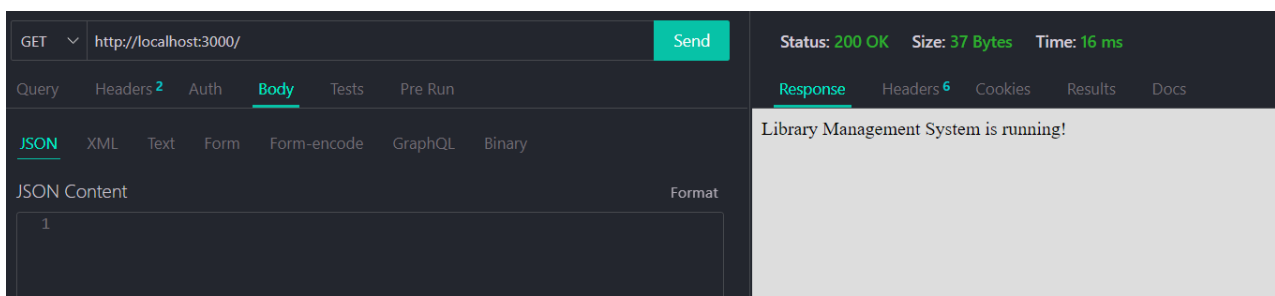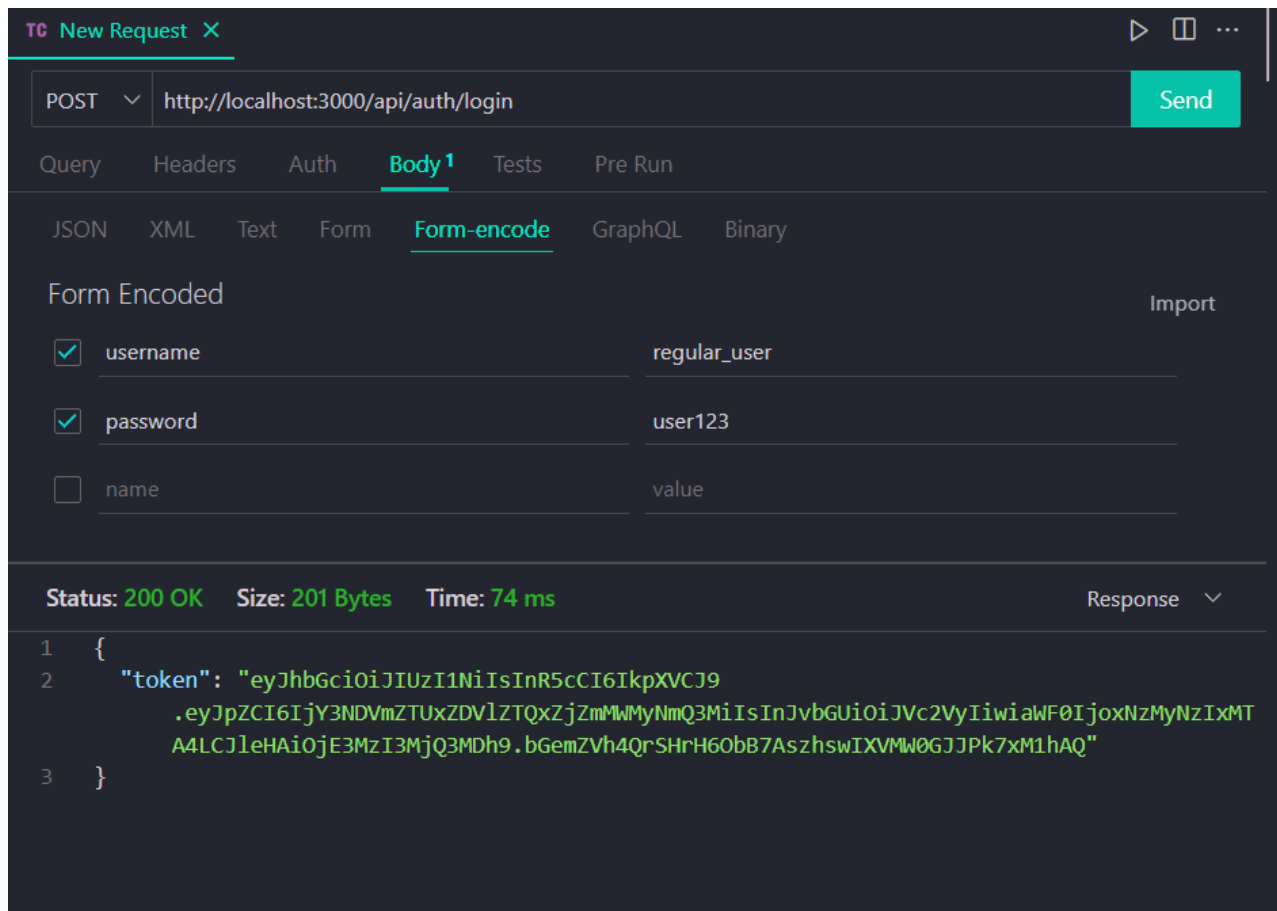# System Interaction and Permission Documentation

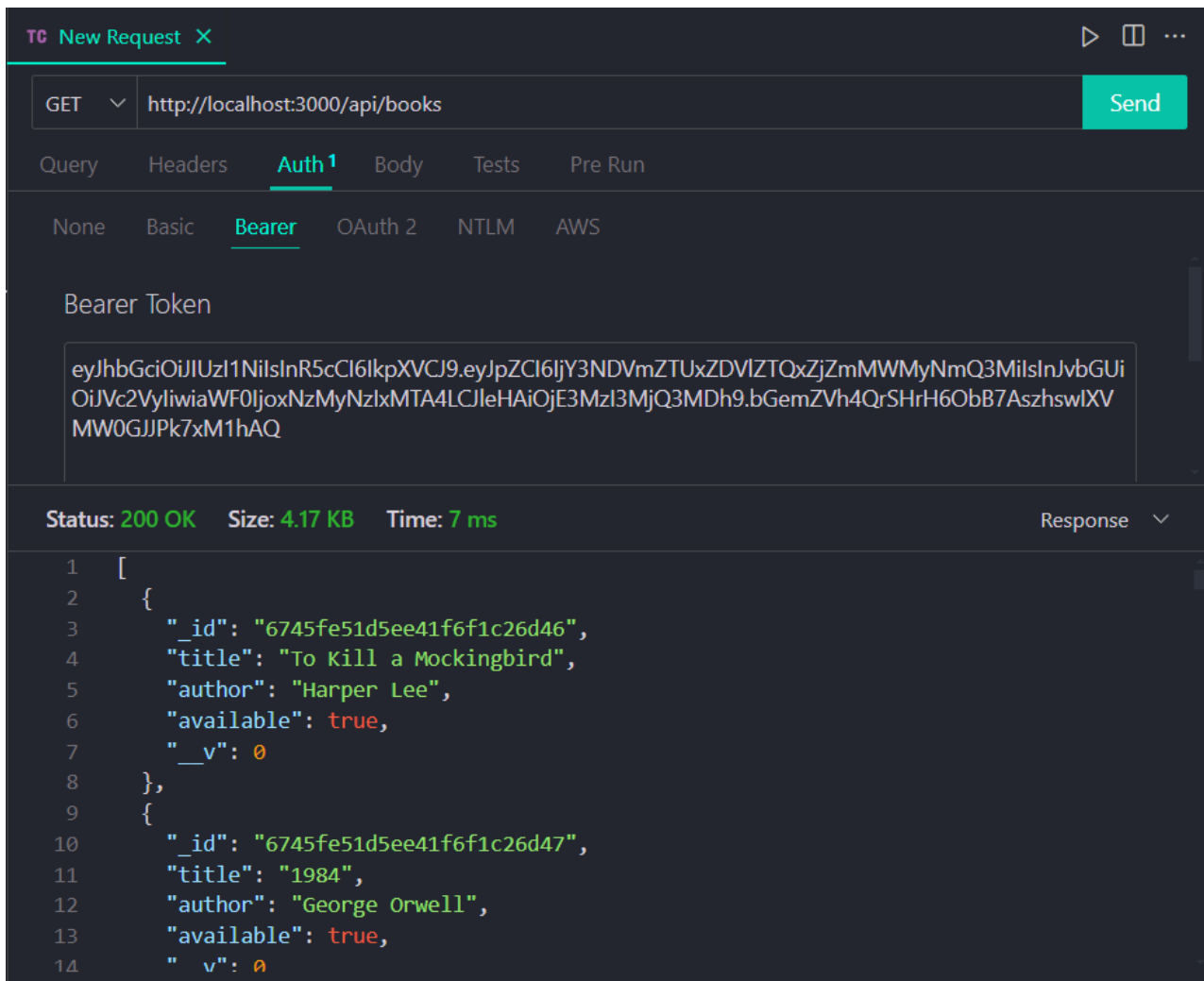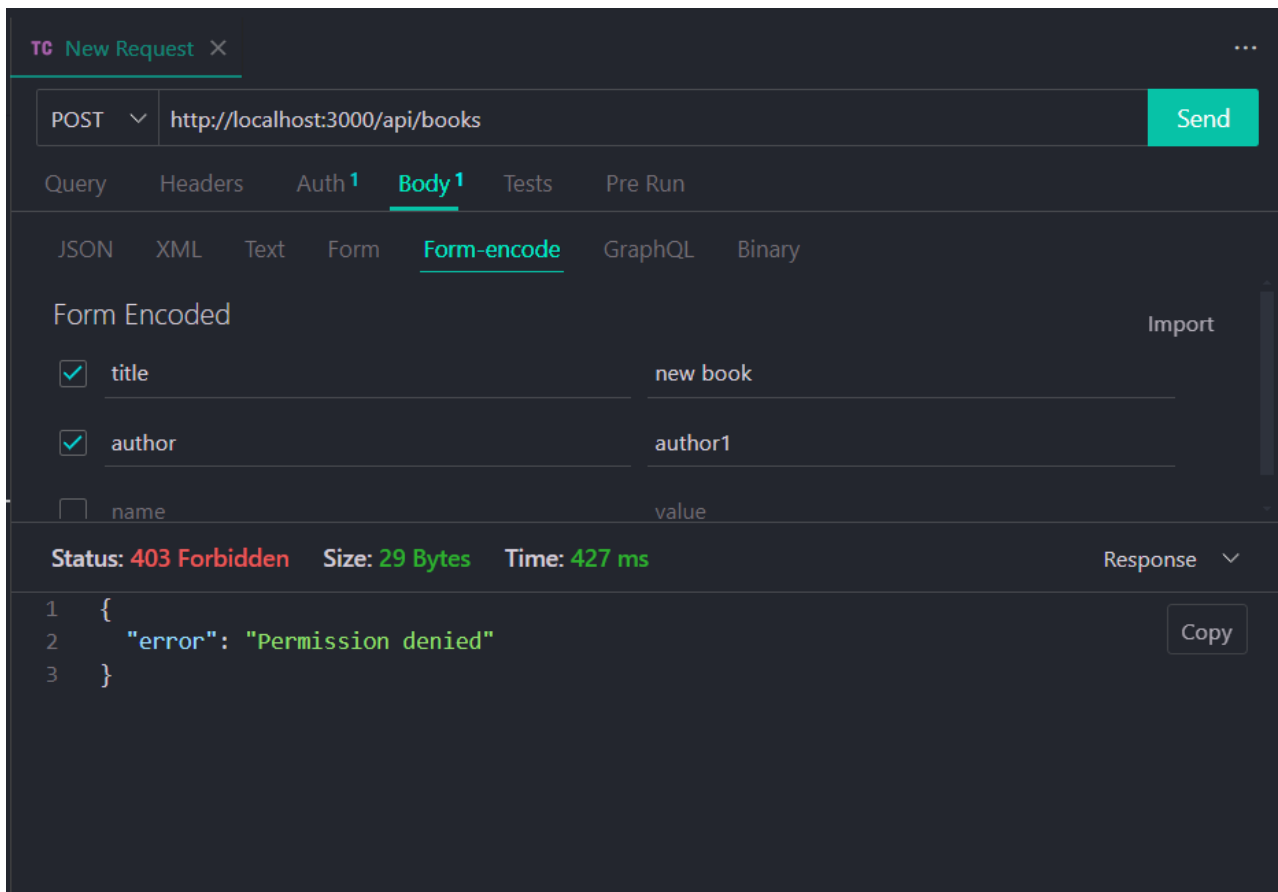## Library Management System

