📓 Blue Ink House — Author & Book Management Platform

Candidate Submission — SDE Intern Assignment

Confidential — For Blue Ink House Recruitment Only

1. 🎯 Overview & Objective

This project is developed as part of the **SDE Intern Assignment** provided by Blue Ink House. The objective of the platform is to manage **Authors** and **Books** with the core functionalities defined in the assignment:

- Create authors (default status: pending)
- Approve authors
- Add books for approved authors
- List & search books by title, genre, or author
- Clean frontend pages for user flows
- Clean backend architecture, validation, and documentation

This implementation uses **Django**, chosen for its rapid development capability, built-in ORM, form-handling, and support for file uploads.

2. 🚀 Tech Stack

Layer	**Technology**
Framework	**Django 5.x**
Templates	Django Template Engine + Bootstrap
Database	SQLite 3
Media Storage	Local server (MEDIA_ROOT)
Language	Python 3.10+
Testing	Django Test Framework

3. 🗁 Project Structure

```
blueinkhouse-author-book-platform/
├── blueinkhouse/                    # Project Settings + Root URLs
├── authors/                         # Author Module
│   ├── models.py
│   ├── forms.py
│   ├── views.py
│   └── urls.py
├── books/                           # Book Module
│   ├── models.py
│   ├── forms.py
│   ├── views.py
│   └── urls.py
├── templates/
│   ├── base.html
│   ├── authors/
│   └── books/
├── media/                           # Uploaded images (authors/books)
├── manage.py
├── README.md
└── DOCS.md
```

4. 🧱 Data Models

4.1 Author Model

Field	Type	Description
id	AutoField	Primary Key
name	CharField(255)	Author name
email	EmailField (unique)	Unique email
bio	TextField	Author biography
profile_image	ImageField	Uploaded profile photo
status	pending / approved	Default: pending
created_at	DateTime	Auto timestamp
number_of_books	property	Count of related books

Business Rule:
Books can only be added when status = approved.

4.2 Book Model

Field	Type	Description
id	AutoField	Primary Key
title	CharField(255)	Book title
description	TextField	Book description
genre	CharField(100)	Genre/category
cover_image	ImageField	Cover image
author	FK → Author	Only approved authors
created_at	DateTime	Auto timestamp

5. 💻 Frontend Pages

URL	Purpose
/authors/add/	Create new author
/authors/list/	View all authors
/authors/<id>/approve/	Approve author
/books/add/	Add new book
/books/list/	List all books
/books/list/?q=	Search books

Each page uses **Bootstrap UI** for a clean, responsive interface.

6. ⚙ Backend Business Logic

✓ Author Creation

- Saves with status = *pending*
- Email must be unique
- Image upload handled using Django ImageField

✓ Author Approval

- A dedicated action updates the author's status
- Protected with get_object_or_404()

✓ Book Creation

- Only approved authors appear in the dropdown Implemented in BookForm.__init__():

```
self.fields['author'].queryset = Author.objects.filter(status="approved")
```

✓ Book Search

Searches across:

- Title
- Genre
- Author name

Implemented using icontains filters.

7. 🔧 Installation & Setup

Windows

- python -m venv venv
- Venv\Scripts\activate
- pip install -r requirements.txt
- python manage.py migrate
- python manage.py runserver

macOS / Linux

- python3 -m venv venv
- source venv/bin/activate
- pip install -r requirements.txt
- python manage.py migrate
- python manage.py runserver

8. 🌐 API Endpoints (as per assignment)

Method	Endpoint	Description
POST	/authors/	Create an author
GET	/authors/	List all authors
PATCH	/authors/<id>/approve	Approve an author
POST	/books/	Create book
GET	/books/	List books
GET	/books/search?q=	Search books

Though the project is template-based, the backend logic mirrors these API behaviors.

9. 🧪 Testing

Tests include:

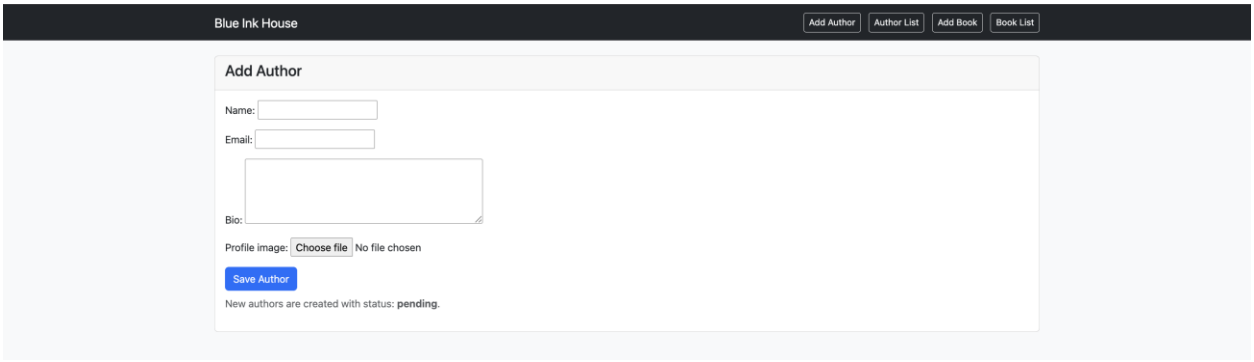
- Author creation
- Duplicate email validation
- Approving an author
- Book creation for approved authors
- Rejection for pending authors
- Search functionality

