
Database Systems -

Introduction to Databases and Data Warehouses

**CHAPTER 2 - Database Requirements and ER
Modeling**

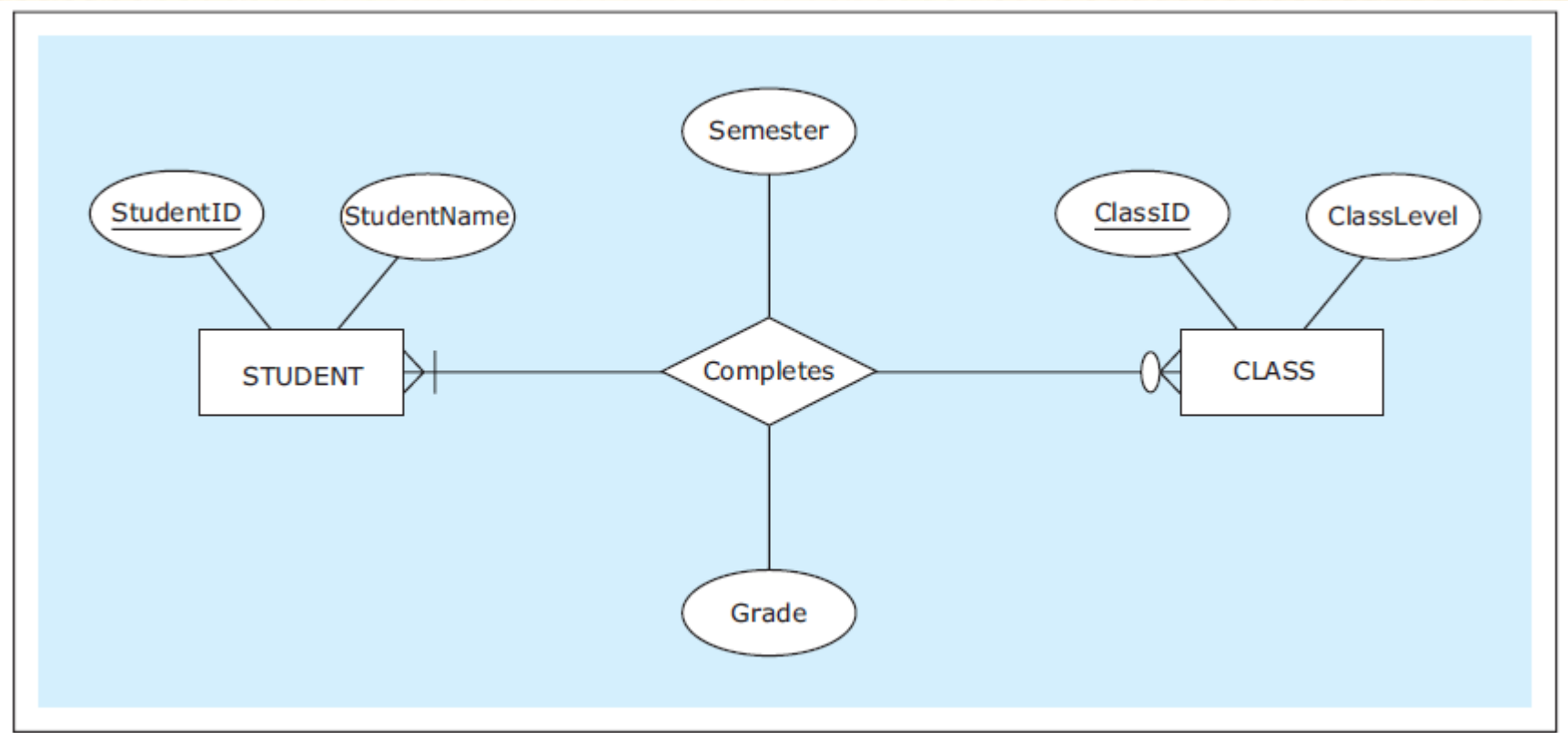
(This file is created Just For Final Exam)

