

**K.J Somaiya Institute of Management Studies and Research**  
**MCA Trim IV TEST**  
**Open-source database technologies**

**Date:19-09-2022**

**Max. Marks: 20**

Using PostgreSQL implement the given the hospital management system.

- Any new Patient is first registered in their database before meeting the doctor.
  - The Doctor can update the data related to the patient upon diagnosis (Including the disease diagnosed and prescription).
  - This organization also provides rooms facility for admitting the patient who is critical.
  - Apart from doctors, this organization has nurses and ward boy. Each nurse and ward boy are assigned to a doctor. Also, they can be assigned to patients (to take care of them).
  - The bill is paid by the patient with cash and E-banking. Record of each payment made is also maintained by the organization.
  - The record of each call received to provide help and support to its existing patients is also maintained.
1. Create a hospital database.
  2. Identify the entities and required referential integrity constraints.
  3. Create a composite data type for name which includes first name and last name.
  4. Create relations
    - a. Use auto incrementing values for patient ids.
    - b. Use array datatype or Json type wherever necessary.
    - c. In bill store the amount after adding 18% GST using generated attribute.
  5. Insert 5 records in each table with the values stored in a document.
  6. Retrieve the patients registered in a particular day.
  7. Fetch the details of patients diagnosed with high fever from 1-9-2022 to 15-09-2022.
  8. Get the details of patients admitted during April 2022 to August 2022.
  9. Fetch the details of doctors specialized in "Neurology".
  10. Get the doctor's details to whom a ward boy 'Ajit' has been assigned.
  11. Get the nurses details under Dr. Aruna.
  12. Get the details of patients under the care of a particular nurse.
  13. Get the total amount collected in the month of August 2022 by cash payment.
  14. Get the average amount collected by E-banking.
  15. Get the details of call received from existing patients on 15-09-2022.