Hospital Management System

Sem IV Section C Group 3

Overview

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Sem II Section C Group 3

Members

01. Kyi Sin Le
B9-1865

02. Eaint Pyae Phyo
B9-1886

03. Su Su Hlaing
B9-1889

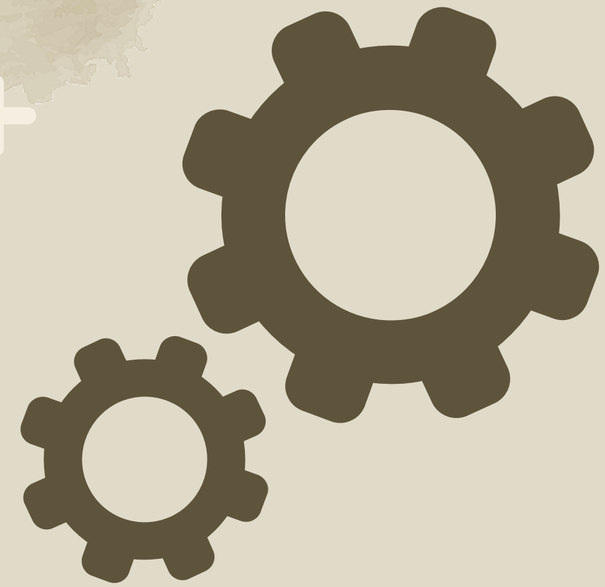
04. Yoon Me Lynn
B9-1860

Objective

In the world where everyone doesn’t have time for themselves but is struggling with surviving, it would be a nuisance if we all have to wait unnecessarily long hours for doctors’ appointment for our health issues. The hospital management system is specifically designed to make such tasks convenient with less time consumed in case of emergency.

The HMS makes records for the patients, pharmacies, doctors and hospital rooms while also giving easy access to the receptionists in terms of appointments, paying bill and booking ID for the appointments.

