



School of information technology and engineering

Program: B.Tech

Course: CSE2004- DBMS

Database Management Systems Lab

Cycle Sheet 3

Hospital Database

Doctor (Doc_ID, Doc_Name, Gender, DOB, Specialist, Qualification, Contact, Address, Dept_No)

Department(Dept_No, Dept_Name, Room_No, Floor, HOD, Estd_Date)

Staff(Staff_ID, Staff_Name, Category(nurse, lab technician, cashier, security), Designation, DOB, Contact, Address, Dept_No)

Patient (Pat_ID, Pat_Name, DOB, Gender, Contact, Address)

In_Patient(Pat_ID, Date_Of_Admission, Bed_No, Start_Time, End_Time)

In_Patient_Prescription(Pat_ID, Pres_ID)

Appointment(App_ID, Pat_ID, Doc_ID, Nurse_ID, Consult_Room_No, Date, Time)

Prescription(Pres_ID, App_ID, Date, Time, Diagnosis_Detail)

Prescribed_Medicines(Pres_ID, Medicine_Name, Dosage, Brand)

Hospital_Bill(Inv_No, Inv_Date, Pat_ID, Bill_Amount, Payment_Type (cash/credit card/debit card), discount)

Lab_Tests(Test_ID, Pat_ID, Date, Time)

Test_Results(Test_ID, TT_ID, Result)

Test_Types(TT_ID, Description, Low_Value, High_Value, Test_Method, Technician)

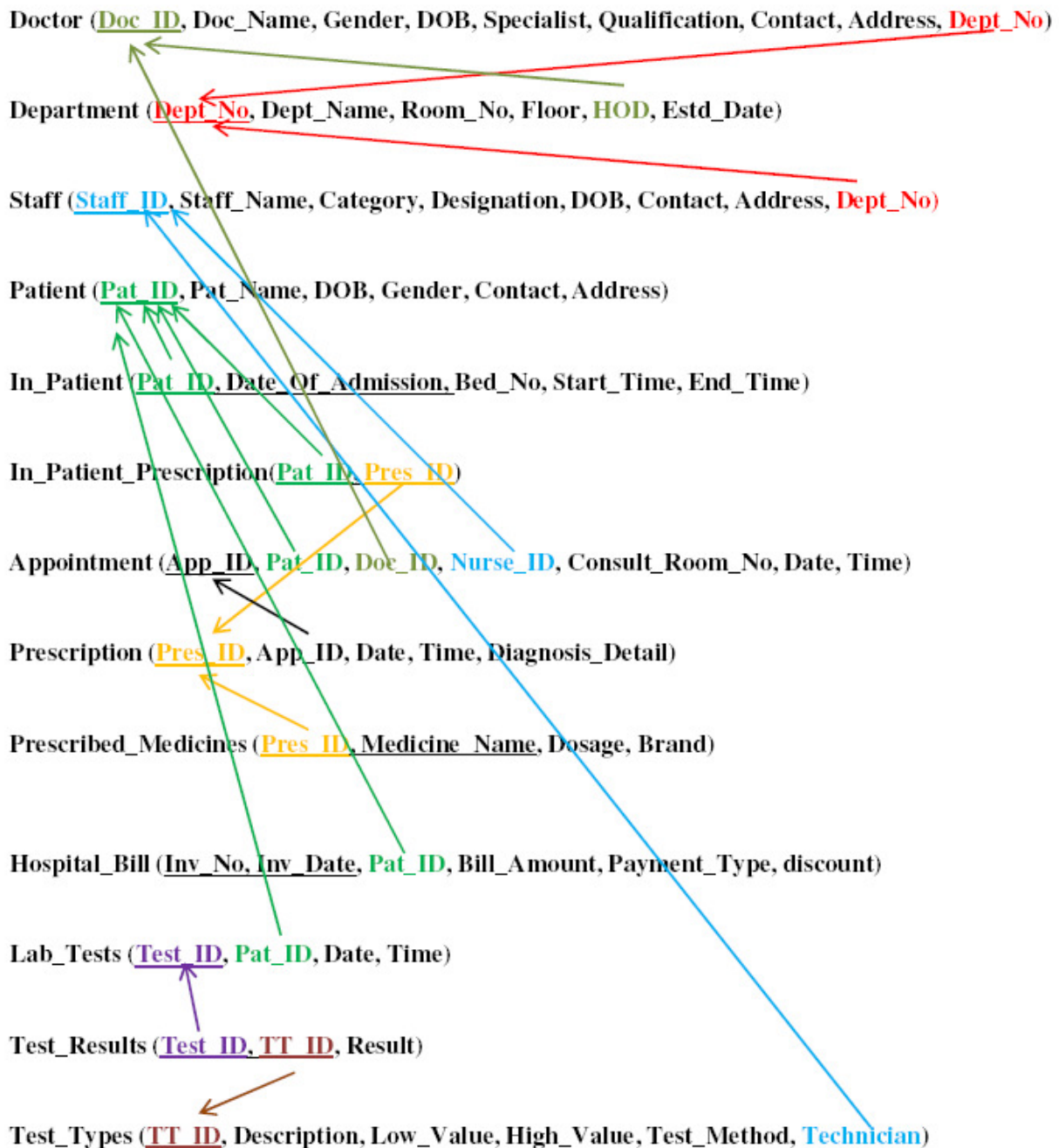


Figure 1: Primary key and foreign keys

Questions:

1. Write a PL/SQL program to implement a simple calculator.

2. Write a PL/SQL program to practice reading the record from a table into local variables using different data types and %TYPE and display the same using locally declared variables.
3. Write a PL/SQL program to find the number of doctors in a given department with a given qualification (read values for department and qualification from user during runtime). If number is more than the number of doctors in that department with other qualifications then display 'Well qualified' else 'Qualified'.
4. Write a PL/SQL program to insert records into any of the tables in your database.
5. Create a function to find the factorial of a given number.
6. Create a function DOC_COUNT to find the number of doctors in the given department. Use the department name as the input parameter for the function.

Cursors:

1. Write a CURSOR to give 5% additional discount to all senior citizen patients.
2. Write a CURSOR to change the department number from 1 as 5 for all doctors with a qualification 'MD'.

Functions and Procedures:

1. Write a PL/SQL stored function COUNT_DOC to count the number of doctors who have treated at least 100 patients if given a doctor id as input parameter.
2. Write a PL/SQL stored procedure to adjust the payment type of hospital bills to CASH if the patient id and amount details given as input.

Triggers:

Add an attribute with patients table to store the age of the patients. Then answer the following question;

1. Write a Trigger to find and fill the age of a patient whenever a patient record is inserted into patients table.

Create a table EMP_SALARY with attributes ID, Basic, DA, HRA, Deduction, Net_Salary. Here, ID refers the Staff_ID of staff table. Treat 'Net_Salary' as a derived attribute and don't insert a value through insert operation. The value for Net Salary can be calculated as follows;

$$\text{Net_Salary} = \text{Basic} + \text{DA} + \text{HRA} - \text{Deduction}$$

1. Write a Trigger to perform the following; whenever new staff is recruited and a designation is assigned, insert an appropriate record into EMP_SALARY table. Refer the following table for salary details.

Designation	Basic	DA	HRA	Deduction
Staff nurse	6000	2000	2000	2% of basic
Head nurse	8000	2500	3000	2% of basic
Technician	6000	2000	2000	2% of basic
Senior technician	9000	2500	3500	2.5% of basic
Junior attender	5000	1500	2000	2% of basic
Senior attender	6500	2000	2000	2% of basic