Ronak Hingonia

November 29, 2024

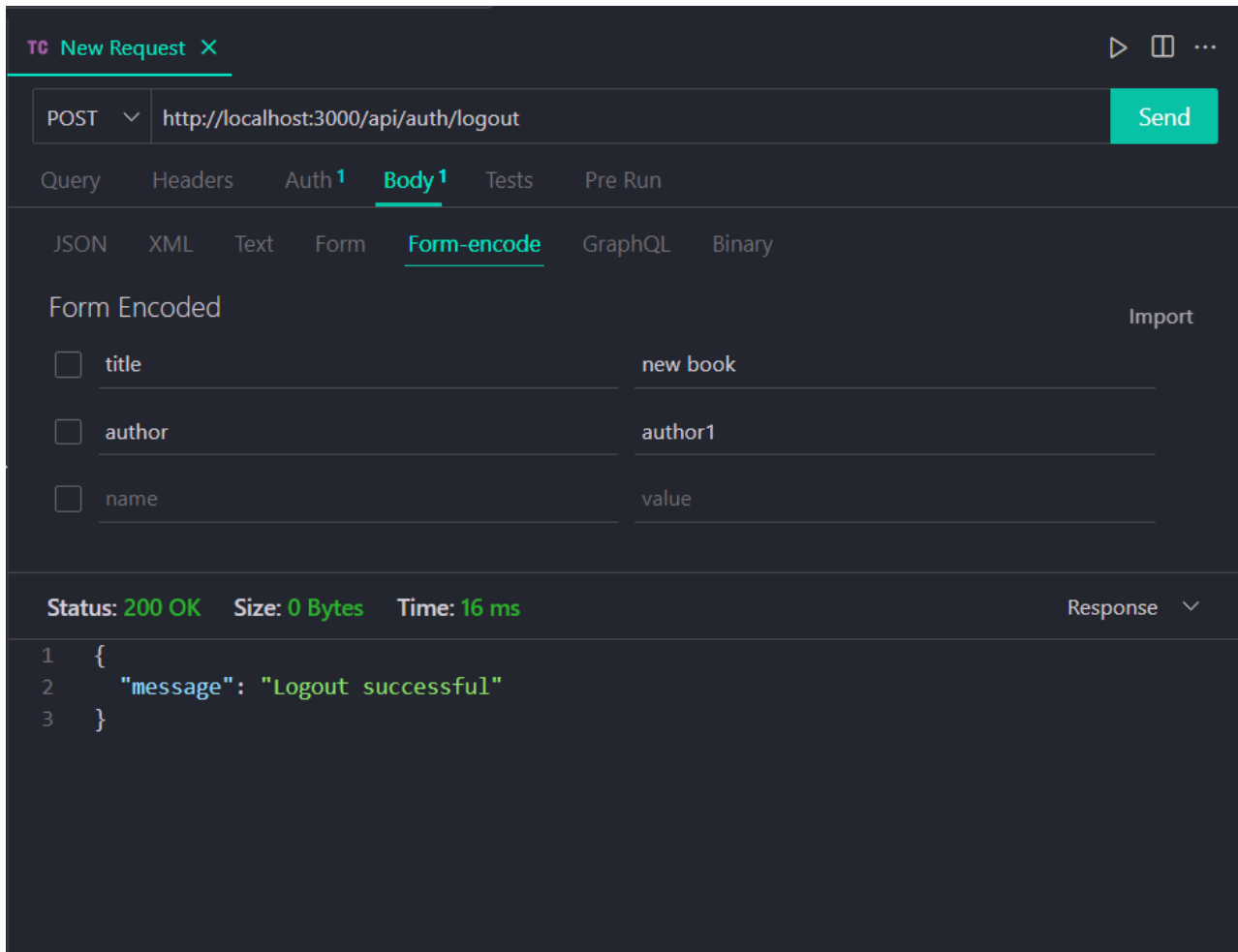Server Working: Initial server startup and configuration process

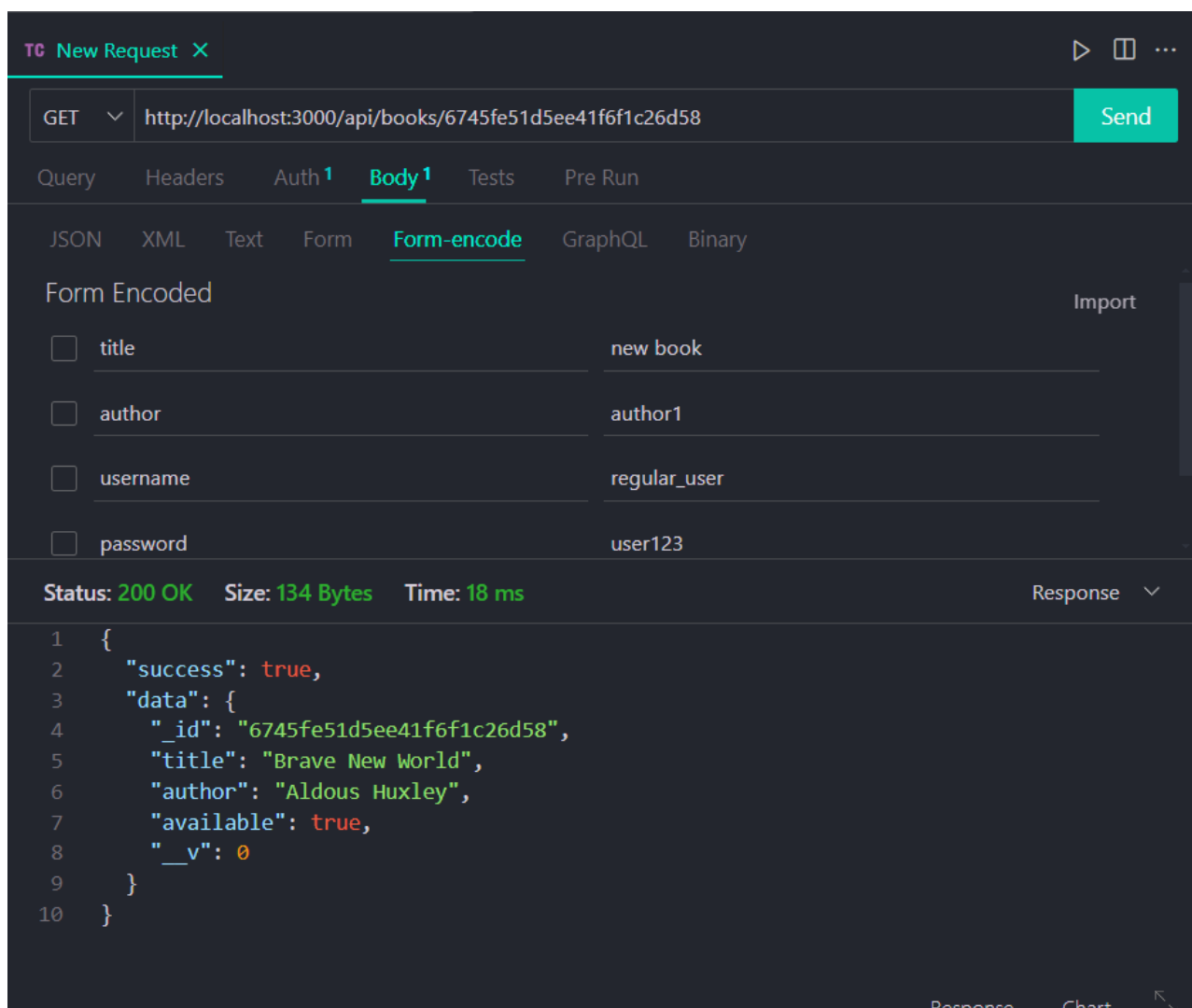Login was successful and token is received
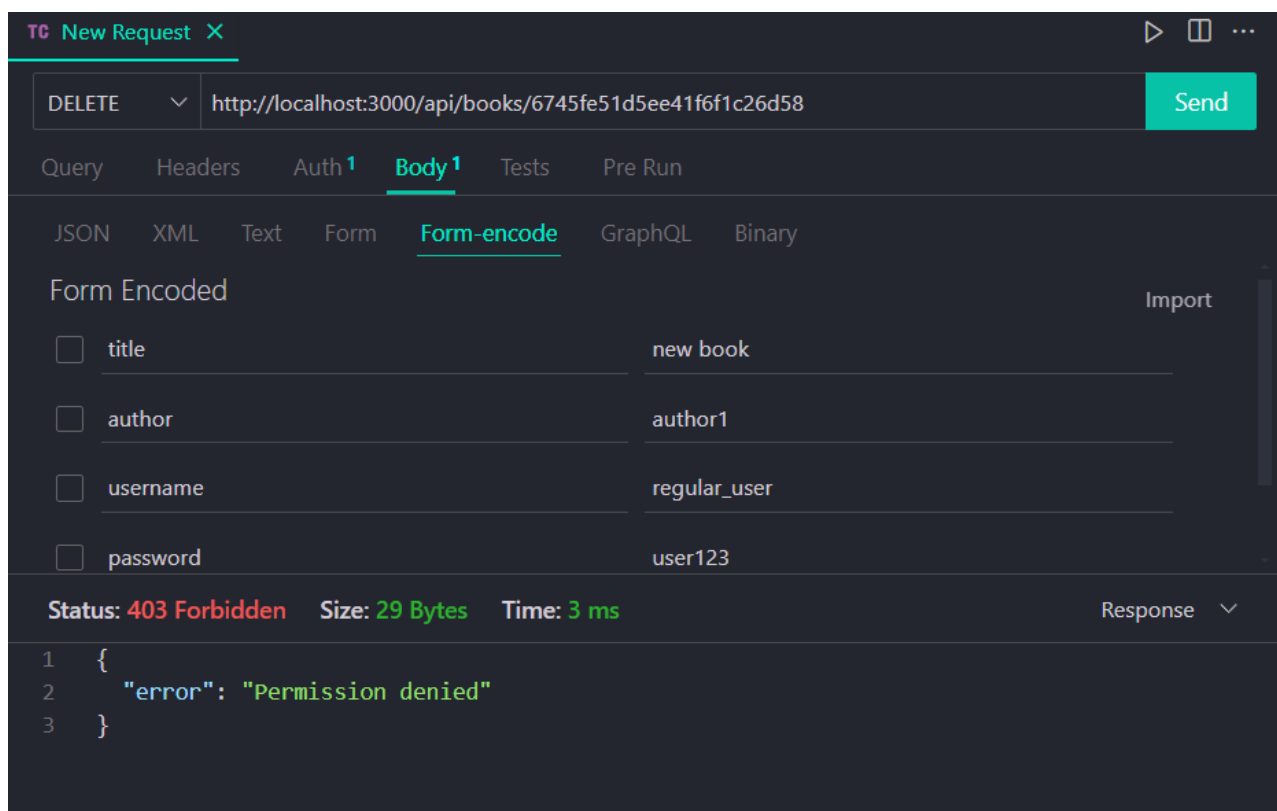
Get Books: Displaying available books