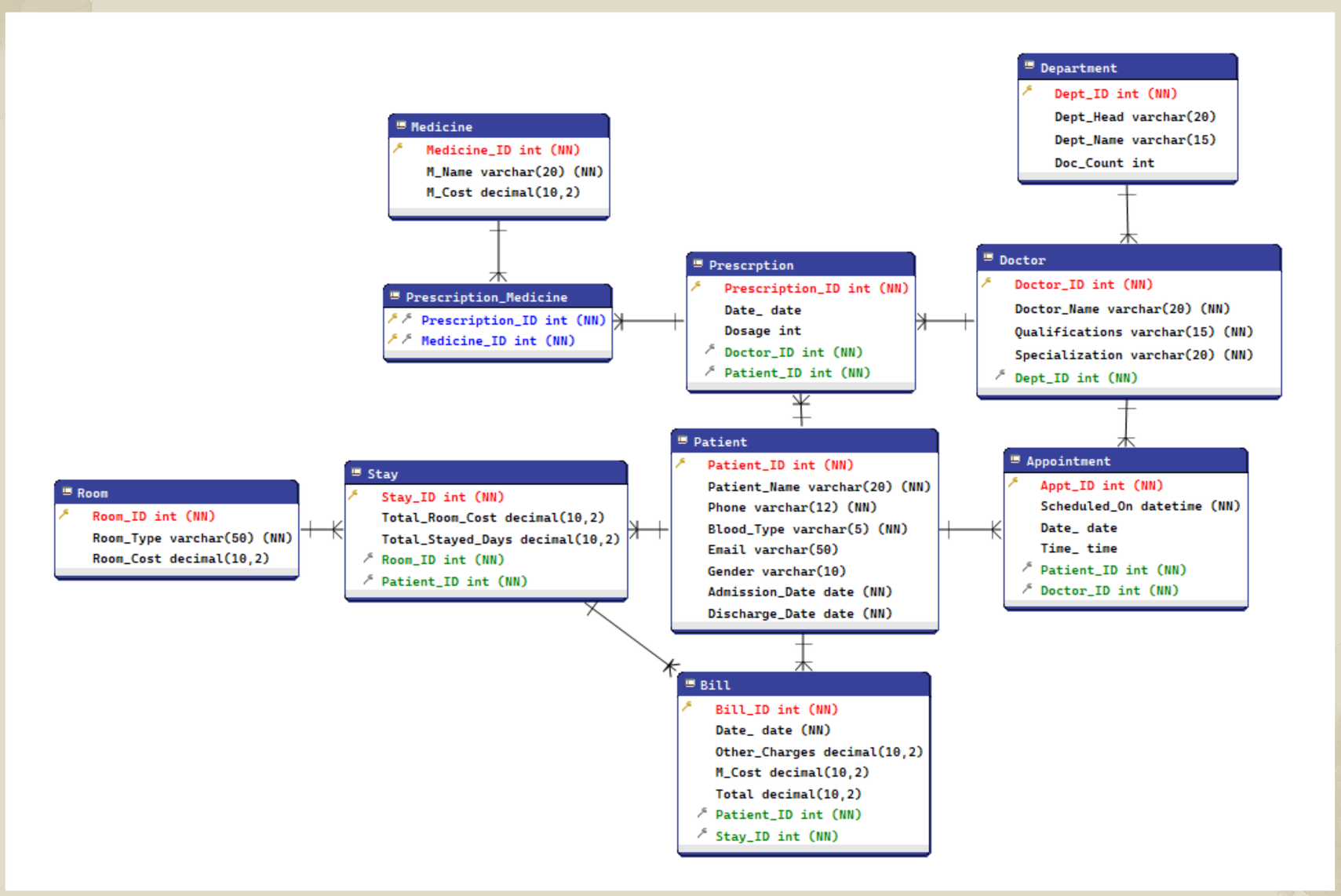
Software Used



Xampp
Server

MySQL
Database

ER Diagram


Department
Dept_ID int (NN)
Dept_Head varchar(20)
Dept_Name varchar(15)
Doc_Count int
Medicine
Medicine_ID int (NN)
M_Name varchar(20) (NN)
M_Cost decimal(10,2)
Prescrption
Prescription_ID int (NN)
Date_ date
Dosage int
Doctor_ID int (NN)
Patient_ID int (NN)
Doctor
Doctor_ID int (NN)
Doctor_Name varchar(20) (NN)
Qualifications varchar(15) (NN)
Specialization varchar(20) (NN)
Dept_ID int (NN)
Prescription_Medicine
Prescription_ID int (NN)
Medicine_ID int (NN)
Patient
Patient_ID int (NN)
Patient_Name varchar(20) (NN)
Phone varchar(12) (NN)
Blood_Type varchar(5) (NN)
Email varchar(50)
Gender varchar(10)
Admission_Date date (NN)
Discharge_Date date (NN)
Appointment
Appt_ID int (NN)
Scheduled_On datetime (NN)
Date_ date
Time_ time
Patient_ID int (NN)
Doctor_ID int (NN)
Stay
Stay_ID int (NN)
Total_Room_Cost decimal(10,2)
Total_Stayed_Days decimal(10,2)
Room_ID int (NN)
Patient_ID int (NN)
Room
Room_ID int (NN)
Room_Type varchar(50) (NN)
Room_Cost decimal(10,2)
Bill
Bill_ID int (NN)
Date_ date (NN)
Other_Charges decimal(10,2)
M_Cost decimal(10,2)
Total decimal(10,2)
Patient_ID int (NN)
Stay_ID int (NN)

Queries (1)

