Reichman University

Relational Databases and SQL 2026

Assignment #1

THIS ASSIGNMENT MUST BE SUBMITTED IN PAIRS.

Assignment Overview

In this assignment, you will design an Entity-Relationship Model (ERM) for an information system of your choice. The goal is to demonstrate your understanding of information entities, their attributes, and relationships between them. Your final product will be a complete conceptual and logical models represented as either a cardinality Entity-Relationship Diagram (ERD).

Assignment Description

You are required to design an **ERD** for a **Hospital Patient Management System**. This system tracks patients, doctors, medical appointments, treatments, and hospital rooms.

Step 1: Define the Entities

You must define **exactly 4 entities** that are essential to this system.
Each entity must include:

- A **primary key (PK)**
- At least **five attributes** with appropriate data types (e.g., string, integer, date, boolean)

Step 2: Define the Relationships

You must establish the following relationships between your entities:

- **Tow (2) One-to-Many (1:M) Relationships**
- **One (1) One-to-One (1:1) Relationships**
- **Three (3) Many-to-Many (M:N) Relationship**

Additionally, your ERD must include:

- **One (1) Weak Entity with an identifying relationship**
- **One (1) Associative Entity derived from a M:N relationship with attributes**

Step 3: Create the Conceptual ERD

- **Use a professional tool** (e.g., **draw.io, Lucidchart**) to design the ERD.
- **Your ERD must include**:
    - **All four entities**.
    - **Correct relationships**, with clear **cardinalities** (1:M, 1:1, M:N).

Step 4: Convert to a Logical ERD

- **Use a professional tool** (e.g., **draw.io, Lucidchart**) to design the ERD.
- Transform your conceptual ERD into a **logical ERD**, using tables, primary keys (PK), and foreign keys (FK).
- Include this logical model as an additional page in the same PDF file.

Submission Guidelines

- **Format**: Submit a **PDF** of the Conceptual ERD and Logical ERD.
- All assignments are to be submitted in **pairs** as **one file**.
- The file names must be **identical** in both submissions and must include both student ID numbers (e.g., 123456789_987654321.pdf).

Good luck, and feel free to reach out if you have any questions! 🙂