

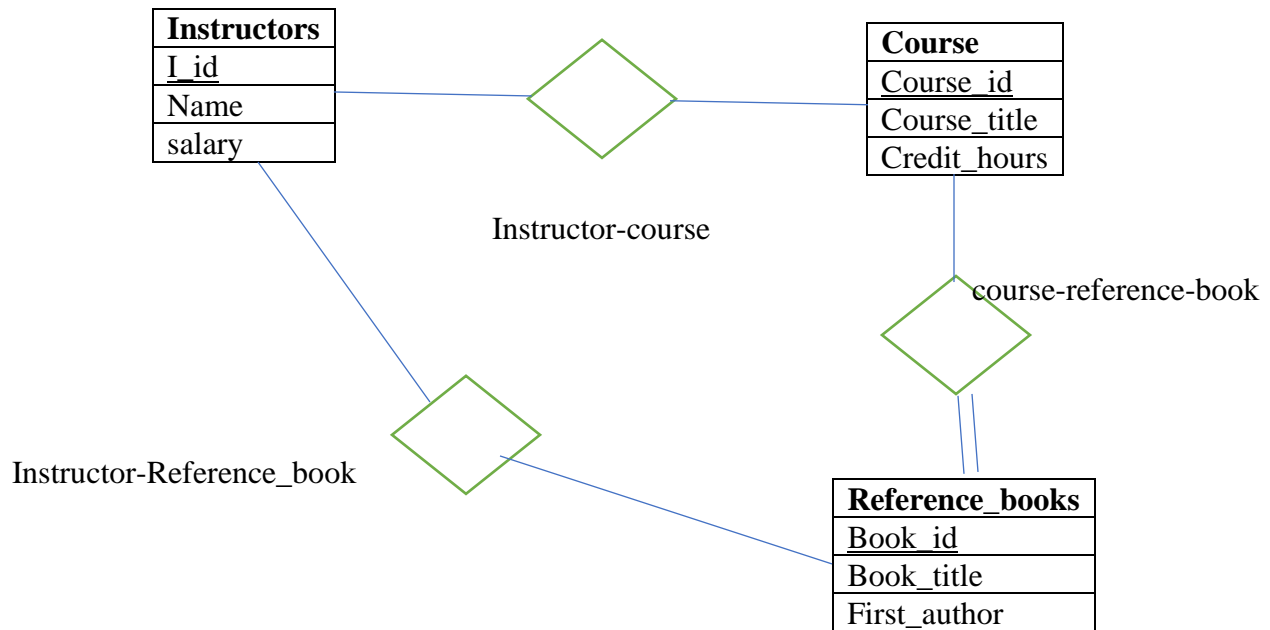
Chris Grimes

CS 33007

Homework 5

1. The computer science department has three entity sets instructors(i_id, name, salary), courses(course_id, course_title, credit_hours) and reference_books(book_id, book_title, first_author).

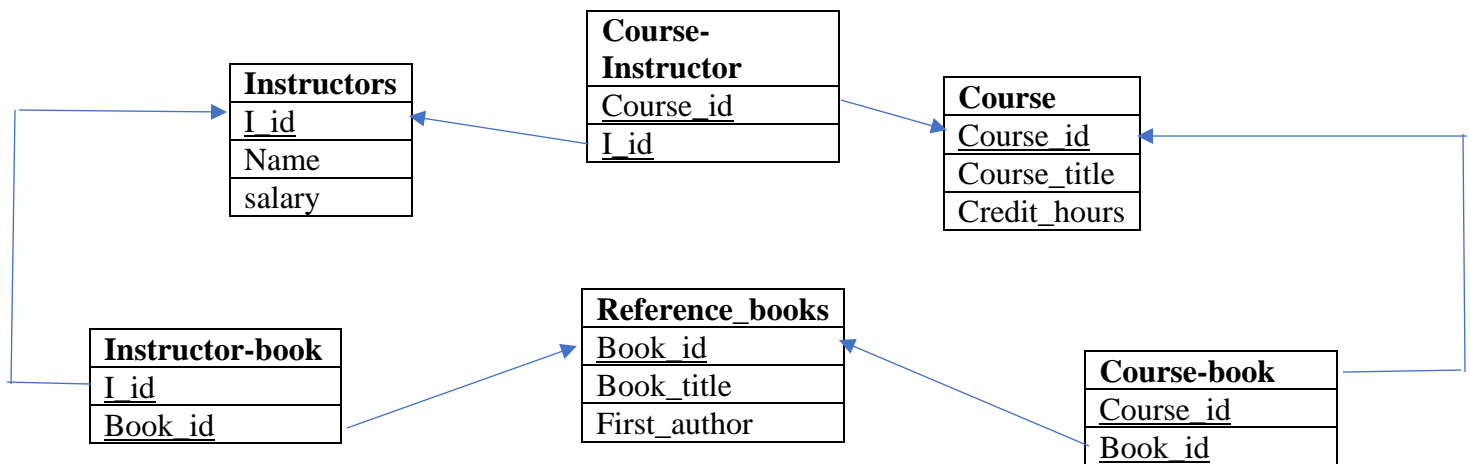
a. Draw an ER diagram for these entity sets. Please note that each course must have at least one reference book. [15 points]



