

# Database ER Diagram



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# 1 Learning Task

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A. Draw the ER diagram of the case presented above!

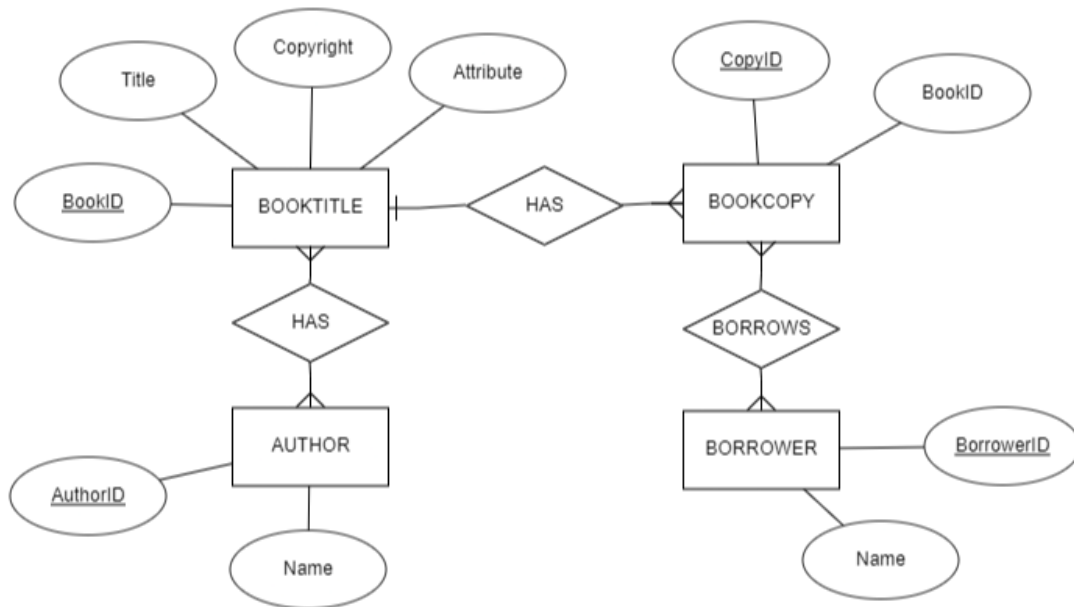


Figure 1: The Entity Relationship Diagram for the above case study

B. What relationship exists between BOOKTITLE and BOOKCOPY if there is?

The relationship between BOOKTITLE and BOOKCOPY is 1-n or one to many. This is due to the fact that each BOOKTITLE can have many copies but not the other way around.

C. What relationship exists between BOOKTITLE and BORROWER if there is?

The relationship between BOOKTITLE and BORROWER is n-m or many to many. This is because a BOOKTITLE can be borrowed by multiple BORROWER but multiple BORROWER can also borrow the same BOOKTITLE.

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D. How many relationships or associations exist in the ER Model for the given problem?

There are 3 relations on this case study, namely:

- Relation between BOOKTITLE and BOOKCOPY which is 1-n or one to many
- Relation between AUTHOR and BOOKTITLE which is n-m or many to many
- Relation between BORROWER and BOOKCOPY which is n-m or many to many

E. What will be the attributes of the BOOKCOPY table including the primary keys and foreign keys?

The BOOKCOPY table will have the **CopyID** as its primary key and **BookID** as its foreign key which is used to connect itself to the BOOKTITLE table.

F. What foreign key will be set for the BOOKTITLE and BOOKCOPY relationship?

Since the relationship for BOOKTITLE and BOOKCOPY is many to many, there needs to be a pivot table. The pivot table will have the **BookID** and **CopyID** as its foreign key which refers to both table primary key.