FACULTY OF COMPUTING & INFORMATION TECHNOLOGY

UNIVERSITY OF THE PUNJAB

Database Systems: Lab 10

BS-DS Fall-22 (Afternoon)   Date: 22-04-2024

Instructions
- Work on this quiz/lab individually.
- You are NOT allowed to use internet, mobile phone.
- You are NOT allowed to borrow anything from your peer student.
- You are NOT allowed to use **Chat GPT** , **Gemini** etc.
- In case of any ambiguity, benefit will be given to the students.
- First read the query statement carefully before solving it.
- In case of Cheating or sharing of lab solution may leads to **ZERO** marks.
- During lab TAs should entertained any query , no need to talk to peers.

QUESTION 1:

Company organized into DEPARTMENT. Each department has unique name and a particular employee who manages the department. Start date for the manager is recorded. Department may have several locations.
A department controls a number of PROJECT. Projects have a unique name, number and a single location.
Company's EMPLOYEE name, employee no, address, salary, sex and birth date are recorded. An employee is assigned to one department, but may work for several projects (not necessarily controlled by his/her department). Number of hours/week an employee works on each project is recorded; The immediate supervisor for the employee.
Employee's DEPENDENT are tracked for health insurance purposes (dependent name, birthdate, relationship to employee).

QUESTION 2:

• The database keeps track of three types of persons: employees, alumni, and students. A person can belong to one, two, or all three of these types. Each person has a name, SSN, sex, address, and birth date.
• Every employee has a salary, and there are three types of employees: faculty, staff, and student assistants. Each employee belongs to exactly one of these types. For each alumnus, a record of the degree or degrees that he or she earned at the university is kept, including the name of the degree, the year granted, and the major department. Each student has a major department.
• Each faculty has a rank, whereas each staff member has a staff position. Student assistants are classified further as either research assistants or teaching assistants, and the percent of time that they work is recorded in the database. Research assistants have their research project stored, whereas teaching assistants have the current course they work on.
• Students are further classified as either graduate or undergraduate, with the specific attributes degree program (M.S., Ph.D., M.B.A., and so on) for graduate students and class (freshman, sophomore, and so on) for under-graduates.

QUESTION 3:

A hospital consists of various WARDs, each identified by a unique code. Each ward has a type (e.g., General, ICU, Pediatrics) and a capacity.

PATIENTs are admitted to the hospital. Each patient is identified by a patient ID, has a name, address, and birth date. Patients are assigned to a specific ward during their stay, and the admission date is recorded.

The hospital employs DOCTORs, each with a unique doctor ID, name, specialization, and contact information. Each doctor may be assigned to one or more wards, and they can treat multiple patients.

MEDICAL STAFF members, including nurses and administrative staff, are also part of the hospital. Each staff member has a staff ID, name, role, and contact information. Nurses are assigned to specific wards, and administrative staff may work in different departments.

The hospital manages information about DRUGs in its pharmacy. Each drug has a unique code, a name, and a description. The system keeps track of the quantity of each drug in stock.

PATIENTs may be prescribed MEDICATION during their stay. Each prescription is identified by a prescription ID, and it includes details such as the drug name, dosage, and frequency. The system records when the prescription was given to the patient.

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