Permission Denied: User attempting to add a book without proper authorization

Logout Successful: User successfully logged out of the system

GET ⌄ | http://localhost:3000/api/books/6745fe51d5ee41f6f1c26d58 | Send

Query   Headers   Auth¹   **Body¹**   Tests   Pre Run

JSON   XML   Text   Form   **Form-encode**   GraphQL   Binary

Form Encoded   Import

☐ title   new book

☐ author   author1

☐ username   regular_user

☐ password   user123

Status: 200 OK   **Size: 134 Bytes**   **Time: 18 ms**   Response ⌄

```json
1   {
2     "success": true,
3     "data": {
4       "_id": "6745fe51d5ee41f6f1c26d58",
5       "title": "Brave New World",
6       "author": "Aldous Huxley",
7       "available": true,
8       "__v": 0
9     }
10  }
```
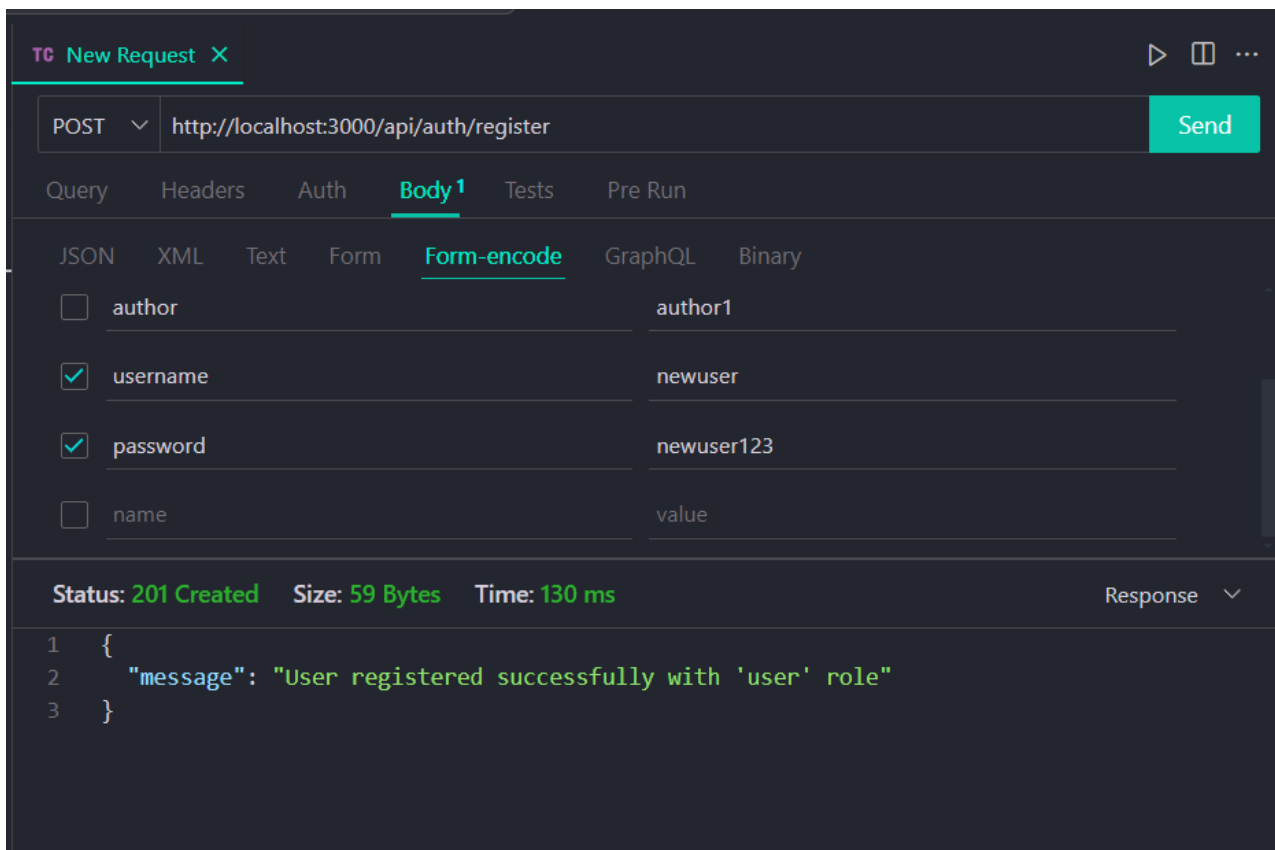
Response   Chart

