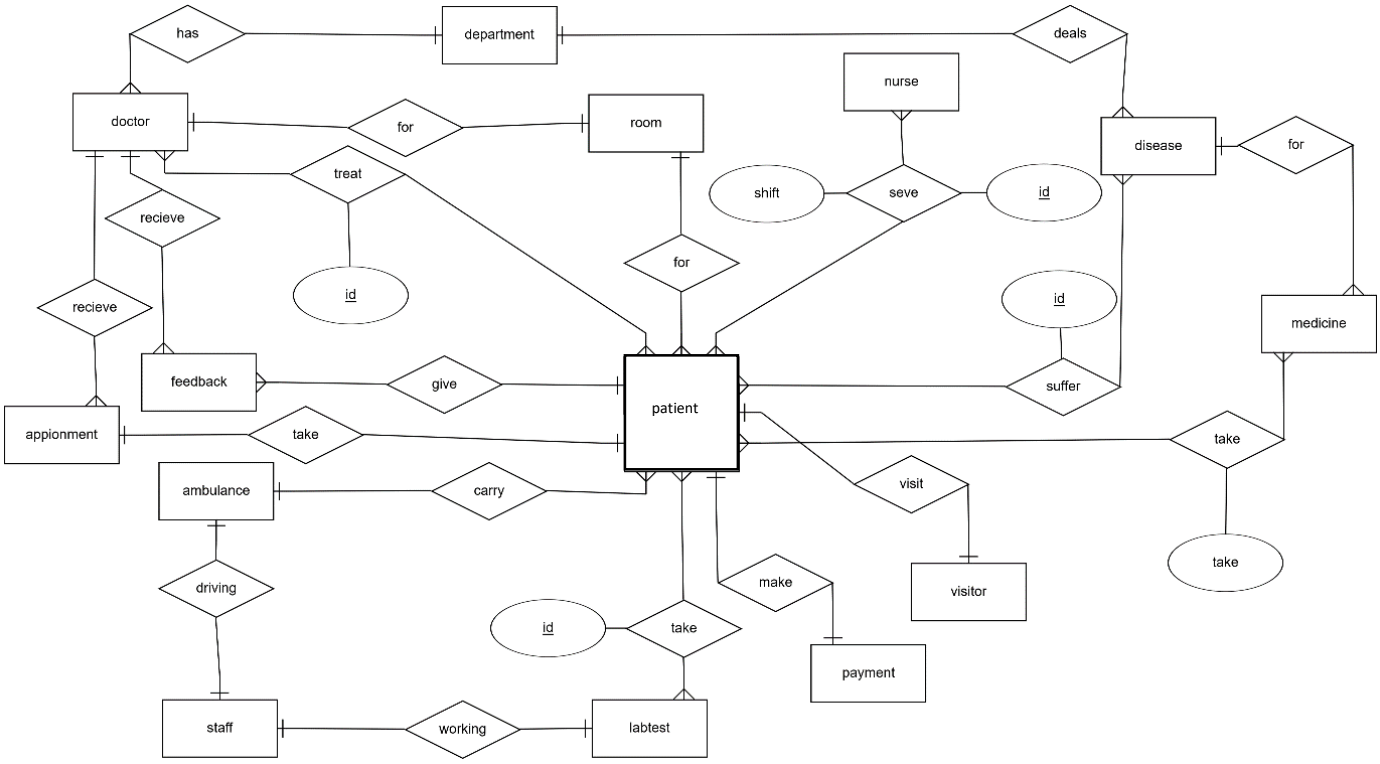
The entities for the hospital_management_system database are:

a. ambulance(id, vehicle_number, type, status, service_area, ambulance_fare)
b. appionment(id, status, data, time, reason)
c. department (id, name, location, email, phone)
d. disease (id, name, symptoms)
e. doctor (id, name, specialization, qualifications, license_number, phone, email, hospital_salary, visiting_hour, visiting_fee)
f. feedback (id, comment, rating, date)
g. labtest (id, name, description, cost)
h. medicine (id, name, description, supplier, price, expiry_date, stock)
i. nurse (id, name, qualifications, phone, email, duty_shift, hospital_salary, patient_cost)
j. patient (id, name, gender, dob (date of brith), address, phone, email, emergency_contact, medi_history, admit_date, admit_time, release_date, release_time)
k. payment (id, biller_name, bill_maker, time, payment_method, hospital_cost, discount, receipt_number)
l. room (id, room_number, type, status, location, room_fare, facilities)
m. staff (id, name, role, phone, email, hospital_salary)
n. visitor (id, name, contact, relation, time)