Display the total cost of medicines prescribed on January 1, 2024

```
mysql> use hospital;
Database changed
mysql> SELECT Date_, SUM(M_Cost) AS Total_Medicine_Cost
    -> FROM Prescription
    -> JOIN Prescription_Medicine ON Prescription.Prescription_ID = Prescription_Medicine.Prescription_ID
    -> JOIN Medicine ON Prescription_Medicine.Medicine_ID = Medicine.Medicine_ID
    -> WHERE Date_ = '2024-01-01'
    -> GROUP BY Date_;
+------------+--------------------+
| Date_      | Total_Medicine_Cost |
+------------+--------------------+
| 2024-01-01 |             4500.00 |
+------------+--------------------+
1 row in set (0.01 sec)
```

Queries (2)

Retrieve the details of patients who stayed in premium room type:

```
mysql> SELECT Patient.Patient_ID, Patient.Patient_Name, Stay.Room_ID, Room.Room_Type
    -> FROM Patient
    -> JOIN Stay ON Patient.Patient_ID = Stay.Patient_ID
    -> JOIN Room ON Stay.Room_ID = Room.Room_ID
    -> WHERE Room.Room_Type = 'Premium';
+------------+--------------+---------+-----------+
| Patient_ID | Patient_Name | Room_ID | Room_Type |
+------------+--------------+---------+-----------+
|         14 | Thein Zaw    |      90 | Premium   |
+------------+--------------+---------+-----------+
1 row in set (0.00 sec)
```

Queries (3)

List all appointments scheduled for a specific doctor

```
mysql> SELECT Appointment.Appt_ID, Appointment.Date_, Appointment.Time_, Doctor.Doctor_Name, Patient.Patient_Name
    -> FROM Appointment
    -> JOIN Doctor ON Appointment.Doctor_ID = Doctor.Doctor_ID
    -> JOIN Patient ON Appointment.Patient_ID = Patient.Patient_ID
    -> WHERE Doctor.Doctor_Name = 'Dr Yuyu San';
+---------+------------+----------+-------------+----------------+
| Appt_ID | Date_      | Time_    | Doctor_Name | Patient_Name   |
+---------+------------+----------+-------------+----------------+
|       3 | 2024-01-04 | 09:45:00 | Dr Yuyu San | Shun Lett Thaw |
+---------+------------+----------+-------------+----------------+
1 row in set (0.00 sec)
```

Queries (4)

Retrieve the prescriptions along with the corresponding medicines for a specific patient

```
mysql> SELECT Patient.Patient_Name, Medicine.M_Name, Prescription.
Dosage
    -> FROM Prescription
    -> JOIN Prescription_Medicine ON Prescription.Prescription_ID
= Prescription_Medicine.Prescription_ID
    -> JOIN Medicine ON Prescription_Medicine.Medicine_ID = Medici
ne.Medicine_ID
    -> JOIN Patient ON Prescription.Patient_ID = Patient.Patient_I
D
    -> WHERE Patient.Patient_Name = 'Thein Zaw';
+--------------+---------+--------+
| Patient_Name | M_Name  | Dosage |
+--------------+---------+--------+
| Thein Zaw    | Aspirin |      5 |
+--------------+---------+--------+
1 row in set (0.00 sec)
```

Queries (5)

Retrieve the list of doctors with the total number of appointments and patients they have

```
mysql> SELECT
    ->     Doctor.Doctor_ID,
    ->     Doctor.Doctor_Name,
    ->     COUNT(DISTINCT Appointment.Appt_ID) AS Total_Appointments,
    ->     COUNT(DISTINCT Patient.Patient_ID) AS Total_Patients
    -> FROM Doctor
    -> LEFT JOIN Appointment ON Doctor.Doctor_ID = Appointment.Doctor_ID
    -> LEFT JOIN Patient ON Appointment.Patient_ID = Patient.Patient_ID
    -> GROUP BY Doctor.Doctor_ID, Doctor.Doctor_Name;
+-----------+-----------------+--------------------+----------------+
| Doctor_ID | Doctor_Name     | Total_Appointments | Total_Patients |
+-----------+-----------------+--------------------+----------------+
|       100 | Dr Tin Zaw      |                  1 |              1 |
|       101 | Dr Yuyu San     |                  1 |              1 |
|       102 | Dr Htate Htar   |                  0 |              0 |
|       103 | Dr Mya Kyi      |                  0 |              0 |
|       104 | Dr Nini Eain    |                  1 |              1 |
|       105 | Dr Tin Hla Htun |                  0 |              0 |
+-----------+-----------------+--------------------+----------------+
6 rows in set (0.01 sec)
```