M:N RELATIONSHIPS WITH MULTIPLE INSTANCES BETWEEN THE SAME ENTITIES

- M:N relationships may have **multiple occurrences** between the **same instances** of **involved entities**
 - Example in next slide

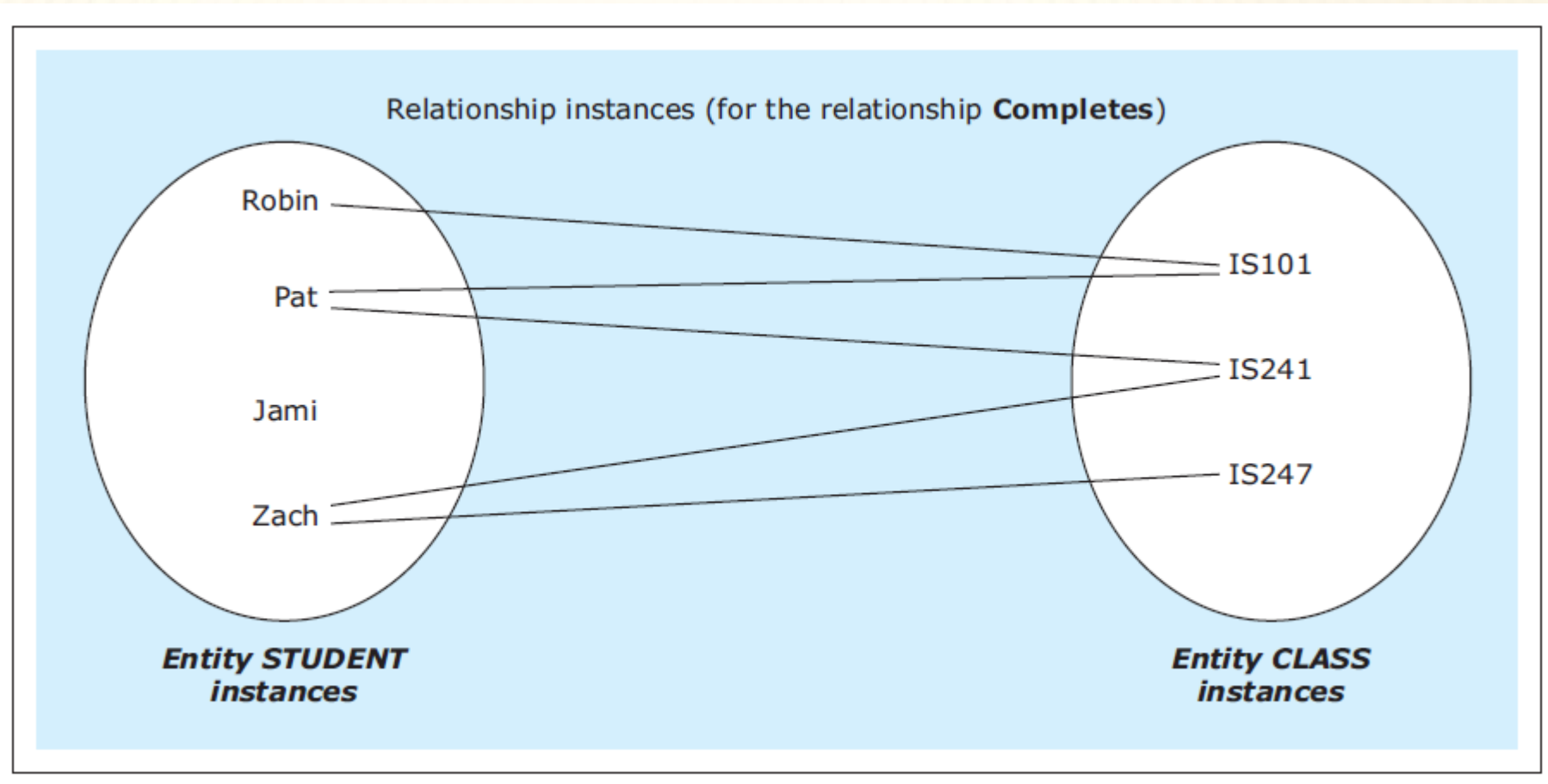
M:N RELATIONSHIPS WITH MULTIPLE INSTANCES BETWEEN THE SAME ENTITIES

