

**ISEM 3006 Data Management in Business
In-class Exercise
For Relational Data Model I**

For the following problems, assumes that the tables have shown all the records.

The following two tables come from the database that records the books own by a school library. In the Book table, the BookCode is the primary key and the PubCode is a foreign key refers to the PubCode of the Publisher table which holds information about publishers. The PubCode is the primary key of the Publisher table.

Book

BOOKCODE	BOOKTITLE	PUBCODE
0180	Sky High	AH
0189	Magic 101	AH
0200	Stranger in City	BP
0189	Facing Pandemic	GG
0220	Magic 101	

Publisher

PUBCODE	PUBNAME
AH	Arkham
BA	Basic Books
BP	Berkley

a. Do the tables violate entity integrity? Explain your answer.

Yes, the primary key of Book table (BOOKCODE) has duplicate value (0189) for different books.

b. Do the tables violate referential integrity? Why?

Yes, the foreign key of Book table has value (GG), which is not in the Publisher table.

2. The following two tables come from the database that records the books own by a school library. In the Book table, the BookCode is the primary key and the PubCode is a foreign key refers to the PubCode of the Publisher table which holds information about publishers. The PubCode is the primary key of the Publisher table.

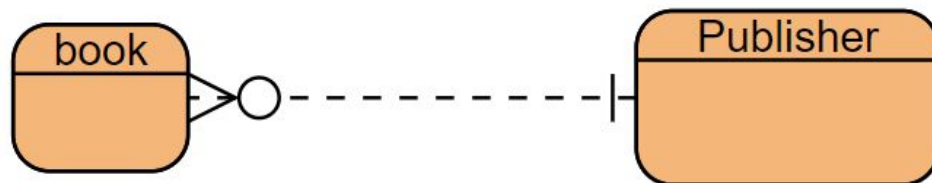
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- a. Do the tables violate entity integrity? Explain your answer.
No, the primary key value of Book table (BOOKCODE) are all unique and not null.
- b. Do the tables violate referential integrity? Why?
No, the foreign key value of Book table (PUBCODE) are all in the the primary key value of Publisher table (PUBCODE).
- c. Create the Relational Diagram for Book AND Publisher.



Book (BOOKCODE , BOOKTITLE , PUBCODE)

Publisher (PUBCODE , PUBNAME)