All relations are many to many, except for course-Reference_book which must have at least one book.

b. Convert the ER diagram to non-redundant relation schemas.

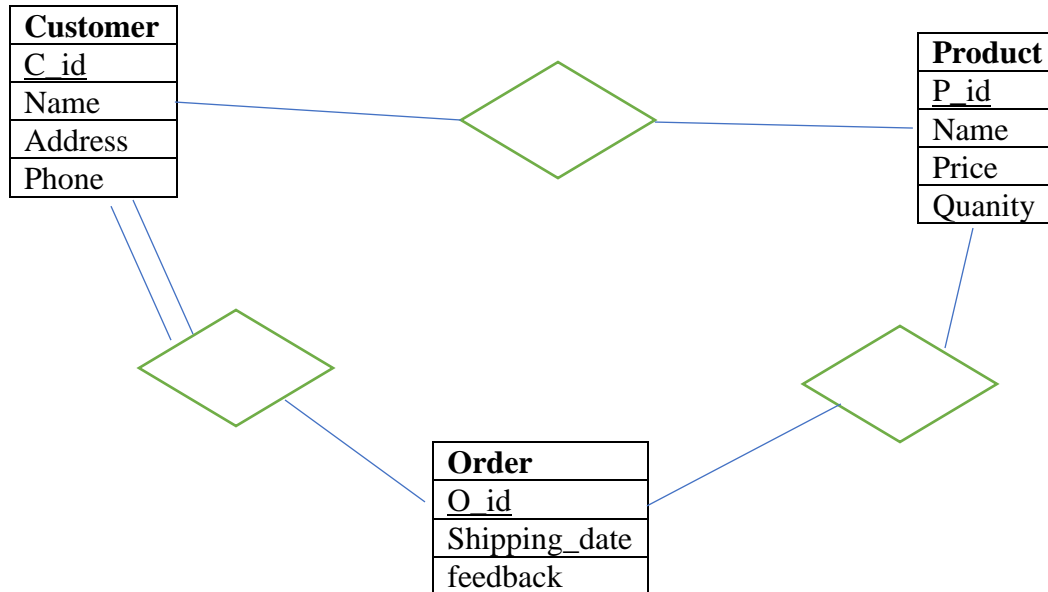
[10 points]



2. For an E-commerce system, you want to store information about the customers, products, the orders, and the customer comments/feedback about each product.

