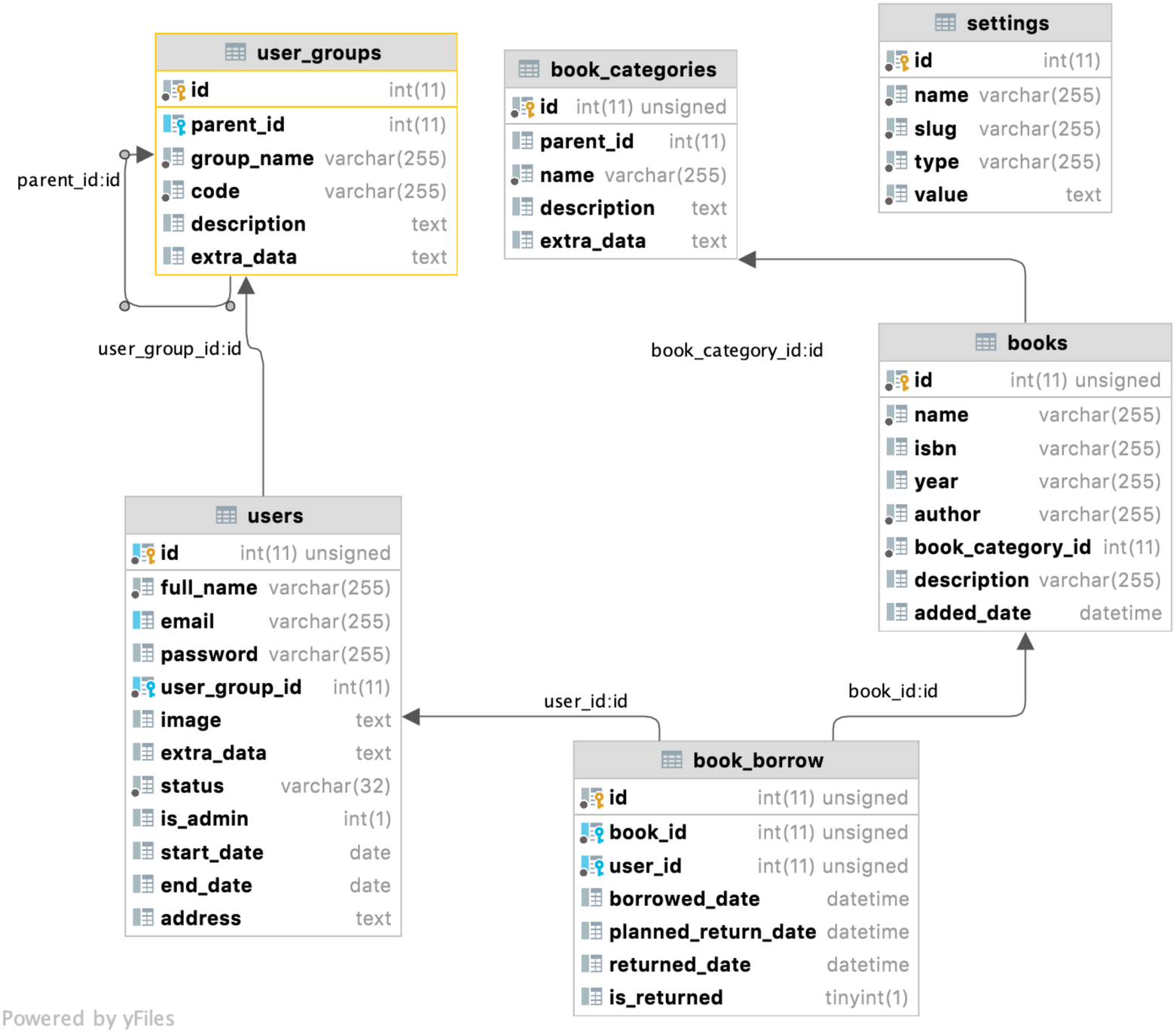
LIBRARY SCHEMA



CYDEO

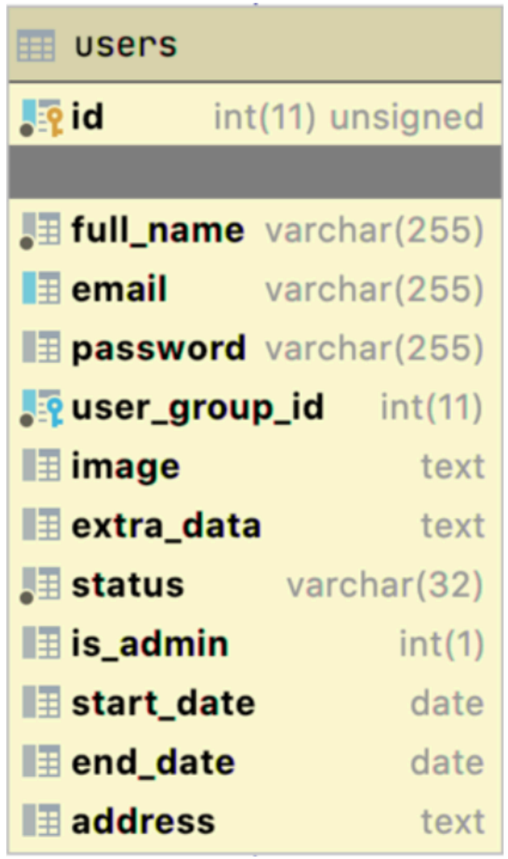
Powered by yFiles

User Story 01

```
Feature: As a data consumer, I want the user information are stored in mySql DB correctly in users table.

  Background:
    Given Establish the database connection

  Scenario: verify users has unique IDs
    When Execute query to get all IDs from users
    Then verify all users has unique ID

  Scenario: verify users table columns
    When Execute query to get all columns
    Then verify the below columns are listed in result

      | id           |
      | full_name    |
      | email        |
      | password     |
      | user_group_id |
      | image        |
      | extra_data   |
      | status       |
      | is_admin     |
      | start_date   |
      | end_date     |
      | address      |
```