Queries (6)

Show doctors and their departments

```
mysql> SELECT d.Doctor_Name, dp.Dept_Name
    -> FROM doctor d
    -> JOIN department dp ON d.Dept_ID = dp.Dept_ID;
+-----------------+-----------------+
| Doctor_Name     | Dept_Name       |
+-----------------+-----------------+
| Dr Tin Zaw      | Cardiology      |
| Dr Yuyu San     | Opthalmology    |
| Dr Htate Htar   | General Surgery |
| Dr Mya Kyi      | Anesthetics     |
| Dr Nini Eain    | Orthology       |
| Dr Tin Hla Htun | Orthology       |
+-----------------+-----------------+
6 rows in set (0.01 sec)
```

Queries (7)

Total Medicine cost

```
mysql> SELECT p.Patient_Name, SUM(m.M_Cost) AS Total_Medicine_Cost
    -> FROM patient p
    -> JOIN prescription pr ON p.Patient_ID = pr.Patient_ID
    -> JOIN prescription_medicine pm ON pr.Prescription_ID = pm.Prescription_ID
    -> JOIN medicine m ON pm.Medicine_ID = m.Medicine_ID
    -> GROUP BY p.Patient_Name;
+--------------+---------------------+
| Patient_Name | Total_Medicine_Cost |
+--------------+---------------------+
| Mya Hmue     |             3500.00 |
| Thein Zaw    |             1000.00 |
| Thint Htar   |             1500.00 |
+--------------+---------------------+
3 rows in set (0.01 sec)
```

Queries (8)

Show Total cost for the patients

```
mysql> SELECT
    ->     p.Patient_Name,
    ->     (s.Total_Stayed_Days * r.Room_Cost) AS Total_Room_Cost,
    ->     SUM(m.M_Cost * pr.Dosage) AS Total_Medicine_Cost,
    ->     b.Other_Charges,
    ->     (s.Total_Stayed_Days * r.Room_Cost) + SUM(m.M_Cost * pr.Dosage) + b.Other_Charges AS Total_Cost
    -> FROM
    ->     patient p
    -> JOIN
    ->     stay s ON p.Patient_ID = s.Patient_ID
    -> JOIN
    ->     room r ON s.Room_ID = r.Room_ID
    -> JOIN
    ->     bill b ON p.Patient_ID = b.Patient_ID
    -> LEFT JOIN
    ->     prescription pr ON p.Patient_ID = pr.Patient_ID
    -> LEFT JOIN
    ->     prescription_medicine pm ON pr.Prescription_ID = pm.Prescription_ID
    -> LEFT JOIN
    ->     medicine m ON pm.Medicine_ID = m.Medicine_ID
    -> GROUP BY
    ->     p.Patient_Name,
    ->     s.Total_Stayed_Days,
    ->     r.Room_Cost,
    ->     b.Other_Charges;
+--------------+-----------------+--------------------+---------------+------------+
| Patient_Name | Total_Room_Cost | Total_Medicine_Cost | Other_Charges | Total_Cost |
+--------------+-----------------+--------------------+---------------+------------+
| Thein Zaw    |       4200.0000 |             5000.00 |         50.00 |  9250.0000 |
| Thint Htar   |      56000.0000 |             3000.00 |         50.00 | 59050.0000 |
+--------------+-----------------+--------------------+---------------+------------+
```

Conclusion

On conclusion, because the Hospital Management System is used to make records regarding with patients, doctors, booking appointments and etc, it is also considered to be manageable and convenient for the admins and users, delivering the best possible result for the group’s project.

THANK YOU FOR YOUR ATTENTION !

Any questions ???