Book Details: Successful retrieval of a specific book's information

Permission Denied: User attempting to delete a book without authorization
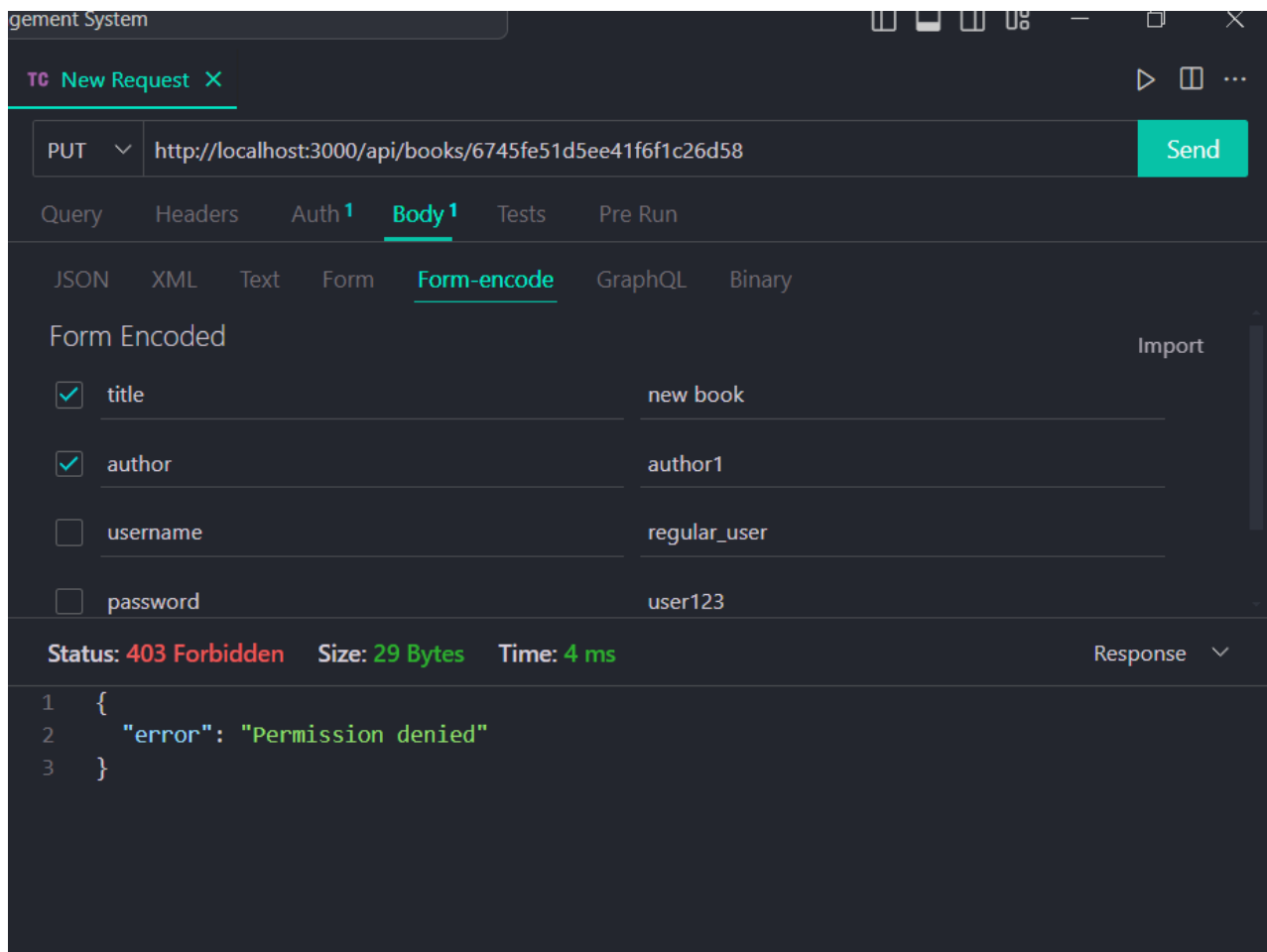
Permission Denied: User attempting to update a book without authorization
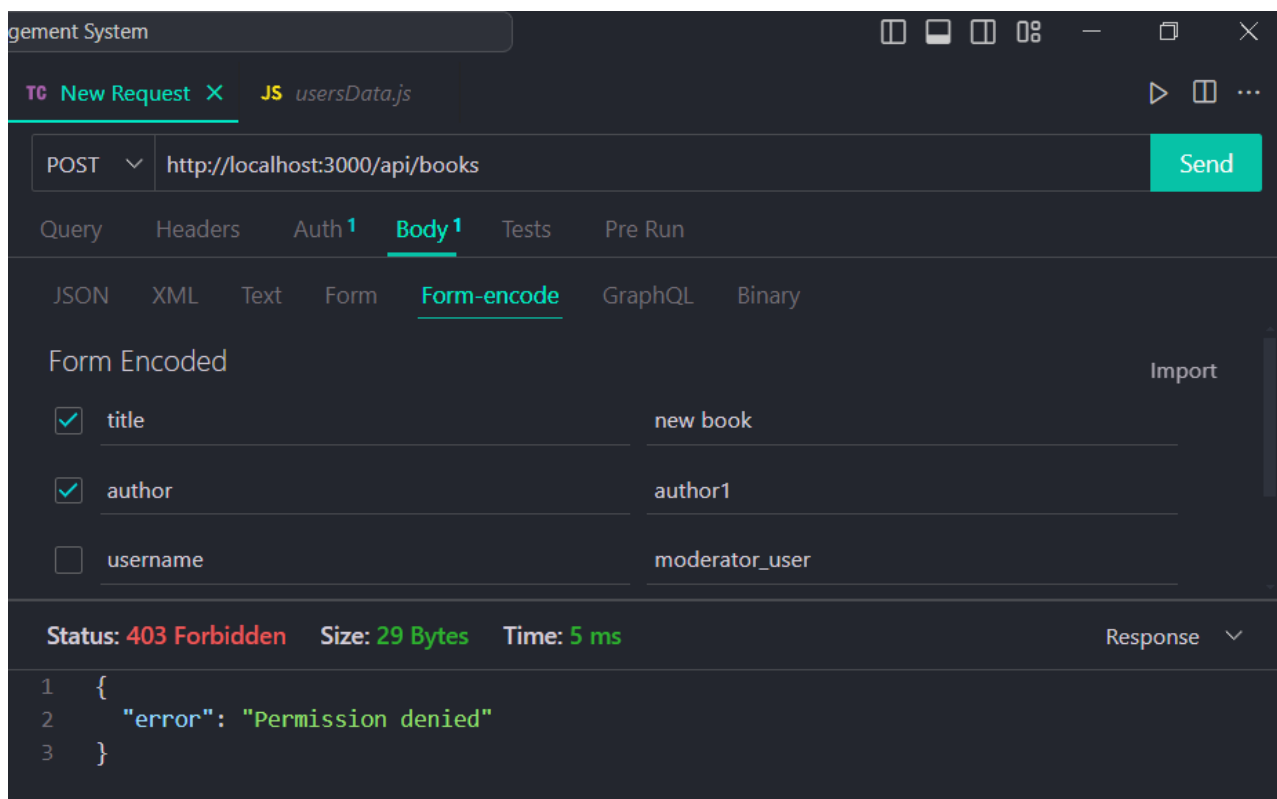
User Registration: New user successfully registered.
(this was before adding input validation)

```
  {
    _id: ObjectId('6747586504f52e1ac7d41cb8'),
    username: 'newuser',
    password: '$2b$10$vZjFoHP8IOGucPSE426TNO4E3SGleEANE.CbK/4Na6YlY21OMJGmm',
    role: 'User',
    __v: 0
  }
]
library>
```
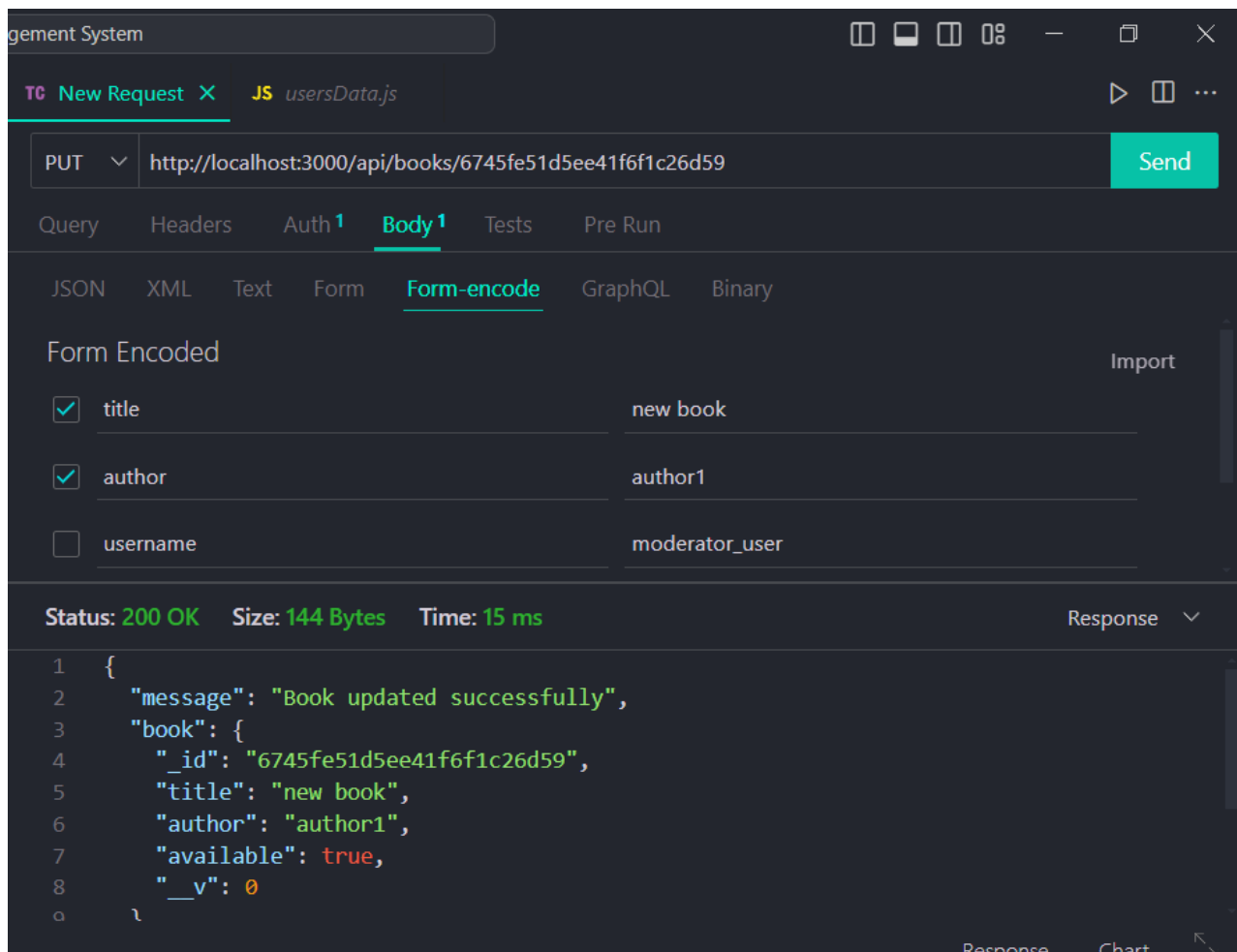
Database Update: New user information saved in the database
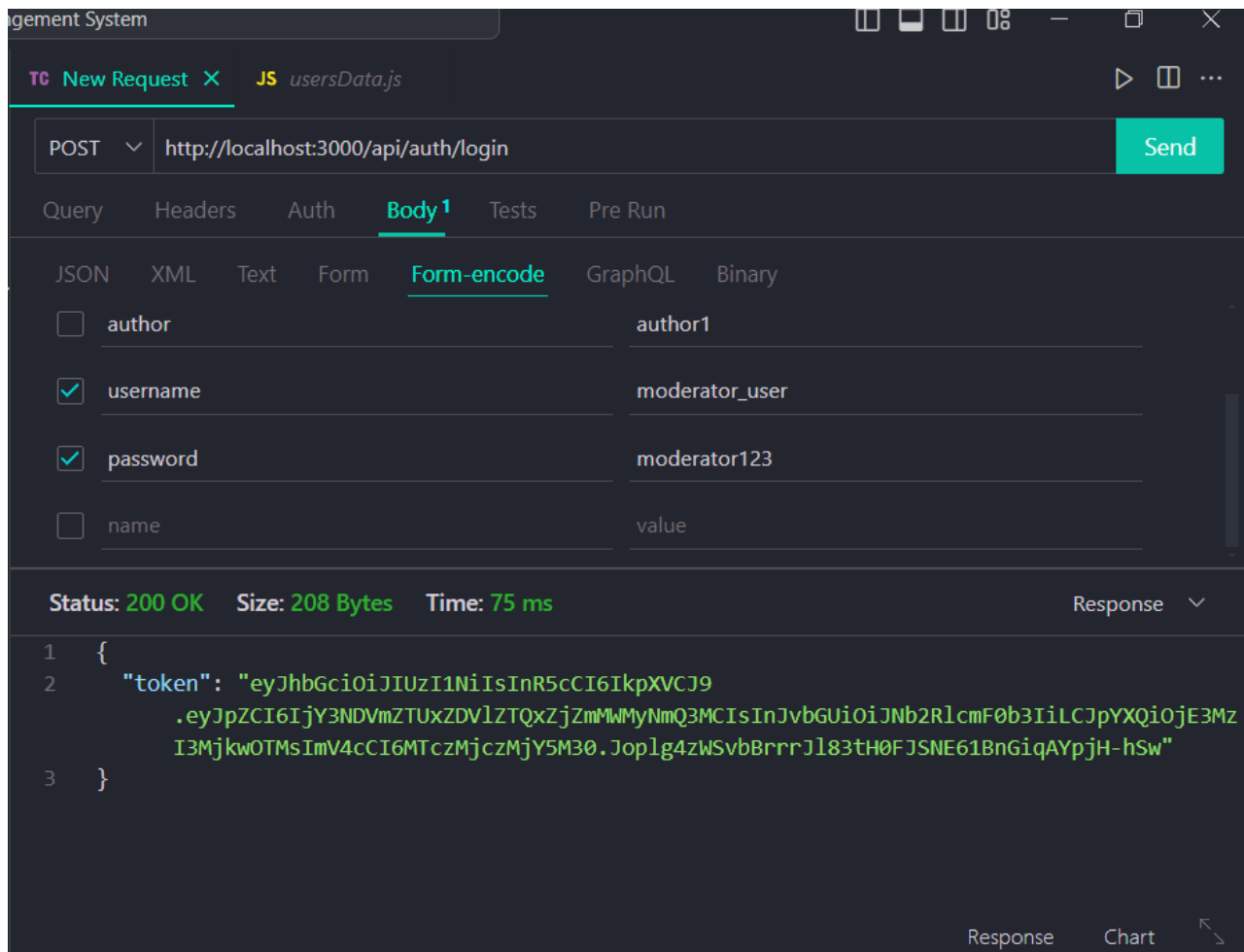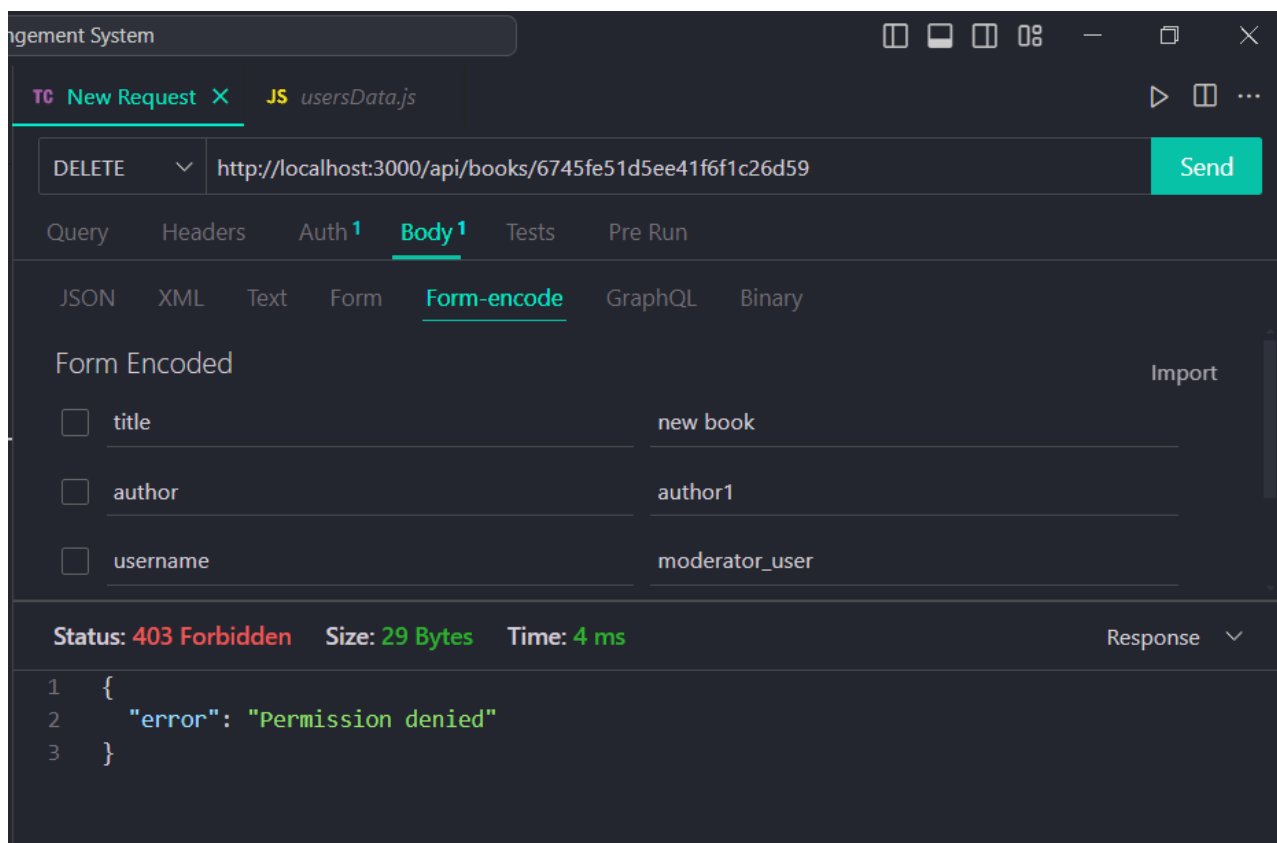
Moderator Login: Successful login for a moderator account

Permission Denied: Moderator unable to add a book

gement System

TC New Request ✕   JS *usersData.js*

PUT ⌄   http://localhost:3000/api/books/6745fe51d5ee41f6f1c26d59   Send

Query   Headers   Auth 1   Body 1   Tests   Pre Run

JSON   XML   Text   Form   Form-encode   GraphQL   Binary

Form Encoded   Import

☑ title   new book

☑ author   author1

☐ username   moderator_user

Status: 200 OK   Size: 144 Bytes   Time: 15 ms   Response ⌄

1 {
2   "message": "Book updated successfully",
3   "book": {
4   "_id": "6745fe51d5ee41f6f1c26d59",
5   "title": "new book",
6   "author": "author1",
7   "available": true,
8   "__v": 0
9   }