If we can start without given we can delete background

ONLY DB

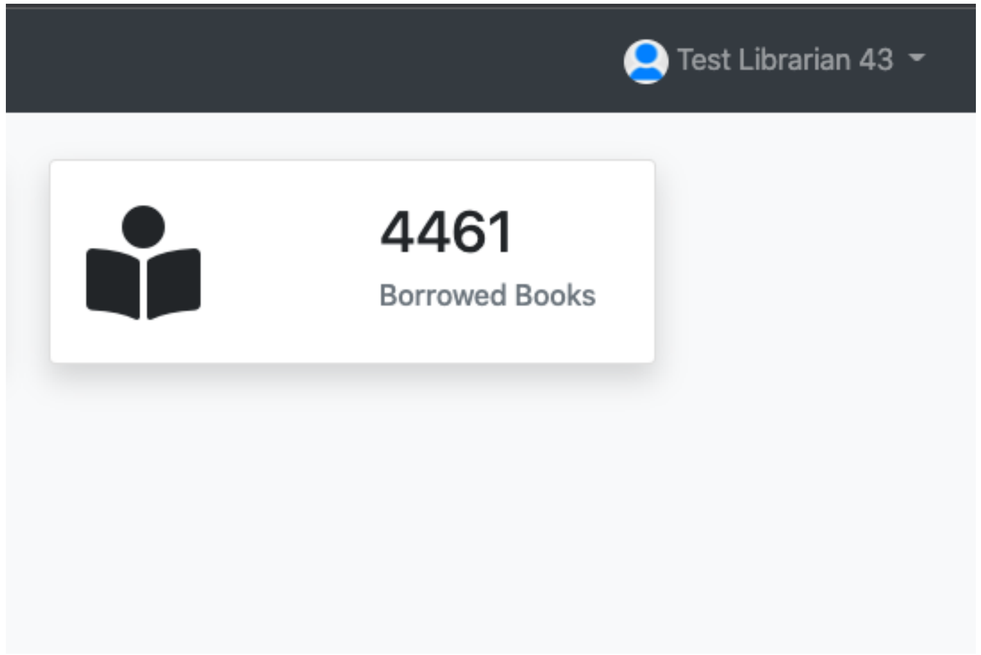


CYDEO

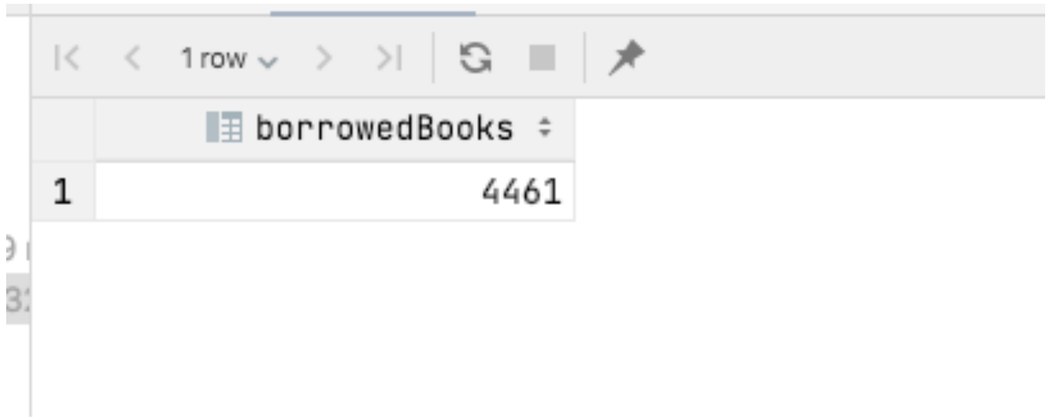
User Story 02

```
Feature: As a librarian, I want to know borrowed books number

Scenario: verify the total amount of borrowed books
  Given I login as a librarian
  When I take borrowed books number
  Then borrowed books number information must match with DB
```

UI



DB



Query :

```
select count(*) as borrowedBooks from users u
inner join book_borrow b on u.id = b.user_id where is_returned = 0;
```

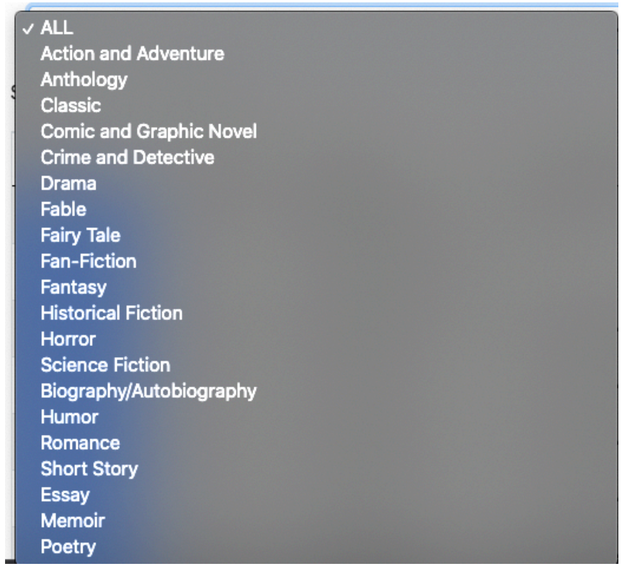
CYDEO

User Story 03

Feature: As a data consumer, I want UI and DB book categories are match.

Scenario: verify book categories with DB
- **Given** I login as a librarian
- **When** I navigate to "Books" page
- **And** I take all book categories in UI
- **And** I execute query to get book categories
- **Then** verify book categories must match book_categories table from db

UI



DB

	name
1	Action and Adventure
2	Anthology
3	Classic
4	Comic and Graphic Novel
5	Crime and Detective
6	Drama
7	Fable
8	Fairy Tale
9	Fan-Fiction
10	Fantasy
11	Historical Fiction
12	Horror
13	Science Fiction
14	Biography/Autobiography
15	Humor
16	Romance
17	Short Story
18	Essay
19	Memoir
20	Poetry

Query : `select name from book_categories;`

CYDEO

User Story 04

Feature: As a data consumer, I want UI and DB book information are match.