The relationship needed for the database:



The ER Diagram for the database:



Relationship:

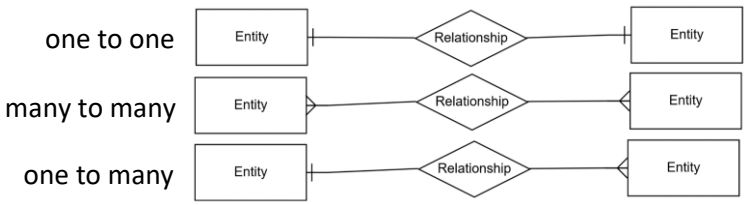


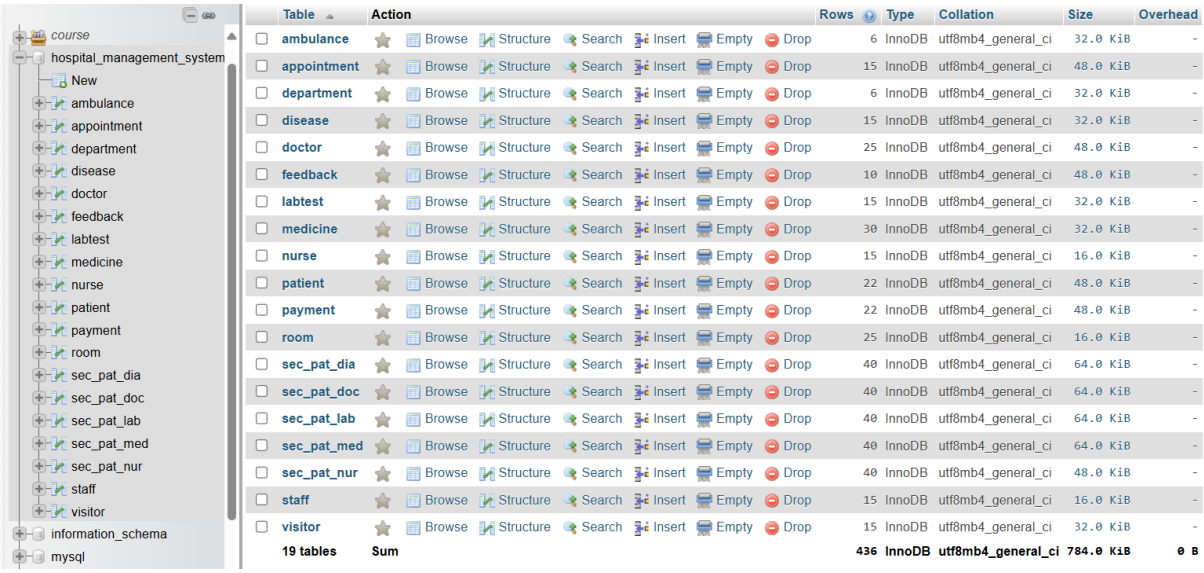
Table for reducing "many to many" relationship:

1. sec_pat_dis (id, pat_id, dis_id)
2. sec_pat_doc (id, pat_id, doc_id)
3. sec_pat_med (id, pat_id, med_id)
4. sec_pat_lab (id, pat_id, lab_id)
5. sec_pat_nur (id, pat_id, nur_id, total_shift)

note:
patient (pat)
doctor (doc)
medicine (mid)
labtest (lab)
nurse (nur)

Database demo from Xammp:

