Hospital Database

Sample Database description:

Hospitals are the most important part of our lives, trying to provide the best medical facilities to people suffering from various type of illness, which may be due to change in climate conditions, increased work-load, emotional trauma stress etc. It is very much difficult for the hospital to maintain its day-to-day acitivities and records manually. That is why a database is required to keep records of all type of acitivities of a hospital.

List of tables in the hospital database:

- physician
- department
- patient
- nurse
- appointment
- block
- room
- procedure
- trained_in
- undergoes

Structure of hospital Database:

Description of tables:

physician:

- employeeid – this is a unique ID of a physician
- name – this is the name of a physician
- position – this is the designation of a physician
- ssn – this is a security number of a physician

department:

- departmentid – this is a unique ID for a department
- name – this is the name of a department
- head – this is the ID of the physician who is the head of a department, referencing to the column employeeid of the table physician

patient:

- ssn – this is a unique ID for each patient
- name – this is the name of the patient
- address – this is the address of the patient
- phone – this is the phone number of the patient
- insuranceid – this is the insurance id of the patient
- pcp – this is the ID of the physician who primarily checked up the patient which is referencing to the column employeeid of the physician table

nurse:

- employeeid – this is the unique ID for a nurse
- name – name of the nurses
- position – the designation of the nurses
- registered – this is a logical column which indicate that whether the nurses are registered for nursing or not
- ssn – this is the security number of a nurse

appointment:

- appointmentid – this is the unique ID for an appointment
- patient – this is the ID of each patient which is referencing to the ssn column of patient table
- prepnurse – the ID of the nurse who may attend the patient with the physician, which is referencing to the column employeeid of the nurse table
- physician – this is the ID the physicians which is referencing to the employeeid column of the physician table
- start_dt_time – this is the schedule date and approximate time to meet the physician
- end_dt_time – this is the schedule date and approximate time to end the meeting
- examinationroom – this the room where to meet a patient to the physician

block:

- blockfloor – ID of the floor
- blockcode - ID of the block
- *Note: The combination of blockfloor, blockcode will come once in that table.*

room:

- roomnumber – this is the unique ID of a room
- roomtype – this is type of room

- blockfloor - this is the floor ID where the room in
- blockcode – this is the ID of the block where the room in
- unavailable – this is the logical column which indicate that whether the room is available or not
- *Note: The of blockfloor, blockcode columns are refercing to the combination of blockfloor and blockcode columns of the table block.*

procedure:

- code – this is the unique ID of a medical procedure

- name – the name of the medical procedure

- cost – the cost for the procedure

trained_in:

- physician – this is ID of the physicians which is referencing to the column employeeid of the physician table

- treatment – this is the ID of the medical procedure which is referencing to the column code of the procedure table

- certificationdate – this is the starting date of certification

- certificationexpires – this is the expiry date of certification

- *Note: The combination of physician and treatement will come once in that table.*

undergoes:

- patient - this is ID of the patient which is referencing to the ssn column of the patient table

- procedure – this is ID of the procedure and referencing to the code column of the procedure table

- stay - this is the ID admission of a patient, which is referencing to the stayid column of the stay table

- date – this is the date when a patient undergoes for a medical procedure

- physician – this is the ID of a physician which is referencing to the column employeeid of the table physician

- assistingnurse – this is the ID of a nurse who will assists the physician, referencing to the column employeeid of the table nurse

- *Note: The combination ofpatient, procedure, stay, date will come once in that table.*

QUERIES:

1) Write a query in SQL to obtain the names of all patients whose primary care is taken by a physician who is not the head of any department and name of that physician along with their primary care physician.

2) Write a query in SQL to obtain the names of all patients who had at least two appointments where the nurse who prepped the appointment was a registered nurse and the physician who has carried out primary care.

3) Write a query in SQL to obtain the names of all patients who have been undergone a procedure costing more than $5,000 and the name of that physician who has carried out primary care.

4)Write a query in SQL to obtain the name of all those physicians who completed a medical procedure with certification after the date of expiration of their certificate, their position, procedure they have done, date of procedure, name of the patient on which the procedure had been applied and the date when the certification expired.

5) Write a SQL query to obtain the names of all the physicians performed a medical procedure but they are not certified to perform.