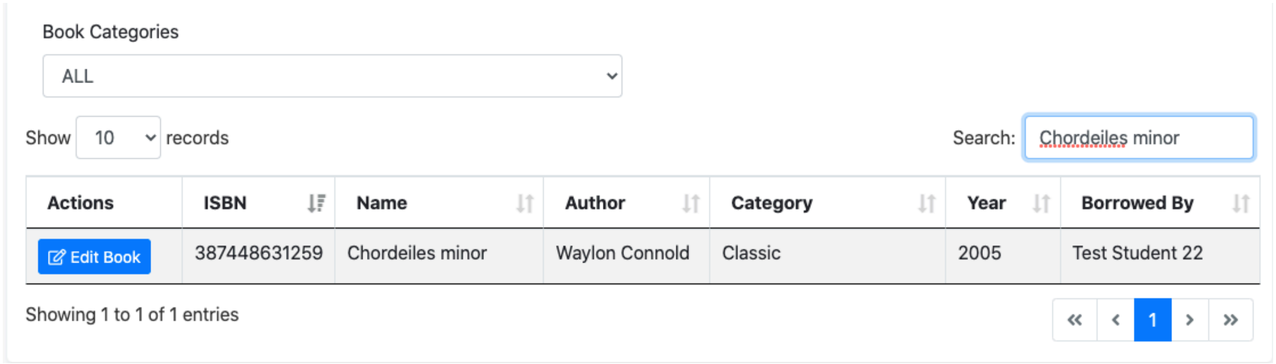
Scenario: Verify book information with DB
Given I login as a librarian
And I navigate to "Books" page
When I open book "Chordeiles minor"
Then book information must match the Database

DB

1 row | Tx: Auto | DDL

	name	author	year
1	Chordeiles minor	Waylon Connold	2005

UI



Query :

```
select name, author,year from books where name='Chordeiles minor';
```

CYDEO

User Story 05

Feature: As a librarian, I want to know genre of books are being borrowed the most

Scenario: verify the the common book genre that's being borrowed
Given Establish the database connection
When I execute query to find most popular book genre
Then verify "Action and Adventure" is the most popular book genre.

Since most popular genre is dynamic this feature needs to be update before release the assignment.

	name	`count(*)`
1	Action and Adventure	1889
2	Fan-Fiction	1137
3	Historical Fiction	835
4	Classic	545
5	Anthology	244
6	Drama	186
7	Fable	142
8	Horror	65
9	Comic and Graphic Novel	63
10	Fantasy	62
11	Science Fiction	56

Query :

```
select bc.name,count(*) from book_borrow bb
    inner  join books b on bb.book_id = b.id
    inner join book_categories bc on b.book_category_id=bc.id
group by name
order by 2 desc;
```

CYDEO

User Story 06

```
Feature: Books module
  As a librarian, I should be able to add new book into library


Scenario Outline: Verify added book is matching with DB
  Given I login as a librarian
  And I navigate to "Books" page
  When the librarian click to add book
  And the librarian enter book name "<Book Name>"
  When the librarian enter ISBN "<ISBN>"
  And the librarian enter year "<Year>"
  When the librarian enter author "<Author>"
  And the librarian choose the book category "<Book Category>"
  And the librarian click to save changes
  Then the librarian verify new book by "<Book Name>"
  Then the librarian verify new book from database by "<Book Name>"
  Examples:
```

Book Name	ISBN	Year	Author	Book Category
Clean Code	09112021	2021	Robert C.Martin	Drama
Head First Java	10112021	2021	Kathy Sierra	Action and Adventure
The Scrum Field Guide	11112021	2006	Mitch Lacey	Short Story

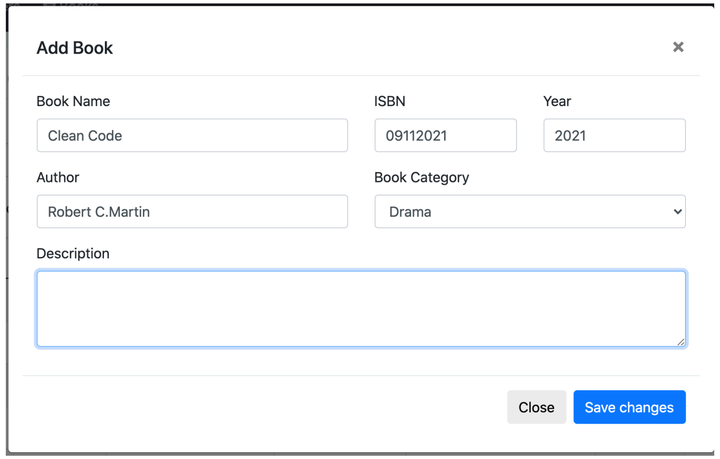
Query :

```
select id,name,author from books
where name = 'Clean Code' and author='Robert C.Martin'
order by id desc;
```

