ERD (Entitiy Relationship Diagram).

Entities:

1. Employees.
2. Floors.
3. Users.
4. Books.
5. Author.
6. Publisher.
7. Shelf.

Attributes:

1. Employee:
   1. Supervises other employees (recursive relationship). 🡺 self relationship (one to one)
   2. Manages one floor.
   3. Records data of user.
   4. Records borrowing details for books.
2. Floor:
   1. Managed by one Employee.
   2. Contains multiple Employees.
   3. Contains multiple Shelves.
3. Shelf:
   1. Located on one floor.
   2. Contains multiple Books.
4. Book:
   1. Has many Publisher.
   2. Many belong to multiple Authors.
   3. Classified under one Category.
   4. Located on one Shelf.
   5. Borrowed by multiple user.
5. Author:
   1. Many author multiple Books.
6. Publisher:
   1. Many publish multiple Books.
7. Category:
   1. Many contain multiple Books.
8. User:
   1. Borrow multiple Books.
   2. Recorded by one Employee.
9. Borrowing (Associative Entity):
   1. Involves on User, one Book, and one employees.

Relationships:

1. Employee 🡨🡪 Floor:
   1. 1-to-1: One employee manages one floor.
   2. 1-to-Many: A floor has many Employees.
2. Floor 🡨🡪Shelf:
   1. 1-to-Many: A floor contains many shelves.
3. Shelf 🡨🡪Book:
   1. 1-to-Many: A shelf contains many books.
4. Book 🡨🡪 Author:
   1. Many-to-Many: A book may have multiple authors, and an author my write multiple books.
5. Book 🡨🡪Publisher:
   1. 1-to-Many: An Employee records data for multiple users.
6. Book 🡨🡪 Category:
   1. 1-to-Many: A book belongs to one category, and a category contains many books.
7. Employee 🡨🡪 User:
   1. 1-to-Many: An Employee records data for multiple users.
8. User 🡨🡪 Borrowing 🡨🡪 Book:
   1. Many-to-Many: A user may borrow multiple books, and a book may be borrowed by multiple users (via Borrowing).
9. Borrowing 🡨🡪 Employee:
   1. 1-to-Many: A borrowing record is created by one Employee.