

| USERS    |               |    |                           |
|----------|---------------|----|---------------------------|
| uuid     | user_id       | PK | references auth.users(id) |
| string   | first_name    |    |                           |
| string   | last_name     |    |                           |
| enum     | role          |    | customer, librarian       |
| datetime | created_at    |    |                           |
| boolean  | is_active     |    |                           |
| int      | penalty_count |    |                           |

| BOOKS    |                  |    |
|----------|------------------|----|
| int      | book_id          | PK |
| string   | isbn             | UK |
| string   | title            |    |
| string   | author           |    |
| string   | publisher        |    |
| int      | publication_year |    |
| string   | category         |    |
| int      | total_copies     |    |
| int      | available_copies |    |
| datetime | created_at       |    |
| datetime | updated_at       |    |

| RESERVATIONS |                  |    |                                      |
|--------------|------------------|----|--------------------------------------|
| int          | reservation_id   | PK |                                      |
| int          | user_id          | FK |                                      |
| int          | book_id          | FK |                                      |
| datetime     | reservation_date |    |                                      |
| datetime     | due_date         |    |                                      |
| datetime     | return_date      |    |                                      |
| enum         | status           |    | active, returned, overdue, cancelled |
| boolean      | reminder_sent    |    |                                      |
| datetime     | created_at       |    |                                      |

| PENALTIES |                |    |                       |
|-----------|----------------|----|-----------------------|
| int       | penalty_id     | PK |                       |
| int       | user_id        | FK |                       |
| int       | reservation_id | FK |                       |
| decimal   | amount         |    |                       |
| string    | reason         |    |                       |
| enum      | status         |    | pending, paid, waived |
| datetime  | created_at     |    |                       |

