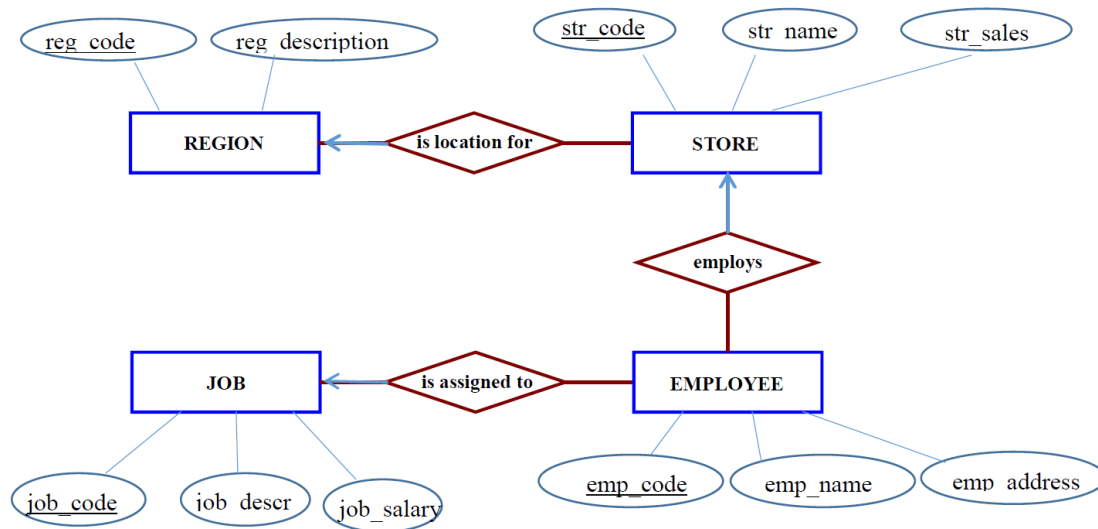


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Metro State University ICS-311-50 Summer 2023 Class Assignment 4

Question 1 (5 points)

Given the following ERD for a ProdCo. company:



- a) Identify all relationships and their cardinality and write the corresponding business rules.
- a store belongs to a region, the store is one of the “child” of the region entity. Region is 1-1, store to region is 1-to-many
 - Employee belongs to a store, employee is 1-to-1 to a store, but store is 1-to-many
 - Job belongs to employees, jobs are many-to-1 relationships with employees
- b) Show the relational schema for the database. Make sure to clearly indicate primary keys and foreign keys.

Region(reg_code primary key, reg_description);
Store(str_code primary key, str_name, str_sales);
Job(job_code primary key, job_descr, job_salary);
Employee(emp_code primary key, emp_name, emp_address);

Questions 2: ERD design (5 points)

You are hired to set up a relational database for a small community hospital. The first thing you do is to go to the hospital and find out the attributes that need to be stored, and their inter-relationships. Here are your findings:

- Every room has a unique room number (integer).
- Every room has one designated usage (char [40]), but different rooms may have the same usage.
- Every patient is assigned a room, but many patients may be assigned to the same room.
- Every patient has a unique patient number (integer)
- Every patient has a name (char[40]) which is not necessarily unique.
 - A patient may be treated by more than one doctor, and a doctor may attend to more than one patient.
- Every doctor has a unique doctor number (integer) and a unique phone (char[10]).

Outline the key features that will be shown in the diagram namely Entity Sets with attributes, Relationships (types) between Entities.. Don't draw the ER diagram..

Entity Sets with Attributes:

Room

RoomNumber (integer, unique)

Usage (char[40])

Patient

PatientNumber (integer, unique)

Name (char[40])

Doctor

DoctorNumber (integer, unique)

Phone (char[10], unique)

Relationships between Entities:

Room-Usage Relationship:

Many-to-One relationship between Room and Usage.

Each Room has one designated Usage, but different Rooms may have the same Usage.

Patient-Room Relationship:

Many-to-One relationship between Patient and Room.

Each Patient is assigned to one Room, but multiple Patients may be assigned to the same Room.

Doctor-Patient Relationship:

Many-to-Many relationship between Doctor and Patient.

Each Doctor can treat multiple Patients, and each Patient can be treated by multiple Doctors.