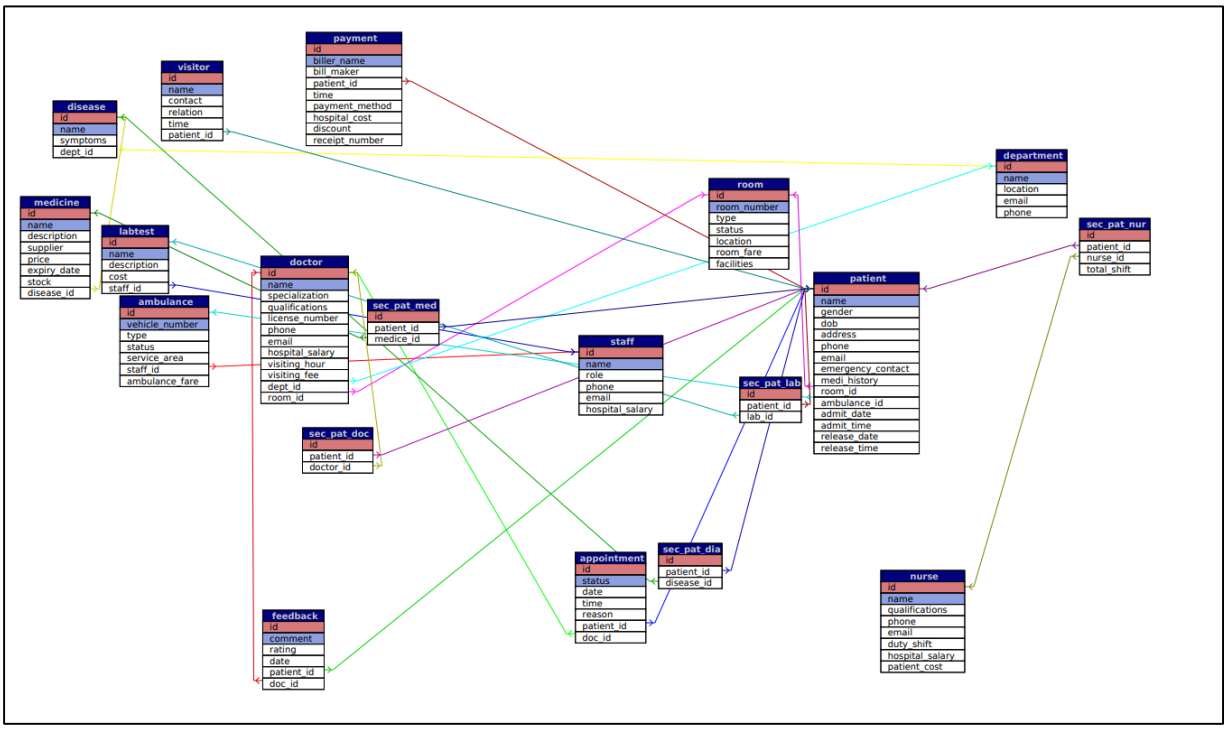
list of table:



course
hospital_management_system
New
ambulance
appointment
department
disease
doctor
feedback
labtest
medicine
nurse
patient
payment
room
sec_pat_dia
sec_pat_doc
sec_pat_lab
sec_pat_med
sec_pat_nur
staff
visitor
information_schema
mysql

Table	Action	Rows	Type	Collation	Size	Overhead
ambulance	Browse Structure Search Insert Empty Drop	6	InnoDB	utf8mb4_general_ci	32.0 KiB	-
appointment	Browse Structure Search Insert Empty Drop	15	InnoDB	utf8mb4_general_ci	48.0 KiB	-
department	Browse Structure Search Insert Empty Drop	6	InnoDB	utf8mb4_general_ci	32.0 KiB	-
disease	Browse Structure Search Insert Empty Drop	15	InnoDB	utf8mb4_general_ci	32.0 KiB	-
doctor	Browse Structure Search Insert Empty Drop	25	InnoDB	utf8mb4_general_ci	48.0 KiB	-
feedback	Browse Structure Search Insert Empty Drop	10	InnoDB	utf8mb4_general_ci	48.0 KiB	-
labtest	Browse Structure Search Insert Empty Drop	15	InnoDB	utf8mb4_general_ci	32.0 KiB	-
medicine	Browse Structure Search Insert Empty Drop	30	InnoDB	utf8mb4_general_ci	32.0 KiB	-
nurse	Browse Structure Search Insert Empty Drop	15	InnoDB	utf8mb4_general_ci	16.0 KiB	-
patient	Browse Structure Search Insert Empty Drop	22	InnoDB	utf8mb4_general_ci	48.0 KiB	-
payment	Browse Structure Search Insert Empty Drop	22	InnoDB	utf8mb4_general_ci	48.0 KiB	-
room	Browse Structure Search Insert Empty Drop	25	InnoDB	utf8mb4_general_ci	16.0 KiB	-
sec_pat_dia	Browse Structure Search Insert Empty Drop	40	InnoDB	utf8mb4_general_ci	64.0 KiB	-
sec_pat_doc	Browse Structure Search Insert Empty Drop	40	InnoDB	utf8mb4_general_ci	64.0 KiB	-
sec_pat_lab	Browse Structure Search Insert Empty Drop	40	InnoDB	utf8mb4_general_ci	64.0 KiB	-
sec_pat_med	Browse Structure Search Insert Empty Drop	40	InnoDB	utf8mb4_general_ci	64.0 KiB	-
sec_pat_nur	Browse Structure Search Insert Empty Drop	40	InnoDB	utf8mb4_general_ci	48.0 KiB	-
staff	Browse Structure Search Insert Empty Drop	15	InnoDB	utf8mb4_general_ci	16.0 KiB	-
visitor	Browse Structure Search Insert Empty Drop	15	InnoDB	utf8mb4_general_ci	32.0 KiB	-
19 tables	Sum	436	InnoDB	utf8mb4_general_ci	784.0 KiB	0 B