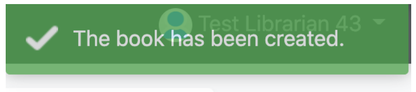
CYDEO

User Story 06

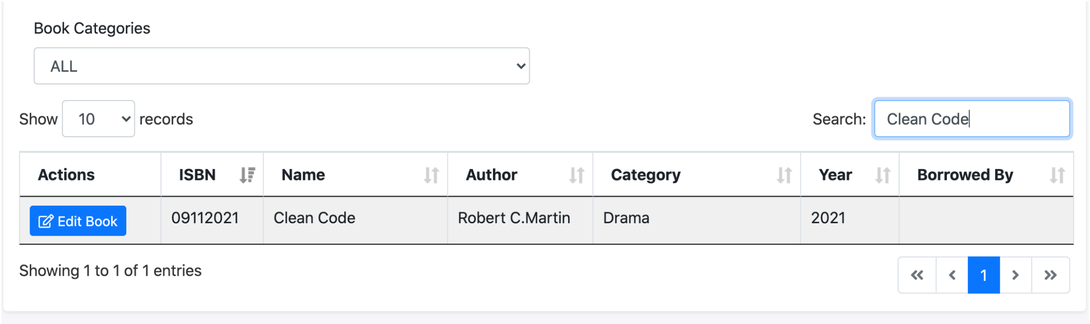
STEP 1



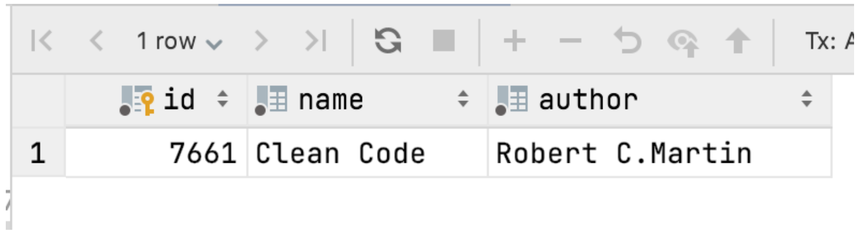
STEP 2



STEP 3



STEP 4 Database



CYDEO

User Story 07

```
Feature: Books module
  As a students, I should be able to borrow book


Scenario Outline: Student borrow new book
  Given I login as a student
  And I navigate to "Books" page
  And I search book name called "Head First Java"
  When I click Borrow Book
  Then  verify that book is shown in "Borrowing Books" page
  And  verify logged student has same book in database
```

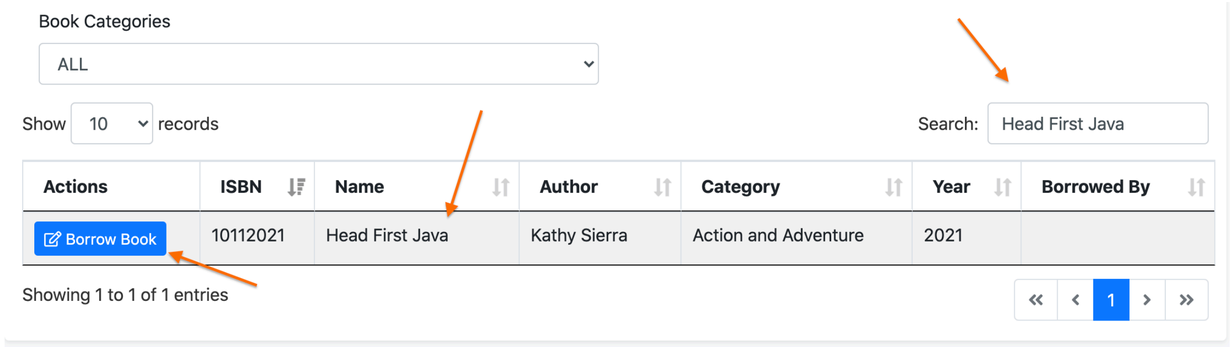
Query :

```
select full_name,b.name,bb.borrowed_date from users u
inner join book_borrow bb on u.id = bb.user_id
inner join books b on bb.book_id = b.id
where full_name='Test Student 38'
order by 3 desc;
```

