CSCI 440
Database Systems

Technical Document II
Relational Schema Diagram

due on (or before) Monday, 11.03 by 5pm

Submission

There will be one hardcopy submission per group. You will submit your relational schema diagram. This document will be graded pass/fail. If returned to you as a 'fail', you must revise and resubmit for a second attempt. Please put in due diligence for your first submission attempt.

Deliverables

Convert your ER (or EER) diagram into a relational database schema diagram. You will find Chapter 9 and Slider Deck 12 useful.

Your final digaram should be similar in style to Figure 9.2 (p.287) in the text. Do not overly complicate the task by using other diagram types (e.g,, UML). Please type as much text as possible. You may create this diagram in Excel and draw by hand the arrows.

Guidelines

1. Transform the conceptual data into normalized relations:
    - Represent entities
    - Map multivalued attributes
    - Map weak entity types
    - Map all relationship types
        - binary 1:1,
        - binary 1:N, and
        - binary M:N
        - n-ary relationships
    - Normalize the relations (see Chapter 15)
    - Merge the relations
2. Ensure well-formed relations:
    - minimum amount of redundancy
    - permits users to insert, modify and delete the rows without errors or inconsistencies
3. Identify all primary keys:
    - value of the key must uniquely identify every row in the relation
    - key should be nonredundant
4. Ensure referential integrity is achieved (i.e., no dangling references).