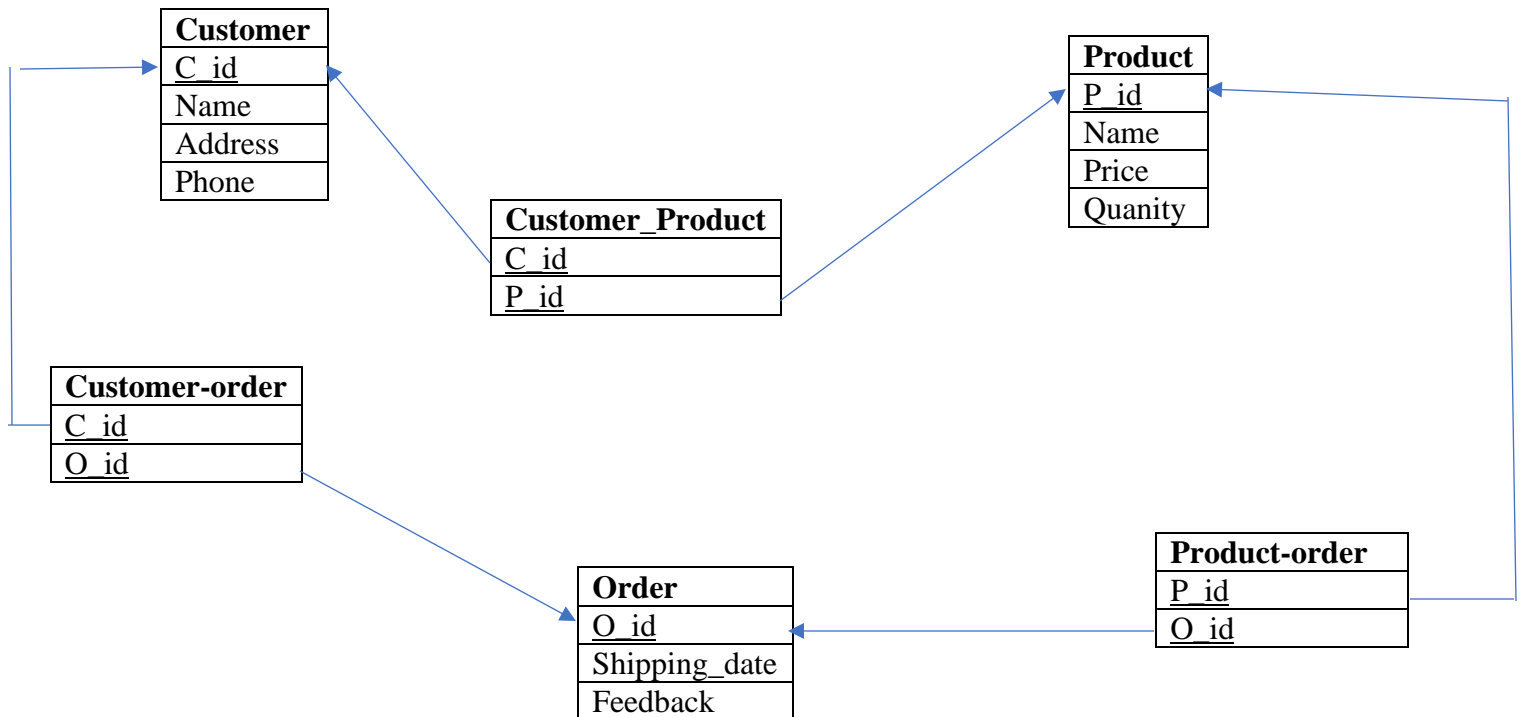
a. Model the database using ER diagram

[25 points]



b. Convert the ER diagram to non-redundant relation schemas.

[10 points]



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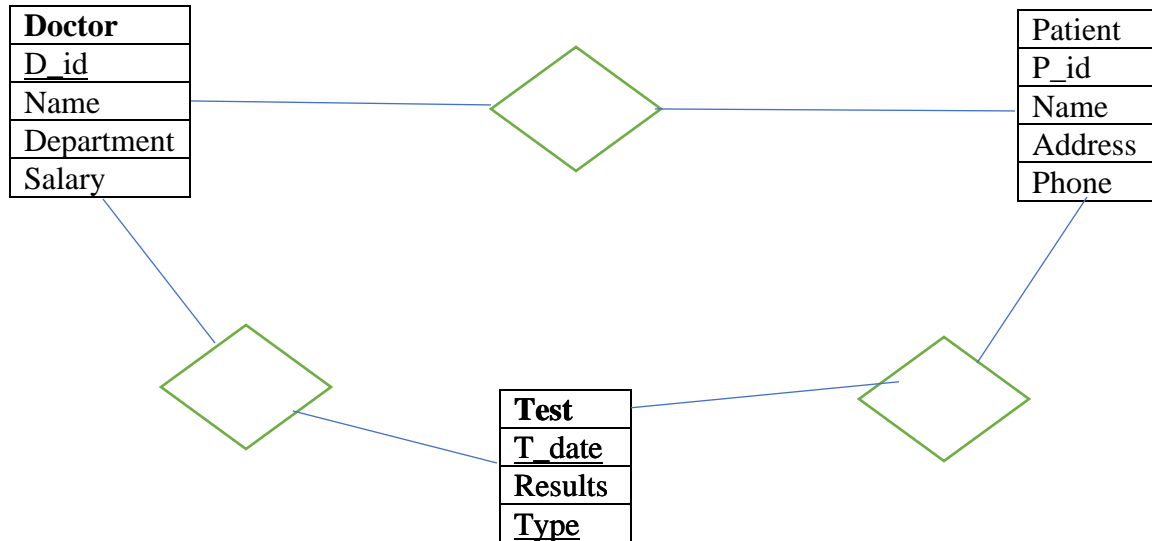
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3. For a hospital, we want to store information about patients, doctors. We also would like to keep records of various tests conducted for each patient.

a. Model the database using ER diagram

[25 points]



b. Convert the ER diagram to non-redundant relation schemas.

[15 points]

