Project Title: Hospital management system

Scope:

● This project deals with the database management system of a particular hospital.

● The hospital management system we aim to create consists of doctors, nurses, patients, patient's visit records, department details, shift details of doctors and nurses, record of prescribed medicine , patient's admission , operation, room and billing details.

● The hospital keeps a unique record of a patient's personal details that remains constant in each of his/her visit in hospital.

● The hospital keeps the records of doctors and nurses which are assumed not to vary.

● Every doctor has a consultation charge.

● Records of each and every visit of a patient in the hospital and the disease corresponding to it are being stored.

● Right now the hospital has four departments: neurology, cardiology, oncology and gynaecology.

● There are three shifts in the hospital: Morning, Noon, Night. Each doctor and nurse works in a particular shift.

● If a Nurse takes a leave of absence then there has to be a specific reason and a date. Also,

there may be a substitute nurse.

● The hospital keeps a record of admitted patients and each of them will be assigned a room.

● Rooms have been categorized where patients will be admitted into private (single occupancy), semi-private (double occupancy) and general (6 people occupancy) rooms assuming assignment of rooms is independent of department.

● The hospital is also interested in room charges since we are covering the billing part as well.

● The hospital keeps records of what all patients amongst the admitted ones went through an operation. The patient who undergoes an operation is assigned to a doctor who performs his/her operation on that visit.

● Records of prescribed medicines and their respective dosage (in mg) and timings of intake corresponding to each visit are being kept.

● An invoice will be issued to a patient corresponding to each visit considering consultation charges, room charges and operation charges if any and the total amount has to be paid by patient.

Requirements:

● Patient has a patient id, patient name, contact, address, blood group, gender and date of birth.

● Doctor has doctor id, name, gender, contact, address, qualifications, consultation charges and date of birth.

● A doctor can have more than one patient.

● Nurse has a nurse id, name, gender, contact, address and date of birth.

● Each nurse is assigned to only one room per shift.

● Each doctor, nurse and patient can be uniquely identified by their respective ids.

● Department has department id and name.

● Each doctor works for only one department.

● Shift has shift id, name and timing.

● Each doctor and nurse work in only one shift.

● Patient's visit id, date of visit, discharge date and disease.

● Each patient who visits the hospital is assigned only one doctor per visit and the patient can have more than one visit.

● If a visiting patient is admitted then it is assigned a room.

● Operation has operation id, name and operation charges.

● All the patients who are to be operated on were admitted.

● Room has a room id.

● Room category has category id, category type and charges.

● A room has a particular category.

● Leave has reason, date and substitute_id (Nurse).

● Prescribed medicine has name, dose (in mg), timings (morning, noon, night) and intake suggestion as before/after meals.

● The idea of specifying morning, noon and night is to give better understanding of timing of taking medicine and also we are specifying that on a particular timing if a patient has to take medicine before or after the meal.

● Doctors can prescribe each visited patient one or more than one medicine.

● Bill has invoice number, date, Consultation Charge, Room Charge, Operation Charge and bill amount.

● Each Patient's visit has only one bill. Expected list of questions

Queries:

1. List the names of doctors from each department with highest consultation charges.

2. Count the number of doctors in each department.
3. List the details of nurses working in a particular shift.
4. List the name of doctors who have done more than 2 operations in a month.
5. List the name of doctors working in a particular shift.
6. Given the doctor's id, retrieve the names of patients he has treated so far.
7. Retrieve details of nurses assigned to a particular room.
8. Count the number of patients preferring a particular category of room.(to understand which room category is preferred so the infrastructure of rooms in hospital is adjusted accordingly)
9. From date A to B retrieve the data of visited patients.
10. Get the admit history of a particular patient.
11. List of medicines prescribed to a patient on a particular visit.
12. List of the disease of a particular patient in previous visits.
13. Show the details of patients treated by a doctor.
14. Show the details of patients operated by a particular doctor.
15. Count the number visits of a particular patient as per his disease.
16. List the details of the doctor working in a particular department and shift.
17. Get the revenue generated in a particular month.
18. Get the last prescription of a particular patient.
19. Total revenue contributed by a doctor in a financial year.
20. Count the number of particular operations in a year.
21. Count the number of operations done by doctors in a year.
22. Count the number of patients who took appointments with at least two different physicians.
23. Obtain the names of all patients whose operation is done by a doctor who is head of a department.
24. List the Nurses who have taken leave on a particular date.
25. Get the revenue generated in a particular month by rooms.
26. List the substitution of nurses on a particular date.

27. Count the number of leaves taken by a particular nurse in a given time.
28. Count the number of leaves taken by each nurse in a year.
29. Select the details of doctors (department wise) whose consultation charge is greater than the average consultation charge.
30. Number of new patients registered in the hospital in a year.