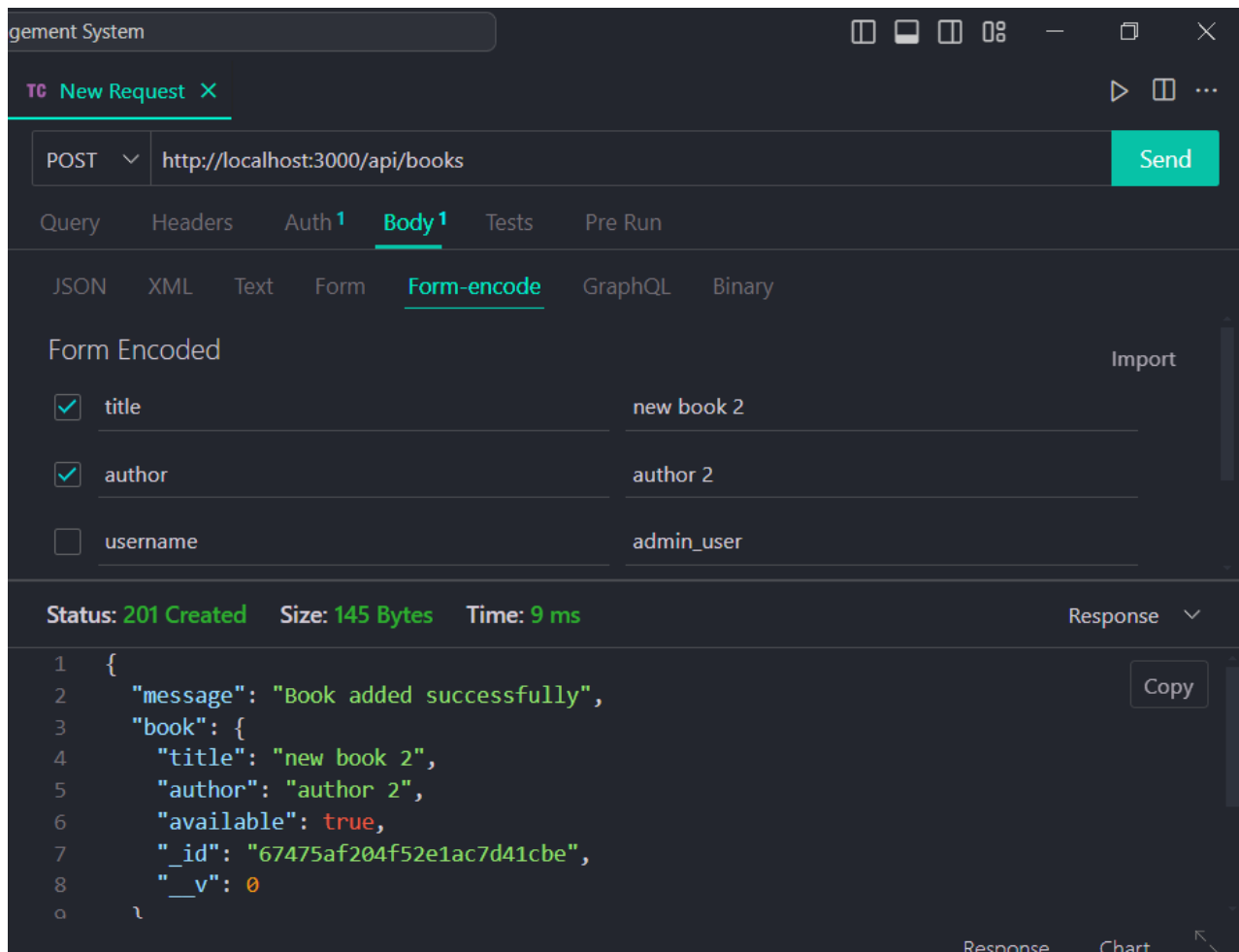   Response   Chart

Book Update: Book successfully updated by a moderator

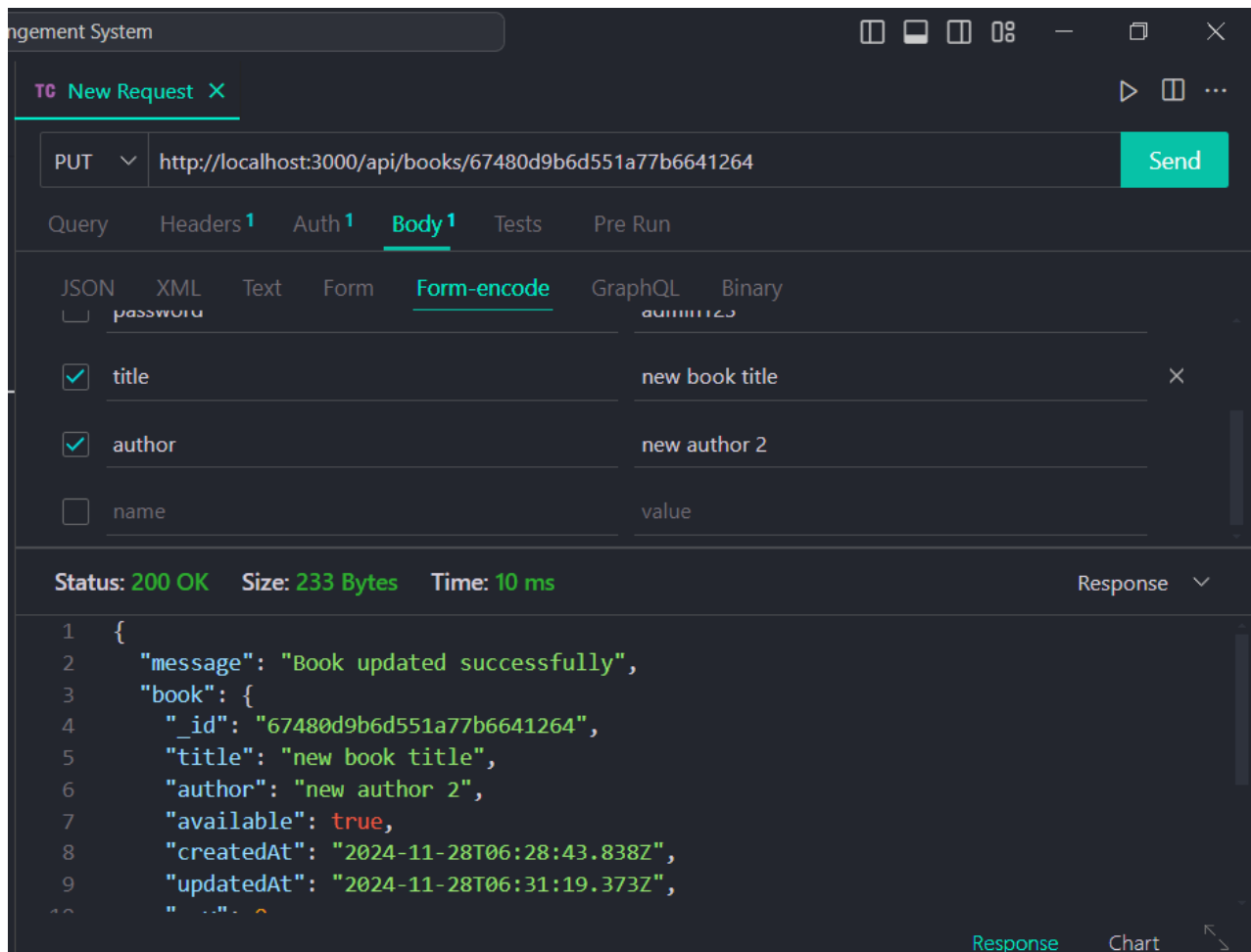Permission Denied: Moderator unable to delete a book
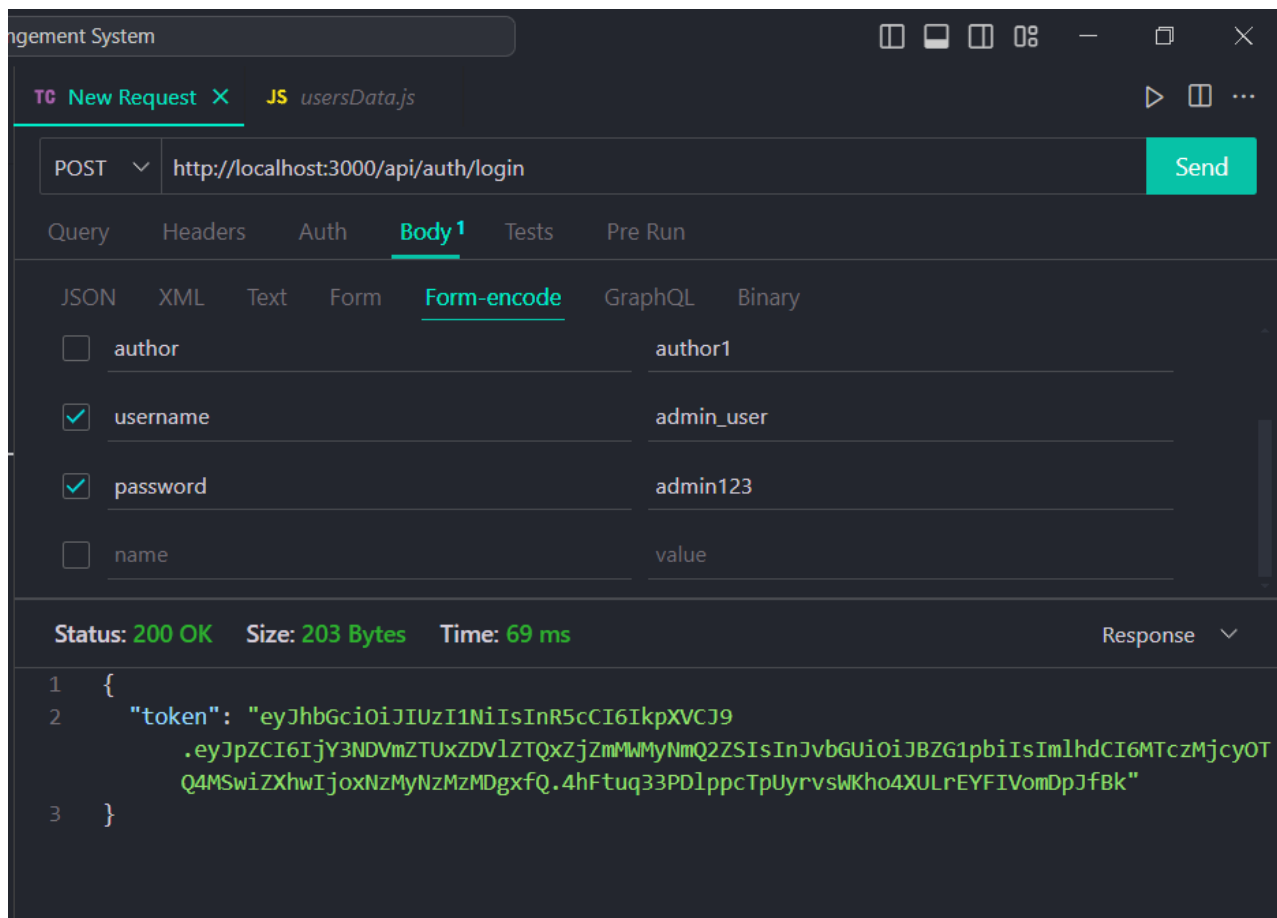
Admin Login: Successful login for an admin account

