Entity Relationship Diagram

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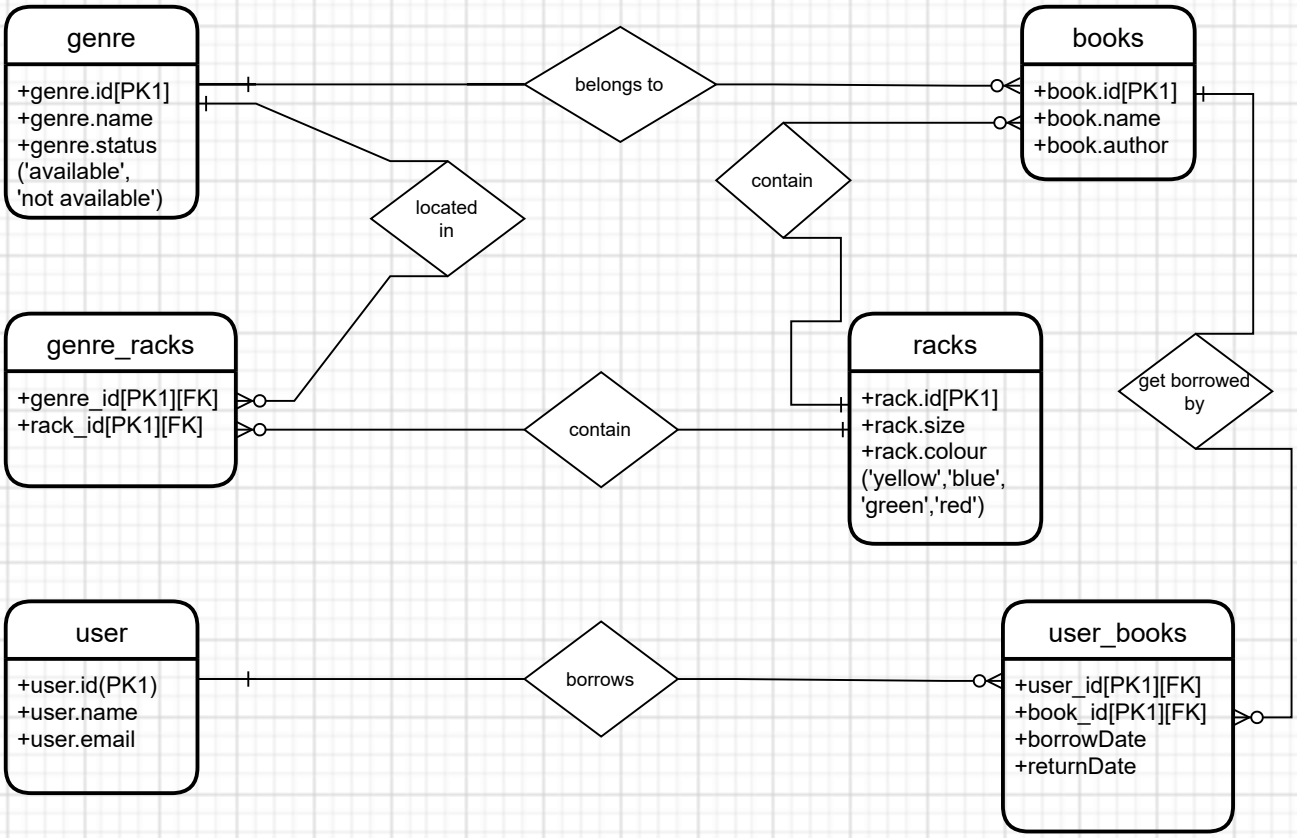

1. Identify Entities:

The entities in ‘a library’ system are Gerne, Racks, Books and User.

2. Find Relationships:

The following Entity Relationship Matrix is constructed.

	Genre	**Racks**	**Books**	**User**
Ganre		located in	belongs to	
Racks	contain		contain	
Books	belong to	located in		get borrowed by
User			borrows	

3. Fill in Cardinality

From the description of the problem we see that:

- Each genre has 0 to many books.
- Each genre is located in 0 to many racks.
- A rack contains 0 to many genres.
- A book located in a rack.
- A user borrows 0 to many books.
- A book gets borrowed by 0 to many users.

4. Define Primary Keys

The primary keys are genre id, racks id, books id, user id.

5. Map Attributes

Attribute	**Entity**	**Attribute**	**Entity**
genre.id genre.name genre.status	genre	rack.id; rack.size rack.color	racks
book.id book.name book.author	books	user.id user.name user.email	user