أكـاديـمية طـويـق
TUWAIQ ACADEMY

Building a REST API
using Python and Django

PROJECT2

Digital Library API

Presented By
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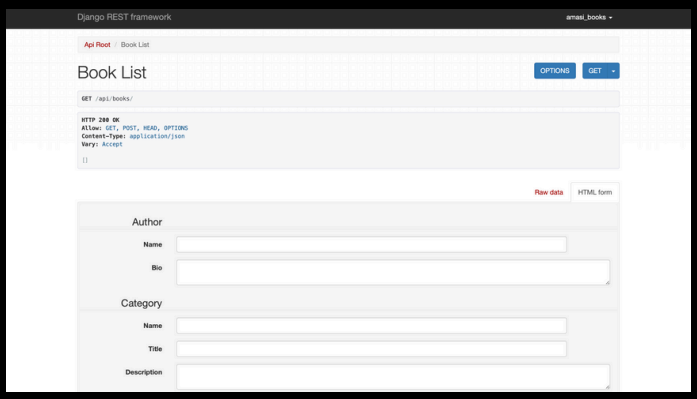
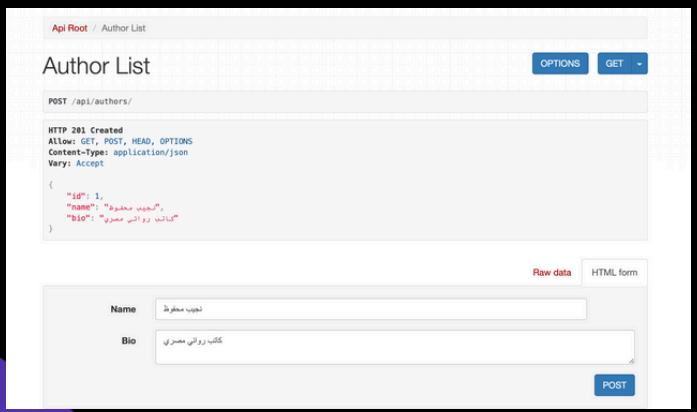
Project Objective

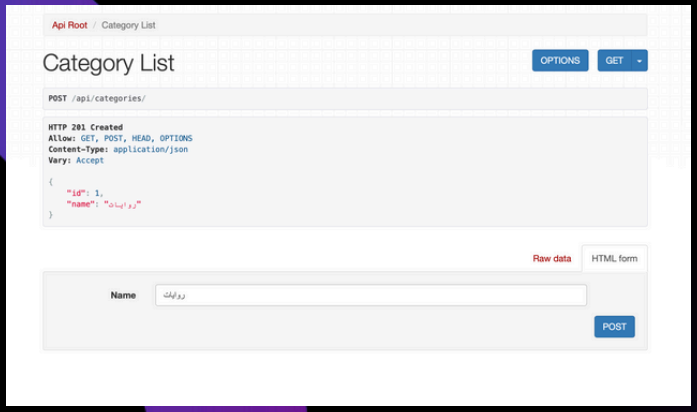
The goal of this project is to build a complete RESTful API using Django REST Framework to manage a digital library system. The API allows interaction with books, authors, categories, reviews, favorites, borrowing records, and tags

Database Models

The project includes at least 8 database tables:







Database Models

The project includes at least 8 database tables:

Description	Model
Built-in Django user model	User
Book data	Book
Author information	Author
Book categories	Category
User reviews for books	Review
User favorite books	FavoriteBook
Borrowed book records	BorrowedBook
Book tagging system	Tag and BookTag

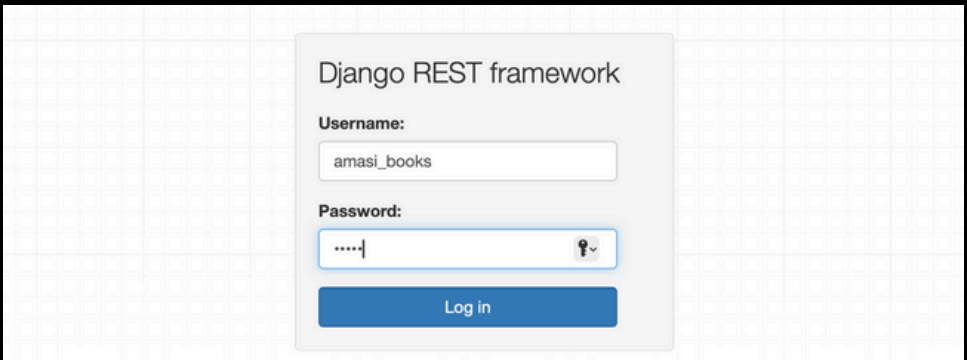
API Endpoints

More than 7 functional endpoints are available:

- /api/books/ – List, add, edit, delete books
- /api/authors/ – Manage authors
- /api/categories/ – Manage categories
- /api/reviews/ – Manage reviews
- /api/favorites/ – Add/remove favorite books
- /api/borrowed/ – Track borrowed books
- /api/tags/ – Assign tags to books
- /api-auth/login/ – Login and authentication

Authentication

Authentication was implemented using Django REST Framework's default login system (api-auth/login/). It restricts access to certain actions for authenticated users only



API Testing

The API has been tested using:

- Browser for basic GET requests
- Postman or online alternatives (e.g., Hoppscotch) for full testing of all HTTP methods (GET, POST, PUT, DELETE)