DASC 5333 Database Systems for Data Science
CSCI 4333 Design of Database Systems
Spring 2025
Homework #3 Model Transformation

UML Conceptual Model to Relational Logical Model

(1) Using the suggested UML solution of Homework #2 (*not* your own solution) and the specification of HW #2, construct the relation schema to implement the UML diagram). For each relation, underline the PK and list:

1. all candidate keys: E.g., [1] FacultyId, [2] FirstName, LastName, DepartmentNumber
2. all foreign key references: E.g., [1] ChairFacultyId references Faculty[FacultyId], [2] StudentId references Student[StudentId]
3. Whether attributes are nullable or not? E.g., Nullable: [1] MiddleInitial, [2] Phone
4. Notes: such as the creation of a surrogate primary key, assumptions and design issues.

You may refer to the suggested solutions of the same HW in the previous semesters as references.

Use h3sol_template.docx as the template. Rename it as h3.docx and submit your homework through Canvas.