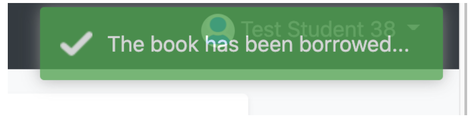
CYDEO

User Story 07

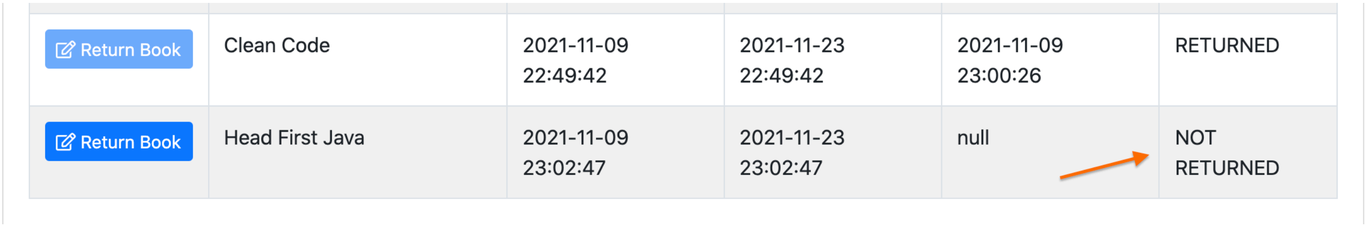
STEP 1



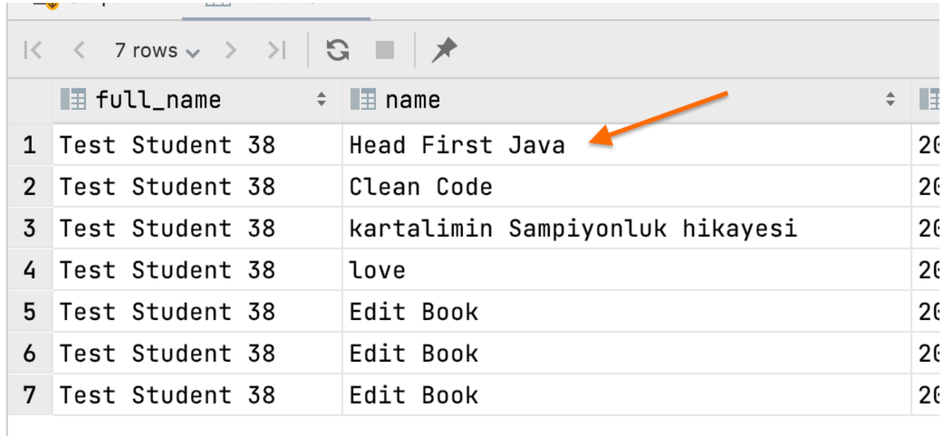
STEP 2



STEP 3



STEP 4 Database



CYDEO

User Story 08

```
Feature: Books module
  As a data consumer, I should be able to see borrowed book number are matching with DB


Scenario Outline: Verify borrowed book numbers are matching with DB
  Given I login as a student
  And I navigate to "Books" page
  And I search book name called "Head First Java"
  When I click Borrow Book
  Then  verify that book is shown in "Borrowing Books"
  And  verify logged student has same book in database
```

