Databases System and Design

Third Lap

First Problem

- **1. For each of the following pairs of related entities, indicate whether (under typical circumstances) there**
- **is a one-to-many or a many-to-many relationship. Then, using the**
- **shorthand notation introduced in the text, draw a diagram for each of the relationships. You are going to**
- **create a basic ER diagram using Microsoft power point.**

a. STUDENT and COURSE (students register for courses)

- Many to many

b. BOOK and BOOK COPY (books have copies)

- One to many

c. COURSE and SECTION (courses have sections)

- One to many

d. SECTION and ROOM (sections are scheduled in rooms)

- One to One

e. INSTRUCTOR and COURSE

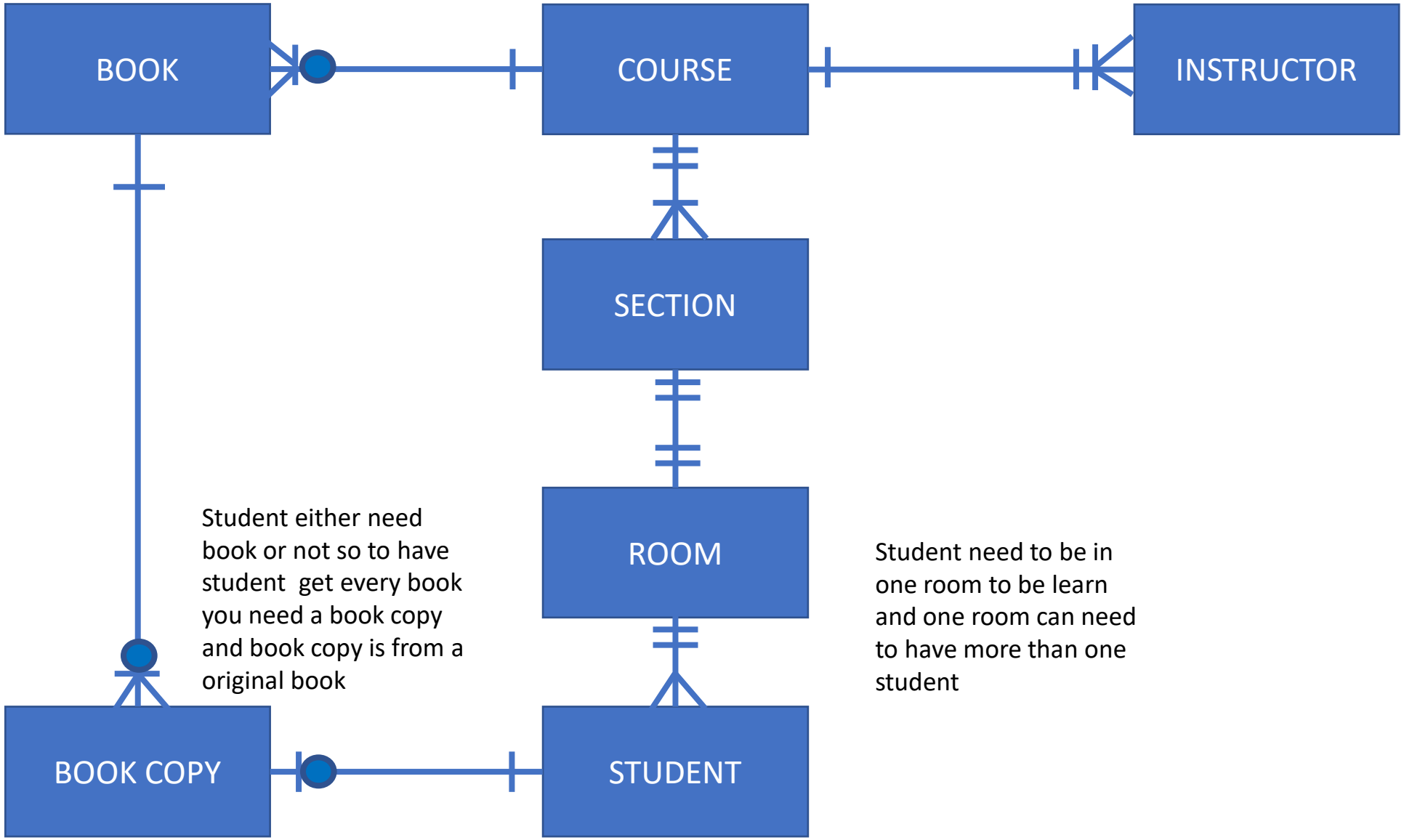
- Many to One

Second Problem

- Consider a CAMT student club or organization in which you are a member. What are the data entities
- of this enterprise? List and define each entity. Then, develop an enterprise data model showing these
- entities and important relationships between them.(10 points)

ER diagram

Because course need instruction to create content so course might need a book or if instructor very good at teaching, they can use instruction from instructor



Student either need book or not so to have student get every book you need a book copy and book copy is from a original book

Student need to be in one room to be learn and one room can need to have more than one student

Third problem

- 3. Figure below shows an enterprise data model for a pet store. (10 points)
- a. What is the relationship between Pet and Store (one-to-one, many-to-many, or one-to-many)?
  - One-to-many : because Store is only a place to sell pets
- b. What is the relationship between Customer and Pet?
  - One-to-many : because One customer can buy one or more pet
- c. Do you think there should be a relationship between Customer and Store?
  - one-to-one : because One customer need to go to pet store to buy pet