Book Addition: Book successfully added by an admin

```
},
{
  _id: ObjectId('67475af204f52e1ac7d41cbe'),
  title: 'new book 2',
  author: 'author 2',
  available: true,
  __v: 0
},
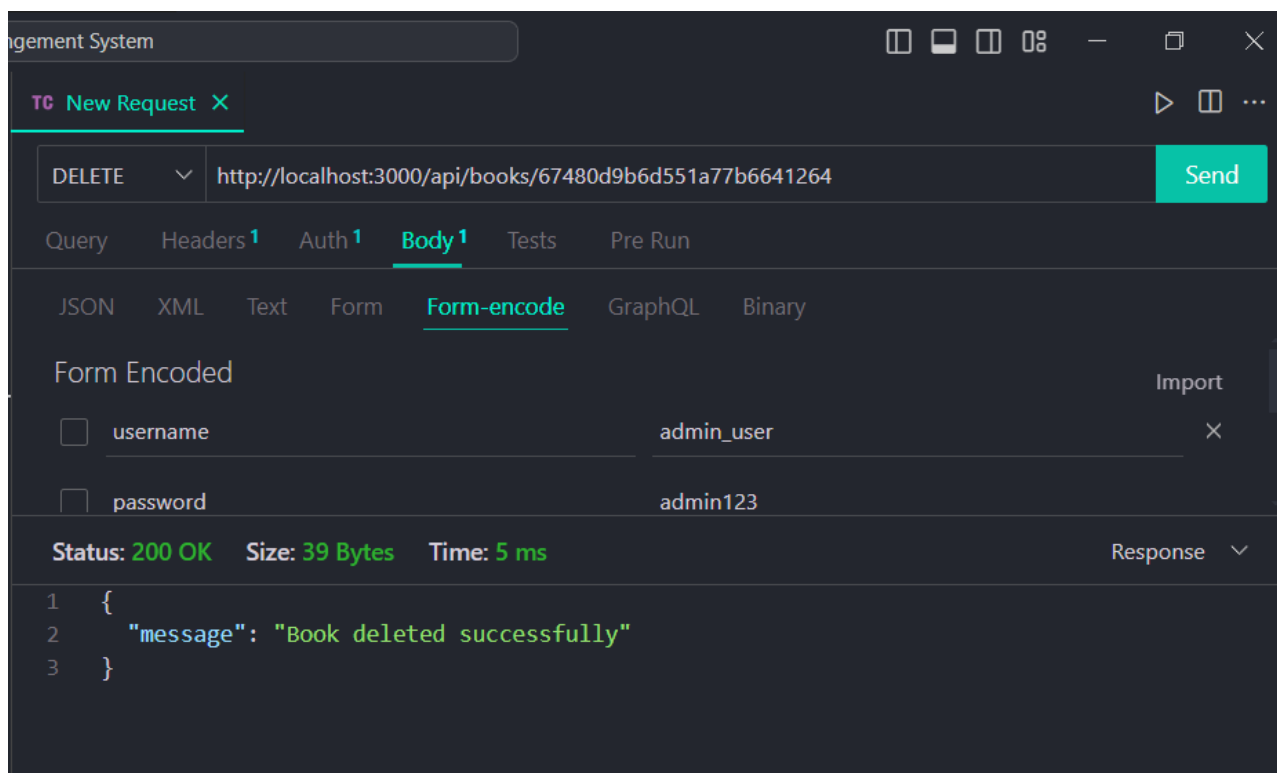```

Database Update: Newly added book saved in the database
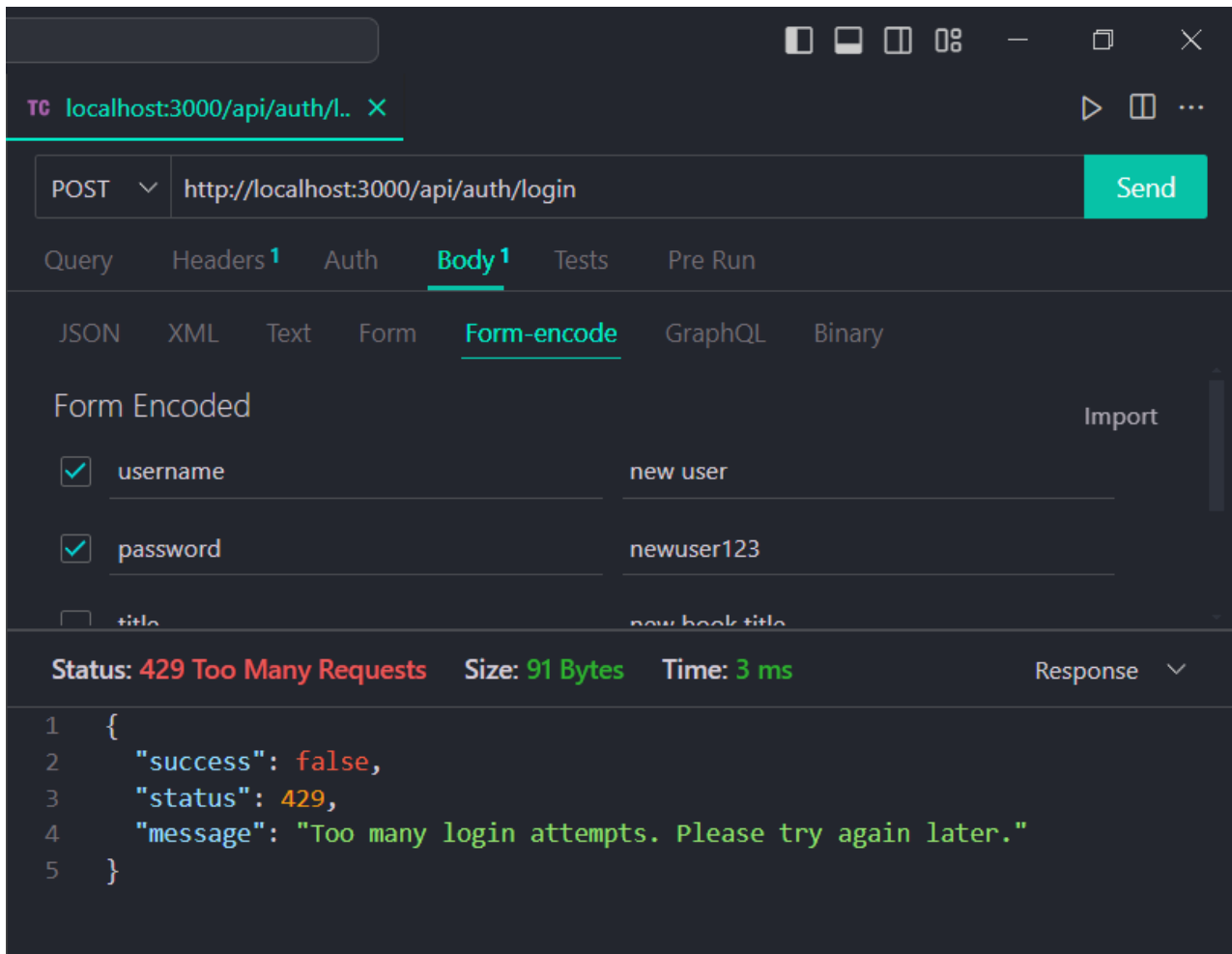
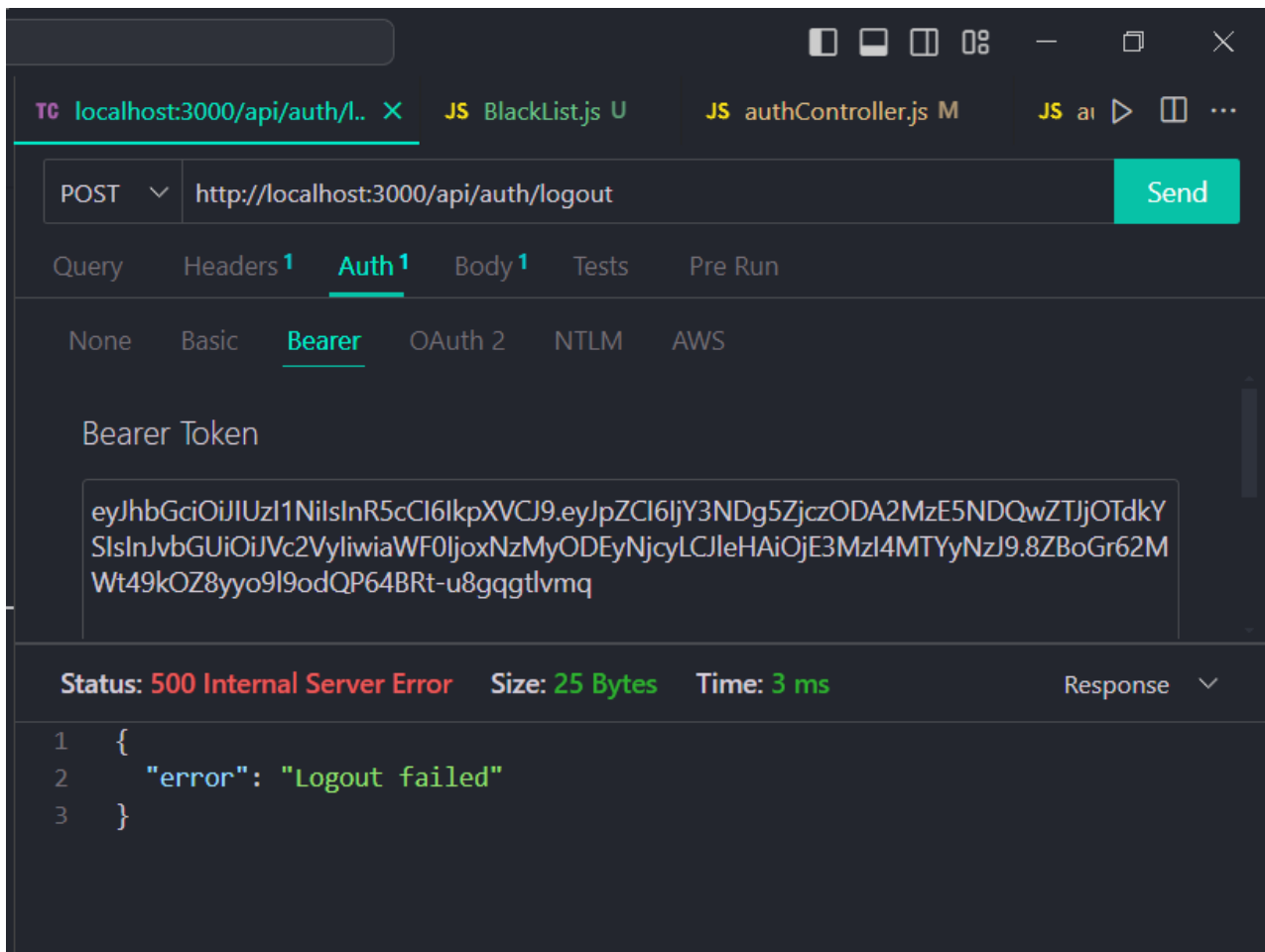Book Update: Book successfully updated by an admin

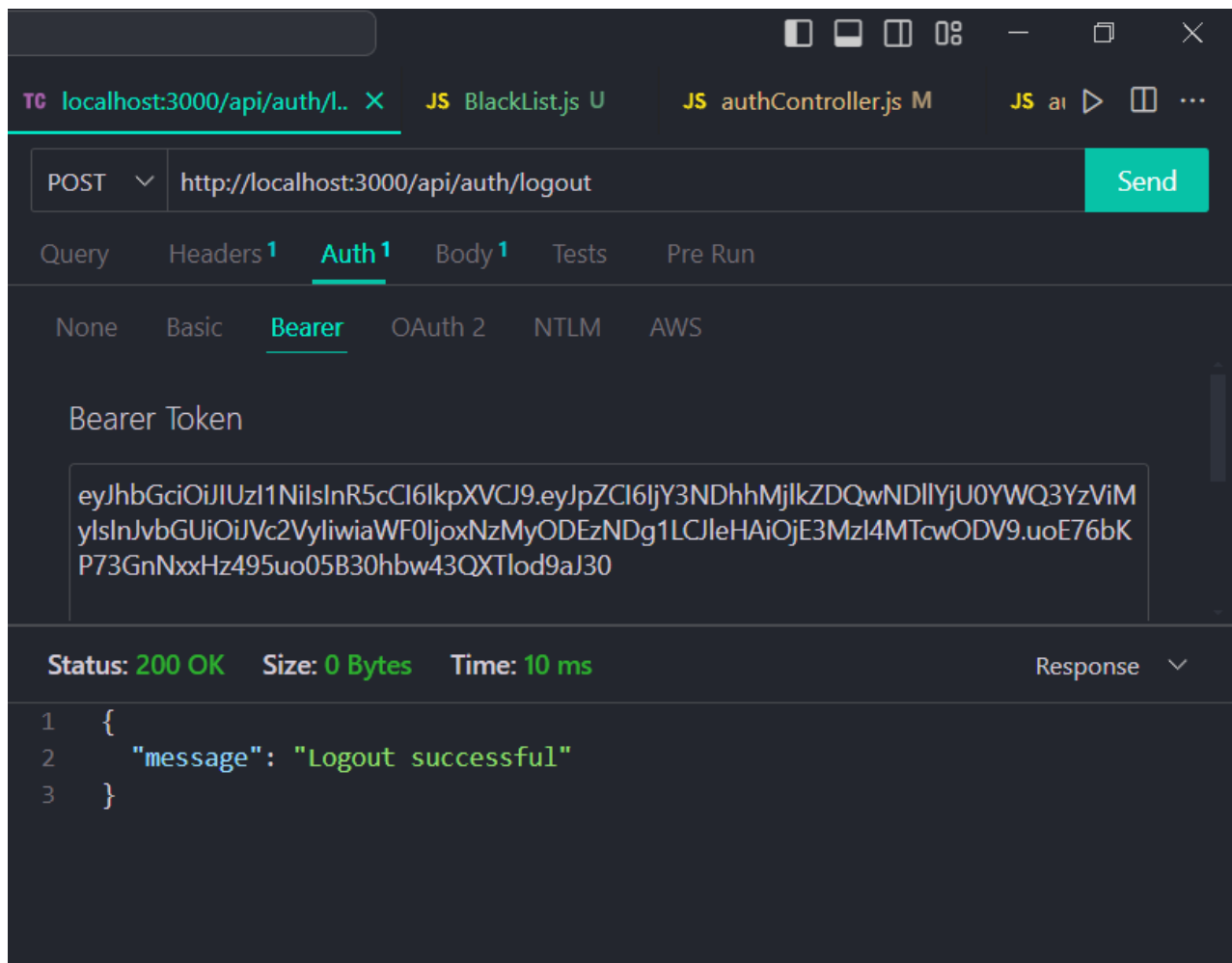Database Synchronization: Database updates reflecting recent changes

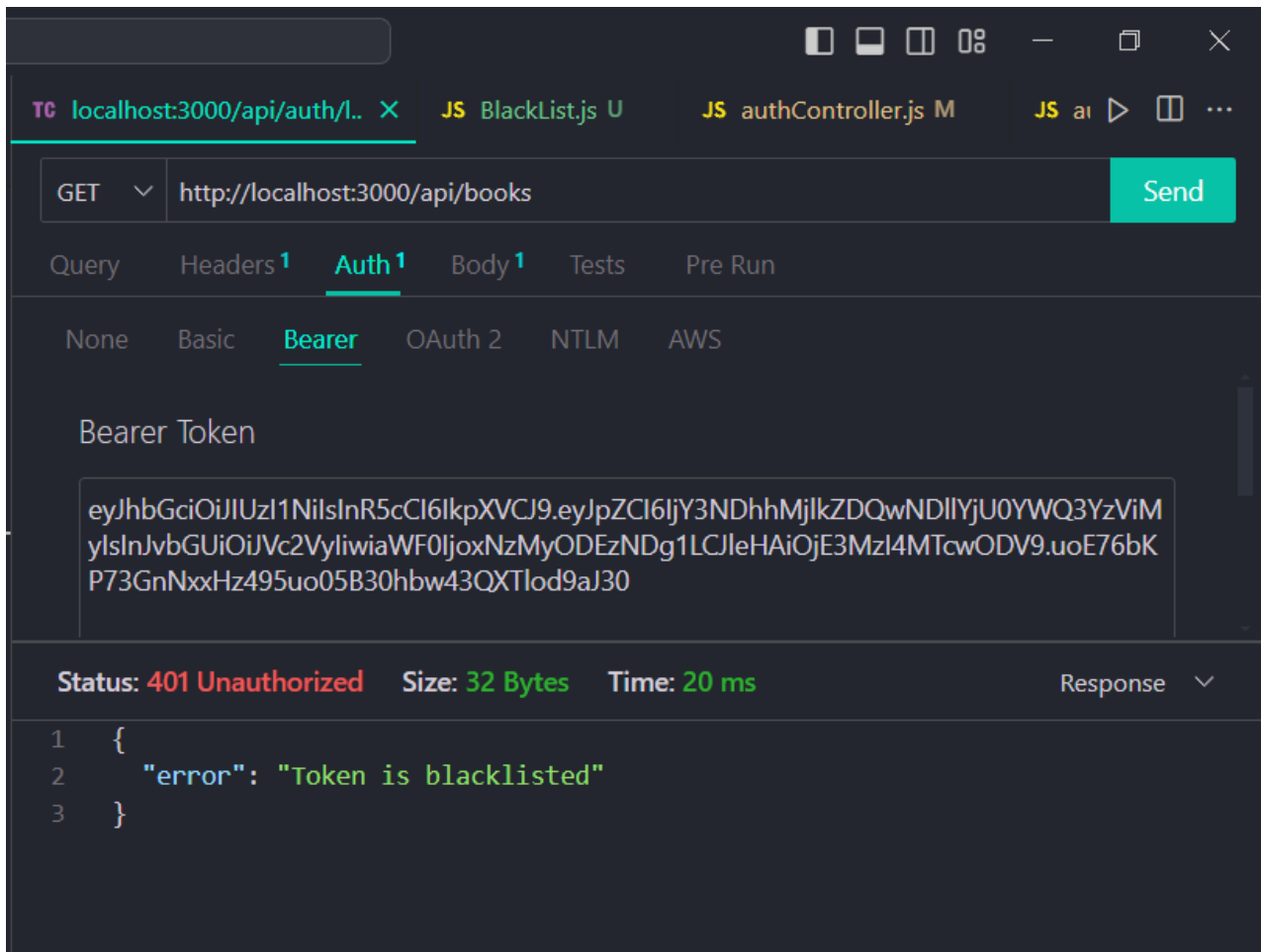Book Deletion: Book successfully deleted by an admin

Login Restriction: Login disabled after multiple failed attempts

Logout Failure: Logout unsuccessful due to token manipulation

Logout Success: Successful logout with a valid token

Token Invalidation: Unable to extract information with a logged-out token

