Relationship Attributes

Bachelor of Information Systems

INTRODUCTION TO
DATABASE AND INFORMATION SYSTEM

Learning Objective(s)

This material should address the following question(s).

- When to use relationship attribute?
- Is it applicable to any type of relationship?

The role of an attribute

The main role of an attribute is to describe an entity, a relationship, or another attribute.

Case Study

Inside the campus library.

Case Study

- A library has a multitude copies of books, articles, etc.
  - New collections come periodically.
- Anyone may come and enjoy the collections.
  - Only library members can lend books for period of time.

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How to express the lending

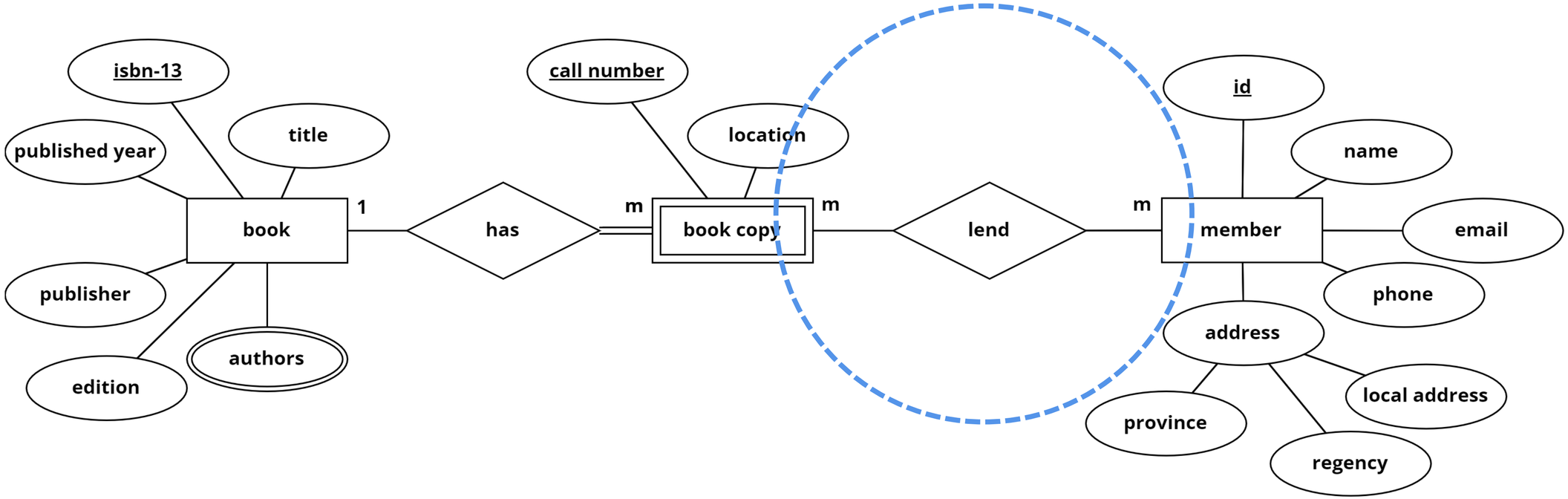
Case Study

Inside the campus library.

- It happens between the member and the book copy entity.
  - A member may lend a copy today and another copy tomorrow.
  - A copy may be lent today, be returned, and be lent again another day.

- It is a **M:N** relationship.

How to express the lending ?



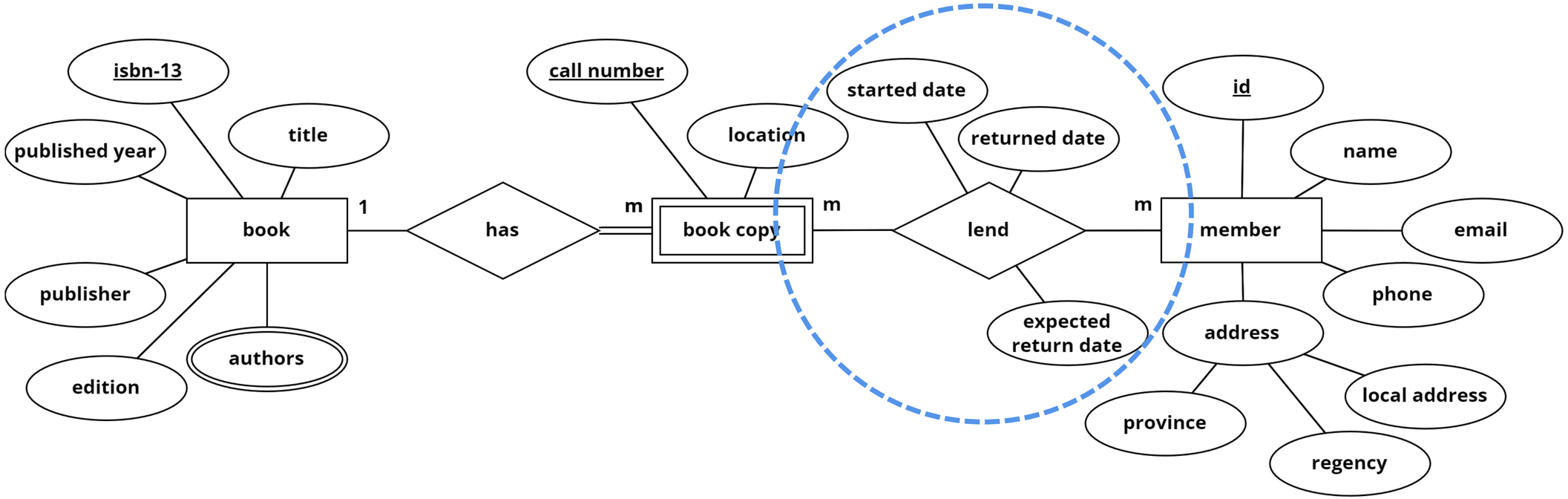
A M:N relationship is formed between the **book copy** and **member** entities.

Case Study

Inside the campus library.

- It happens between the member and the book copy entity.
  - A member may lend a multiple book copies.
  - A copy may be lent to multiple members in different time period.
- It is a **M:N** relationship.

- The lending itself must be described further with:
  - When did it happen?
  - When should the copy be returned?
  - When the copy was actually returned?



Additional attributes are attached to the lend relationship
to better describe the lending itself.

Question

Is it possible to add attributes to any type of relationship?

Question

Is it possible to add attributes to any type of relationship?

Yes! Attachable in `1:1`, `1:M`, or `M:N` relationship.

Conclusion

- Attributes can be attached to a relationship to better describe the relationship.
- Attributes are attachable to 1:1, 1:M, or M:N relationship.

References

- R, Elmasri, et. al., Fundamentals of Database Systems.
- A. Silberschatz, et. al., Database System Concepts.
- R. K. Rainer, et. al., Introduction to Information Systems.
- G. M. Marakas et. al., Introduction to Information Systems: Essentials for The e-Business Enterprise.

Course

Mario E. S. Simaremare

@simaremare

Lecturer

Samuel I. G. Situmeang

@exemuel