Schema design:



Some SQL quary for show data:

For the details of a patient:
(patient name = 'Mary Davis')

```
SELECT patient.name, payment.biller_name, room.room_number, ambulance.vehicle_number, doctor.name as doctor,
department.name as department, disease.name as disease, labtest.name as tesst, medicine.name as medicine,
nurse.name as nurse

from ambulance, department, disease, doctor, labtest, medicine, nurse, patient, payment,
room,sec_pat_nur,sec_pat_med,sec_pat_lab,sec_pat_doc,sec_pat_dia

where patient.room_id=room.id
AND patient.ambulance_id=ambulance.id
AND payment.patient_id=patient.id

AND sec_pat_dia.patient_id=patient.id
AND sec_pat_dia.disease_id=disease.id
AND sec_pat_doc.doctor_id=doctor.id
AND sec_pat_doc.patient_id=patient.id
AND sec_pat_lab.patient_id=patient.id
AND sec_pat_lab.lab_id=labtest.id
AND sec_pat_med.patient_id=patient.id
AND sec_pat_med.medice_id=medicine.id
AND sec_pat_nur.patient_id=patient.id
AND sec_pat_nur.nurse_id=nurse.id

AND doctor.dept_id=department.id
AND medicine.disease_id=disease.id
AND patient.name='Mary Davis'
```

For the total cost of a patient:
(patient name = 'Mary Davis')

```
SELECT
patient.name,  payment.biller_name, room.room_fare,  ambulance.ambulance_fare,  doctor.visiting_fee as doctor,
labtest.cost as 'test cost',
SUM(medicine.price) as medicine, (nurse.patient_cost * sec_pat_nur.total_shift) as nurse, (room.room_fare +
ambulance.ambulance_fare + doctor.visiting_fee + labtest.cost + SUM(medicine.price) + (nurse.patient_cost *
sec_pat_nur.total_shift)) as total_cost
FROM ambulance, department, disease, doctor, labtest, medicine, nurse, patient, payment, room, sec_pat_nur,
sec_pat_med, sec_pat_lab, sec_pat_doc, sec_pat_dia
WHERE patient.room_id = room.id
AND patient.ambulance_id = ambulance.id
AND payment.patient_id = patient.id
AND sec_pat_dia.patient_id = patient.id
AND sec_pat_dia.disease_id = disease.id
AND sec_pat_doc.doctor_id = doctor.id
AND sec_pat_doc.patient_id = patient.id
AND sec_pat_lab.patient_id = patient.id
AND sec_pat_lab.lab_id = labtest.id
AND sec_pat_med.patient_id = patient.id
AND sec_pat_med.medice_id = medicine.id
AND sec_pat_nur.patient_id = patient.id
AND sec_pat_nur.nurse_id = nurse.id
AND doctor.dept_id = department.id
AND medicine.disease_id = disease.id
AND patient.name = 'Mary Davis'

GROUP BY
patient.name,  payment.biller_name,  room.room_fare,  ambulance.ambulance_fare,  doctor.visiting_fee,  labtest.cost,
nurse.patient_cost,  sec_pat_nur.total_shift;
```