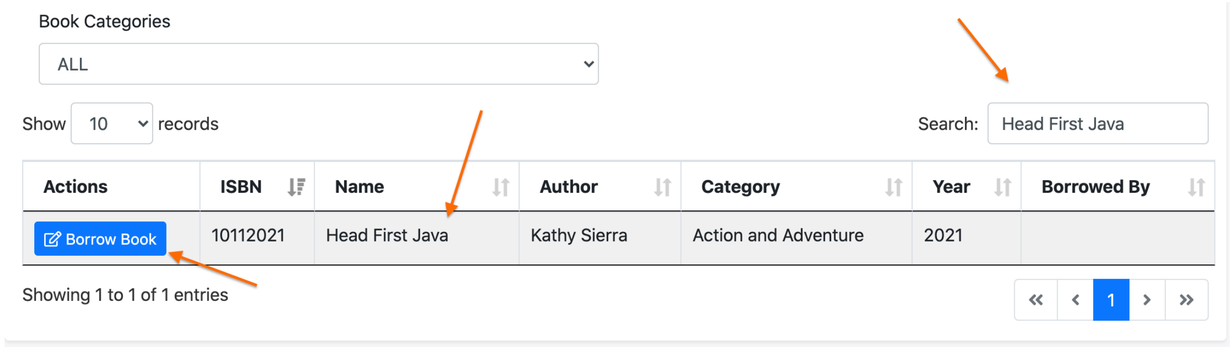
Query :

```
select full_name,b.name,bb.borrowed_date from users u
inner join book_borrow bb on u.id = bb.user_id
inner join books b on bb.book_id = b.id
where full_name='Test Student 38'
order by 3 desc;
```

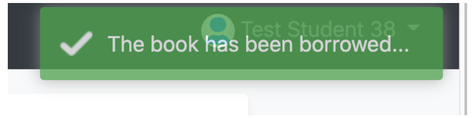
CYDEO

User Story 08

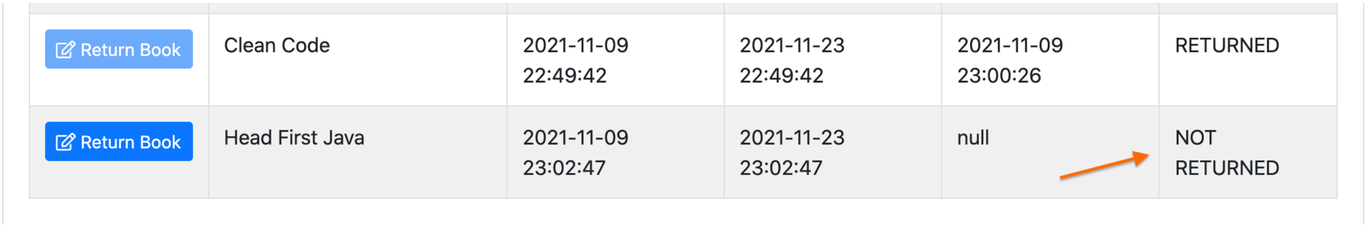
STEP 1



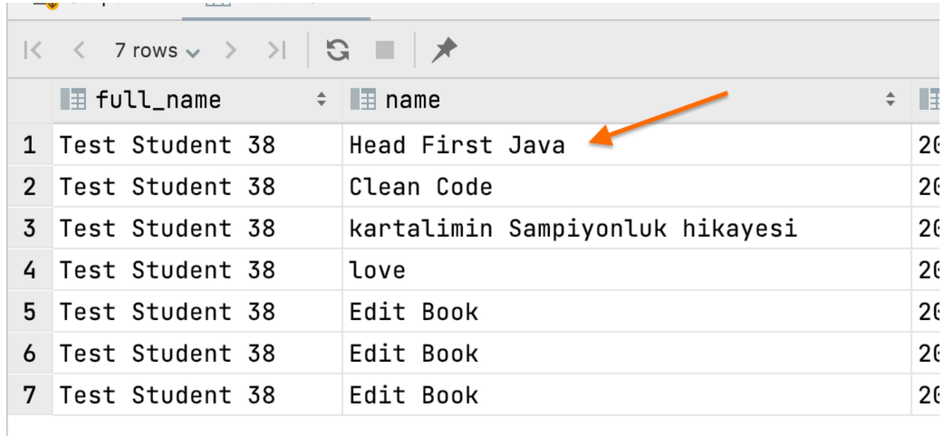
STEP 2



STEP 3



STEP 4 Database



CYDEO