An ER diagram for an M:N relationship depicting students completing classes



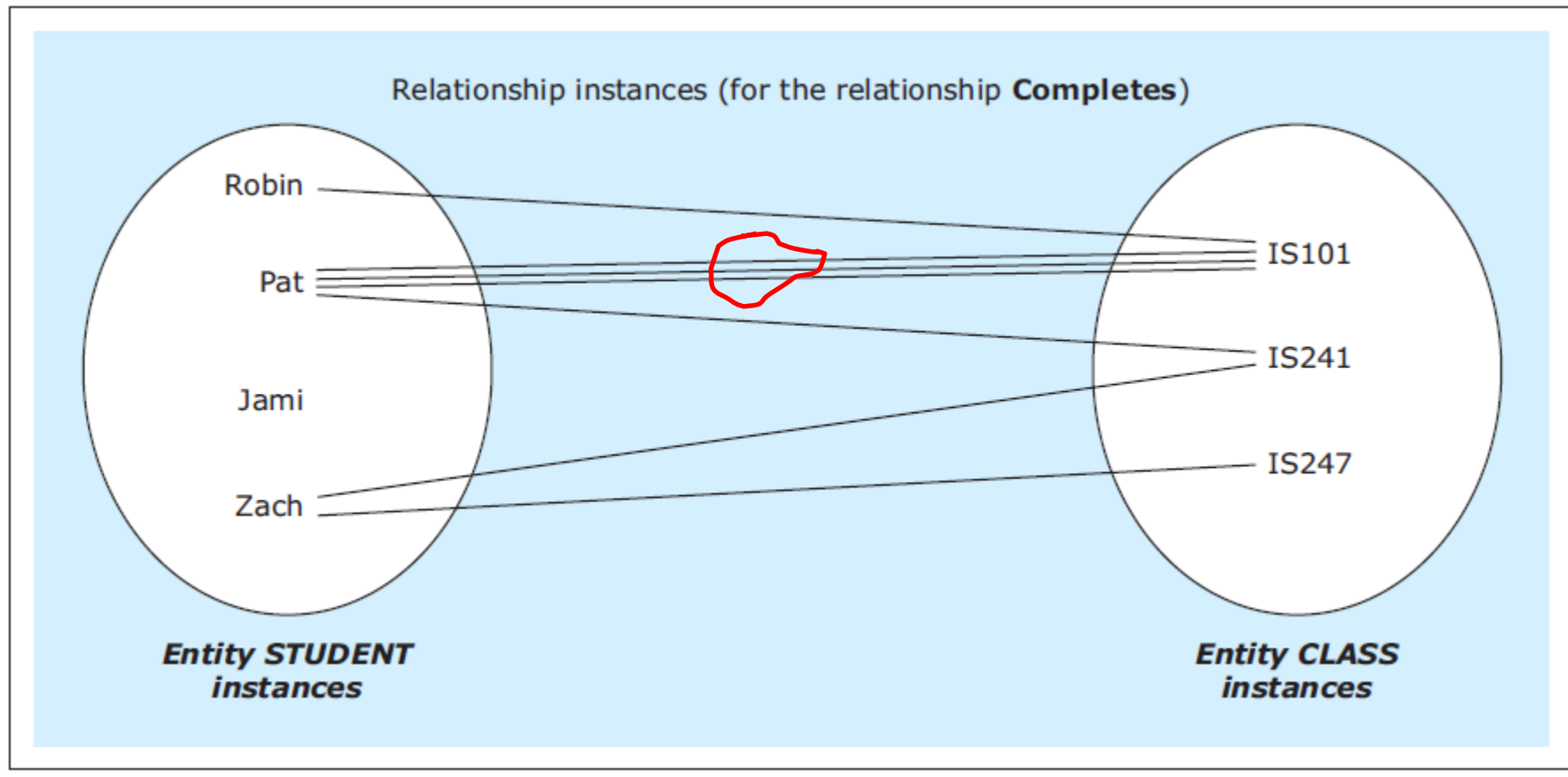
M:N RELATIONSHIPS WITH MULTIPLE INSTANCES BETWEEN THE SAME ENTITIES

Instances of the M:N relationship Completes



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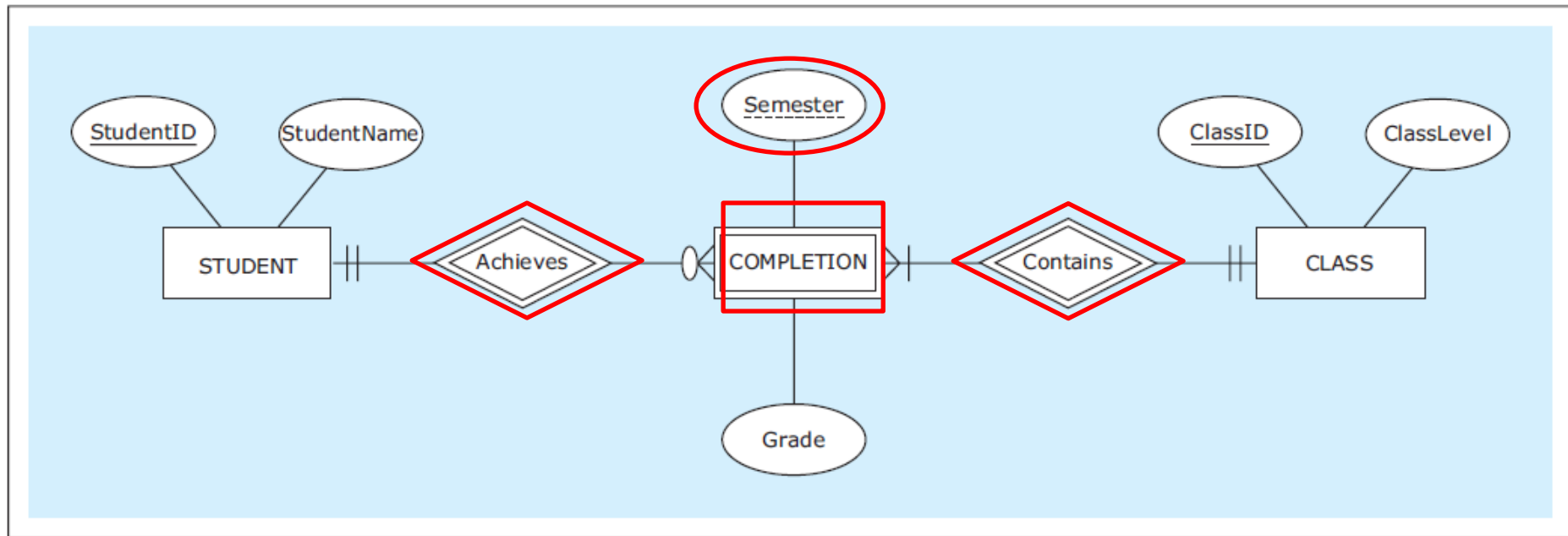
Instances of the M:N relationship **Completes** with an **additional requirement: one student takes same class multiple times**



M:N RELATIONSHIPS WITH MULTIPLE INSTANCES BETWEEN THE SAME ENTITIES

CanNOT be represented in a M:N relationship

Can be represented as a weak entity with partial key and multiple owner entities. Example:



Note the cardinality constraints