```
library> db.blacklists.find()
[
  {
    _id: ObjectId('6748a2d1d4049eb54ad7c5b7'),
    token: 'eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpZCI6IjY3NDhhMjlkZDQwNDllYjU0YWQ3YzViMyIsInJvbGUiOiJVc2VyIiwiaWF0IjoxNzMyODEzNDg1LCJleHAiOjE3MzI
4MTcwODV9.uoE76bKP73GnNxxHz495uo05B30hbw43QXTlod9aJ30',
    expiresAt: ISODate('2024-11-28T18:04:45.000Z'),
    __v: 0
  }
]
library>
```

Token Blacklist: Blacklisted token added to the database
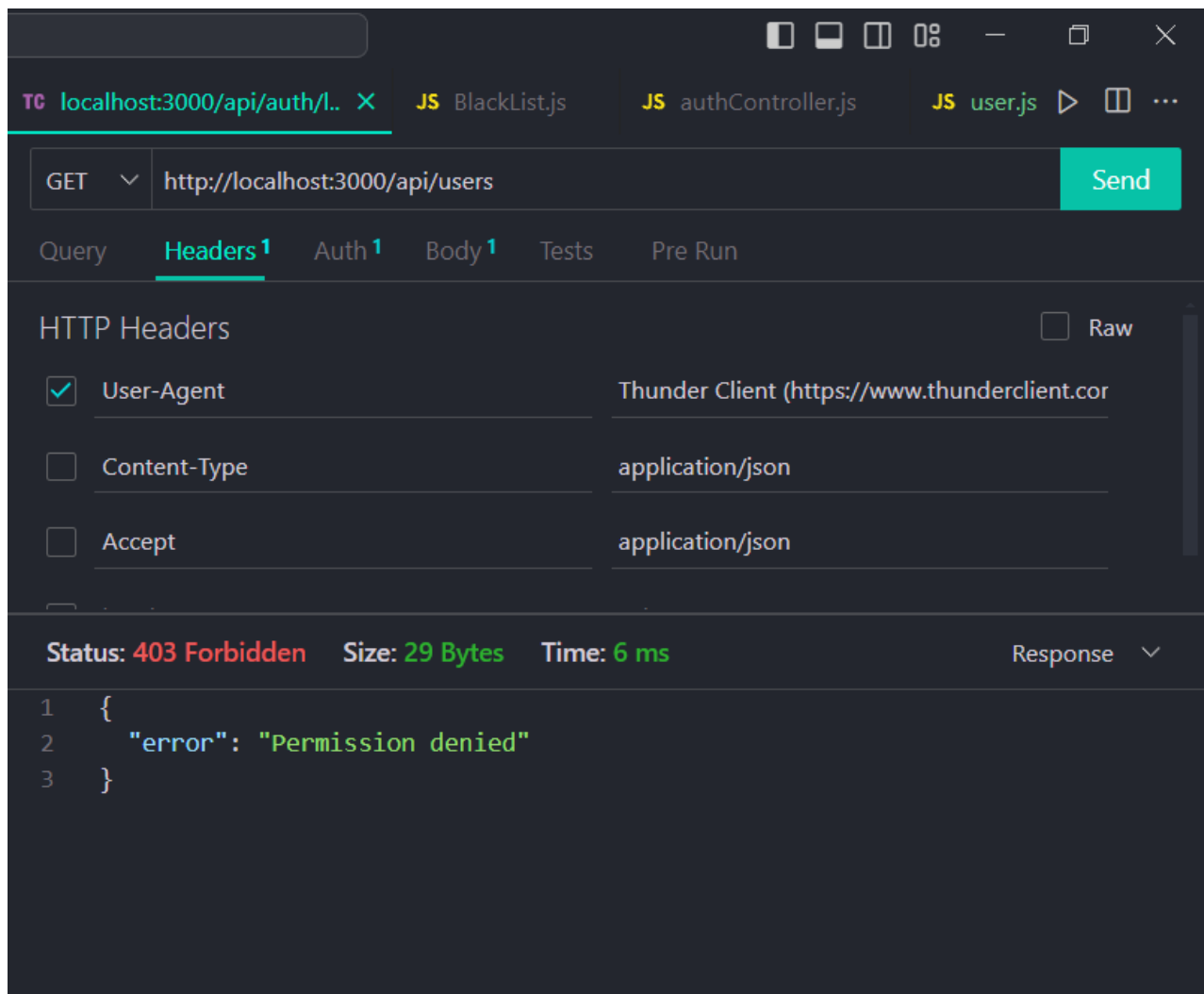
Permission Denied: Moderator unable to access user list
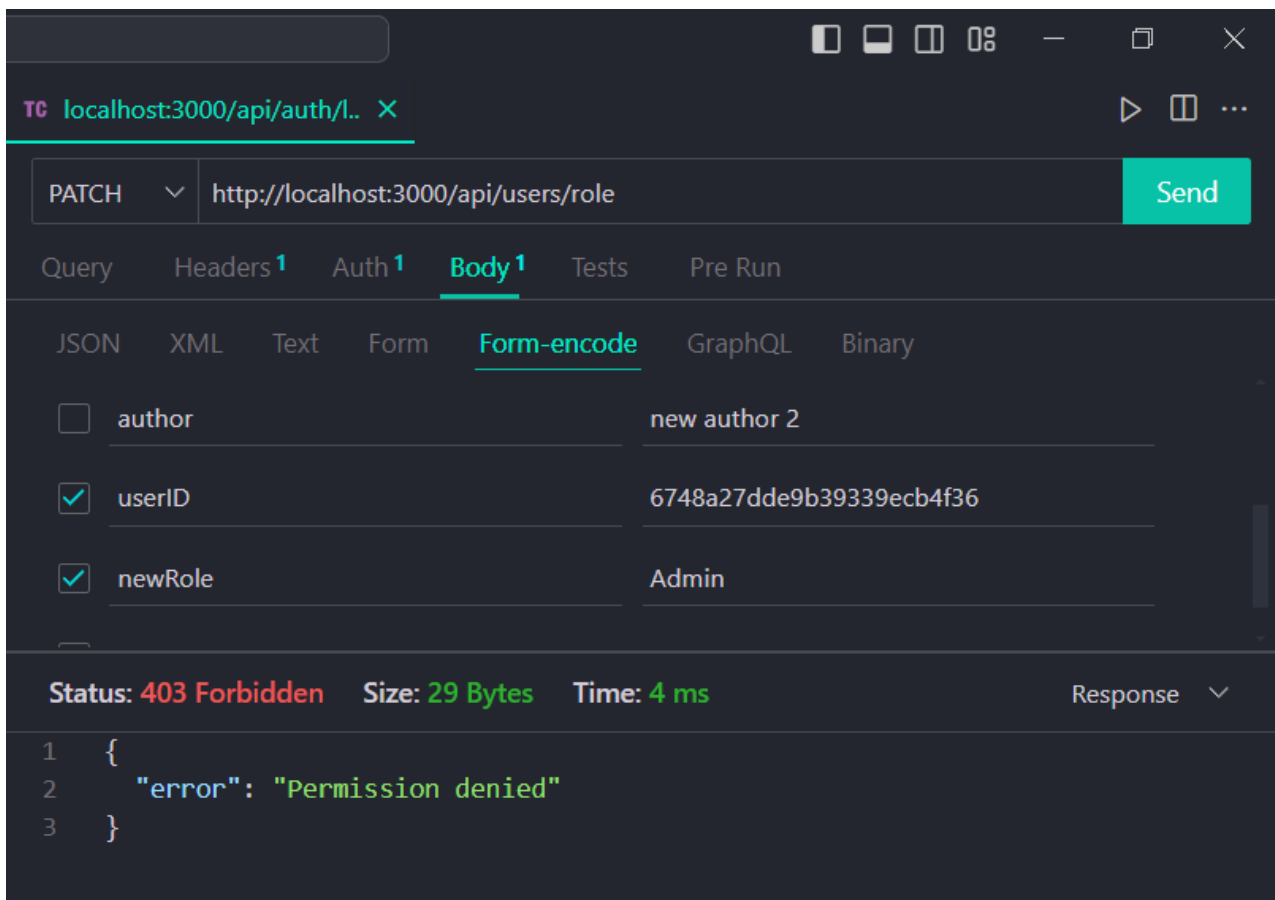
Permission Denied: Moderator unable to update user roles

GET http://localhost:3000/api/users

Query   Headers 1   Auth 1   Body 1   Tests   Pre Run

JSON   XML   Text   Form   Form-encode   GraphQL   Binary

Form Encoded

Status: 200 OK   Size: 683 Bytes   Time: 10 ms

Response   Headers 6   Cookies   Results   Docs

