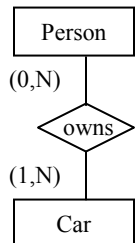
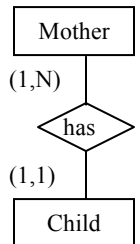


CSCI 2020 Database Fundamentals HW7

Submit the homework as a **Word document** called
LastnameFirstnameHW7.doc to the drop box.
Print a hard copy and submit to your instructor on the due date.

TASKS

- 1) (10 pts) “Every Regular Entity Type in an ER Diagram always maps to exactly one table in a relational database.” Is this statement True or False? Explain why.
- 2) (10 pts) “Every Regular Relationship Type in an ER Diagram always maps to exactly one table in a relational database.” Is this statement True or False? Explain why.
- 3) (10 pts) Which of the following ways is the correct way to map the ER diagram shown to relational tables? _____
 - a. Place a foreign key in MOTHER pointing to CHILD
 - b. Place a foreign key in CHILD pointing to MOTHER
 - c. Create a linking table with foreign keys to MOTHER and CHILD
 - d. Both a and b
- 4) (10 pts) Which of the following ways is the correct way to map the ER diagram shown to relational tables? _____
 - a. Place a foreign key in PERSON pointing to CAR
 - b. Place a foreign key in CAR pointing to PERSON
 - c. Create a linking table with foreign keys to CAR and PERSON
 - d. Both a and b
- 5) (30 pts) Draw an ER diagram for the following. Clearly indicate: primary keys; relationship cardinalities using the (min,max) notation.



Professors have names, id's and salaries. All Professors teach courses. A course can only be taught by one professor. Each course has a name, course number and location. Students take courses. The maximum number of students that can be enrolled in a course is 30. Students have a name and student id.

- 6) (30 pts) Map the ER diagram below to a set of relational tables.
 - a. Draw the tables (with columns labeled) and populate with a couple of rows of sample data. Indicate Primary Keys and any Foreign Keys that the table may have. (Do this by creating tables in Word, and putting some sample data in the tables)

- b. Show the table definitions in SQL code (i.e., write the statements in SQL to create the tables). Use your own judgment on data types. You can paste the SQL code in this document. Do not submit a separate SQL file.

