

## **a) Design a scenario and an ER diagram for an IT training group database Project**

It will meet the information needs of its training program. Clearly indicate the entities, relationships, and the key constraints. The description of the environment is as follows:

The company has 10 instructors and can handle up to 100 trainees for each training session.

The company offers 4 Advanced technology courses, each of which is taught by a team of 4 or more instructors. Each instructor is assigned to a maximum of two teaching teams or may be assigned to do research. Each trainee undertakes one Advanced technology course per training session.

## **b) Blood Donation System Database Project**

A system in which data of Patient, data of donor, data of blood bank would be saved and will be interrelation with each other

DATA OF PATIENT – Patient Name, Patient Id, Patient Blood Group, Patient Disease

DATA OF DONAR – Donar Name, Donar Id, Donar Blood Group, Donar Medical report, Donar Address, Donar Contact number

DATA OF BLOOD BANK – Blood Bank Name, Blood Bank Address, Blood bank Donors name, Blood Bank Contact Number, Blood Bank Address

Try to implement such scenario in a database, create a schema for it, an ER diagram for it and try to normalize it.

## **c) Art Gallery Management Database Project**

Design an E-R Diagram for an Art Gallery. Gallery keeps information about "Artist" their Name, Birthplace, Age & Style of Art about "Artwork," Artist, the year it was made, Unique title, Type of art & Prices must be stored. The piece of artwork is classified into various kind like Poetess, Work of the 19th century still life, etc. Gallery keeps information about Customers as their Unique name, Address, Total amount of Dollar, they spent on Gallery and liking of Customers.

## **d) Hotel Management System Database Project**

A hotel is a hive of numerous operations such as front office, booking, and reservation, banquet, finance, HR, inventory, material management, quality management, security, energy management, housekeeping, CRM and more. The hotel has some rooms, and these rooms are of different categories. By room

category, each room has the different price. A hotel has some employees to manage the services provided to customers. The customer can book the room either online or by cash payment at the hotel. The customer record is stored in hotel database which contains customer identity, his address, check in time, check out time, etc. hotel provides food and beverages to their customers and generates the bill for this at the time of their check out.

## **e) School Management System Database Project**

Design a database to maintain information about school staff and students satisfying the following properties:

1. Staff will have their id, name, and classes they are teaching
2. The student will be having the name, roll no, section, class
3. Another table containing the section, subject and teacher information
4. Next will contain fee information for students
5. One contains salary information for teachers
6. Rooms are assigned to classes keeping in mind that there is no time clash of same room or lab, students cannot be entered in more than one section, no student should be there who have not paid fees up to a particular date.

## **f) Wholesale Management System Database Project**

1. Maintain the details of stock like their id, name, quantity
2. Maintain the details of buyers from which manager has to buy the stock like buyer id, name, address, stock id to be bought
3. Details of customers i.e. name, address, id
4. Defaulters list of customers who have not paid their pending amount
5. List of payment paid or pending
6. The stock that is to buy if quantity goes less than a particular amount.
7. Profit calculation for a month.
8. Quantity cannot be sold to a customer if the required amount is not present in stock and date of delivery should be maintained up to which stock can be provided.