```json
1    {
2      "success": true,
3      "count": 4,
4      "users": [
5        {
6          "_id": "6748a27dde9b39339ecb4f34",
7          "username": "admin_user",
8          "role": "Admin",
9          "createdAt": "2024-11-28T17:03:57.078Z",
10         "updatedAt": "2024-11-28T17:03:57.078Z",
11         "__v": 0
12       },
13       {
14         "_id": "6748a27dde9b39339ecb4f36",
15         "username": "moderator_user",
16         "role": "Moderator",
17         "createdAt": "2024-11-28T17:03:57.140Z",
18         "updatedAt": "2024-11-28T17:03:57.140Z",
19         "__v": 0
20       },
21       {
22         "_id": "6748a27dde9b39339ecb4f38",
23         "username": "regular_user",
```
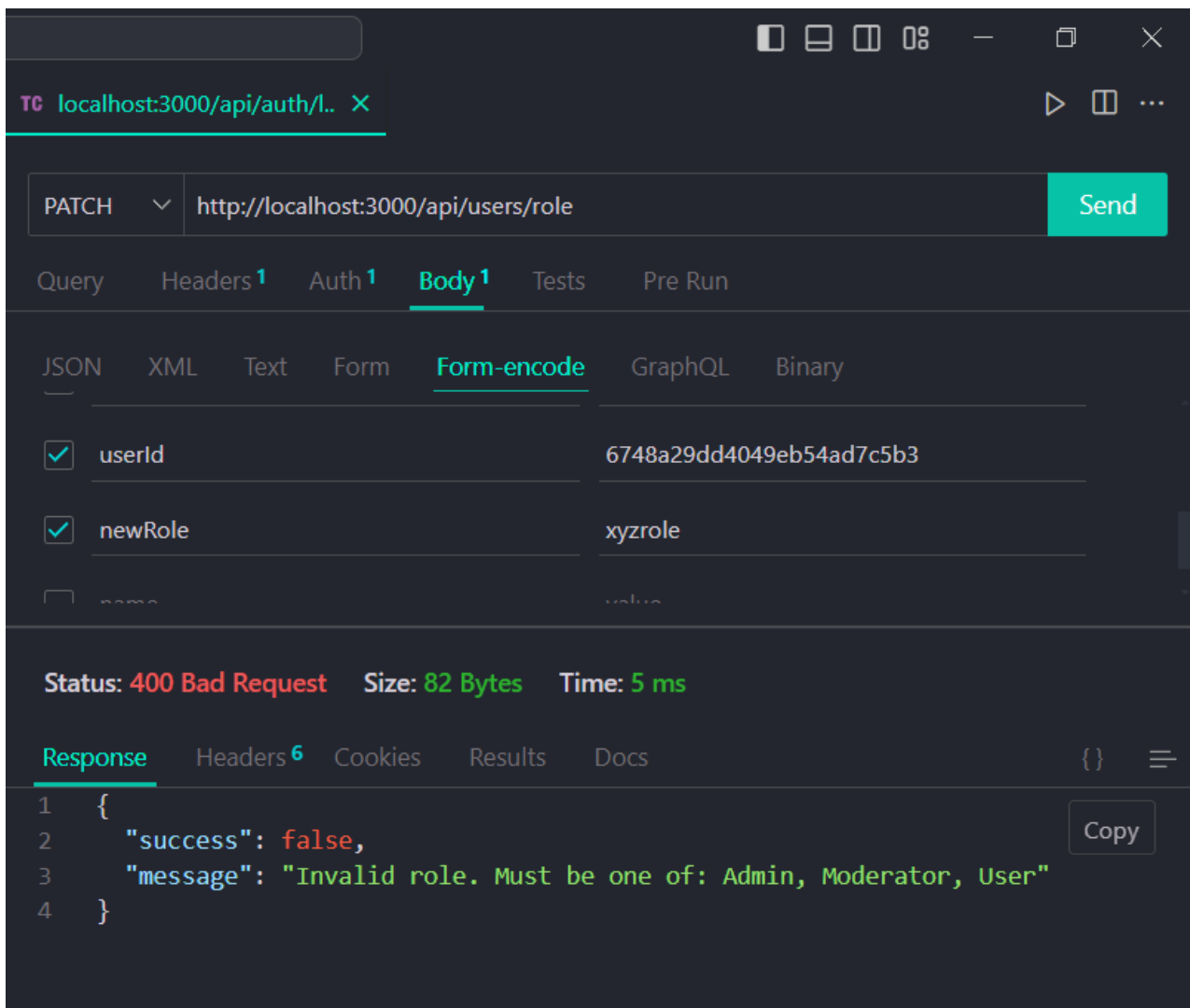
User Management: Successful user list retrieval by admin
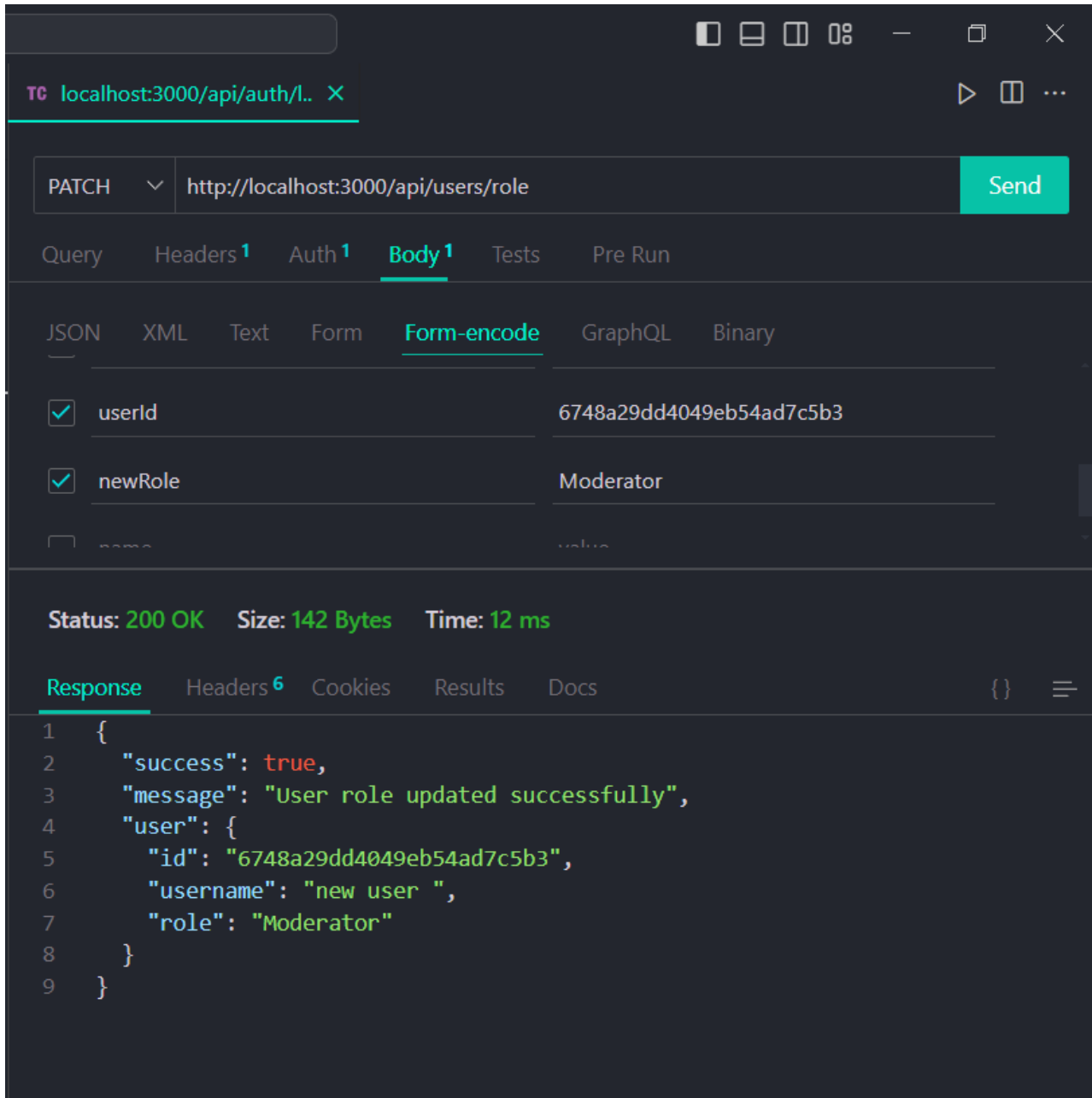
```
29    {
30      "_id": "6748a29dd4049eb54ad7c5b3",
31      "username": "new user ",
32      "role": "User",
33      "createdAt": "2024-11-28T17:04:29.055Z",
34      "updatedAt": "2024-11-28T17:04:29.055Z",
35      "__v": 0
36    }
```
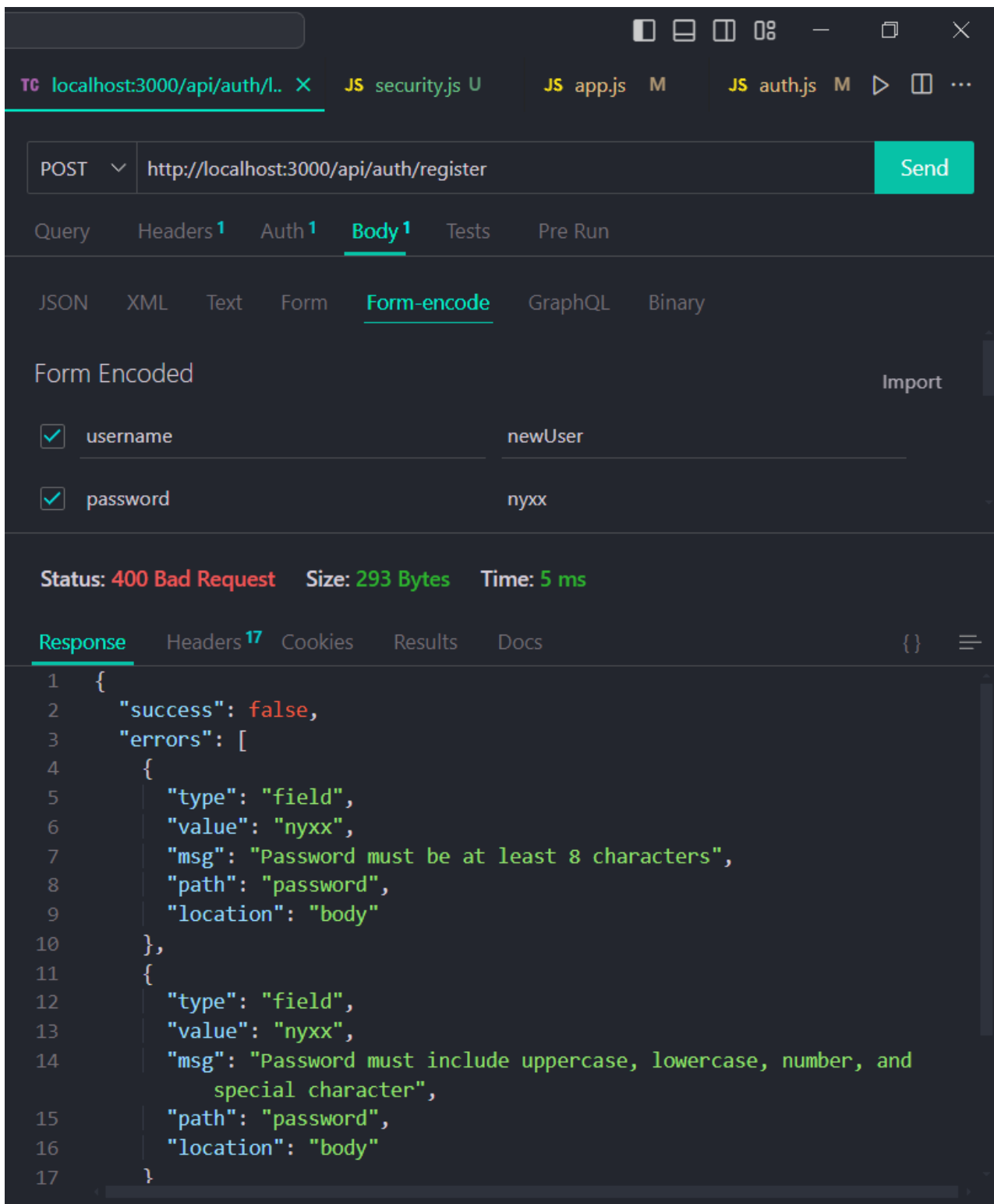
User Role: Initial user role before modification

Role Error: Unrecognized role submission

Role Update: Successful role modification with correct data

Registration Restriction: Unable to register without passing sanitizing middlewares