Run tests:

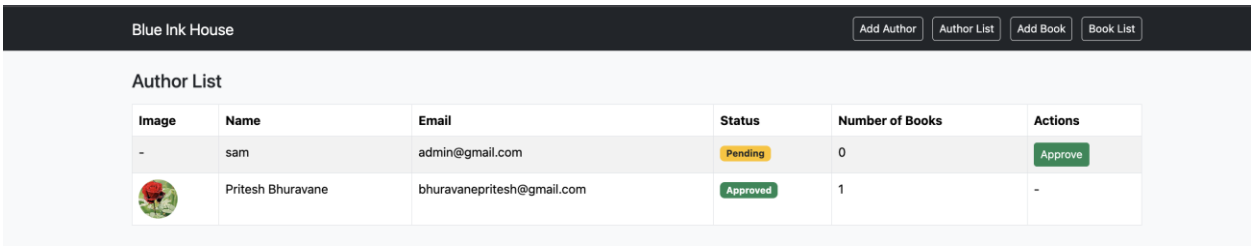
python manage.py test

10. 🖼 Screenshots

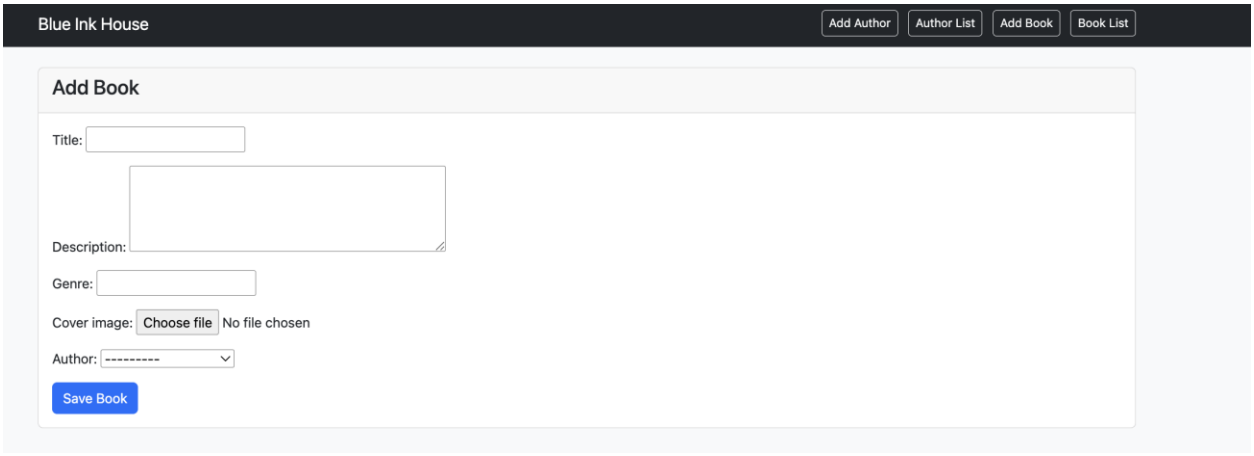
- Add Author screen



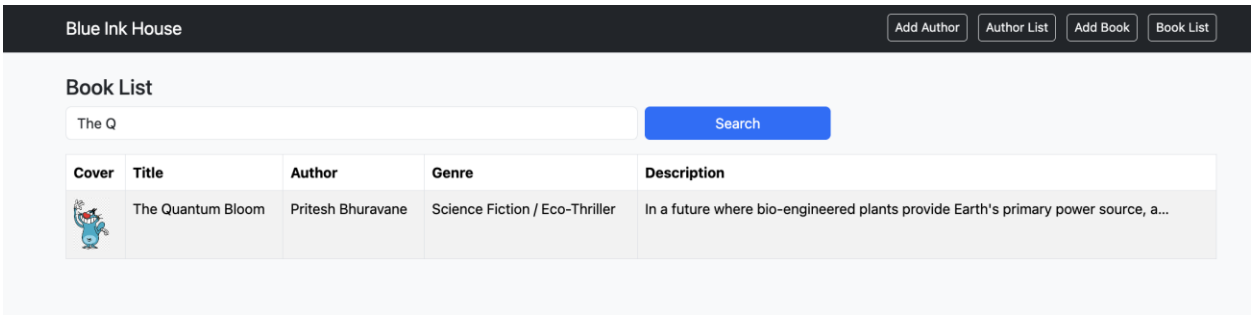
- Approve Author page



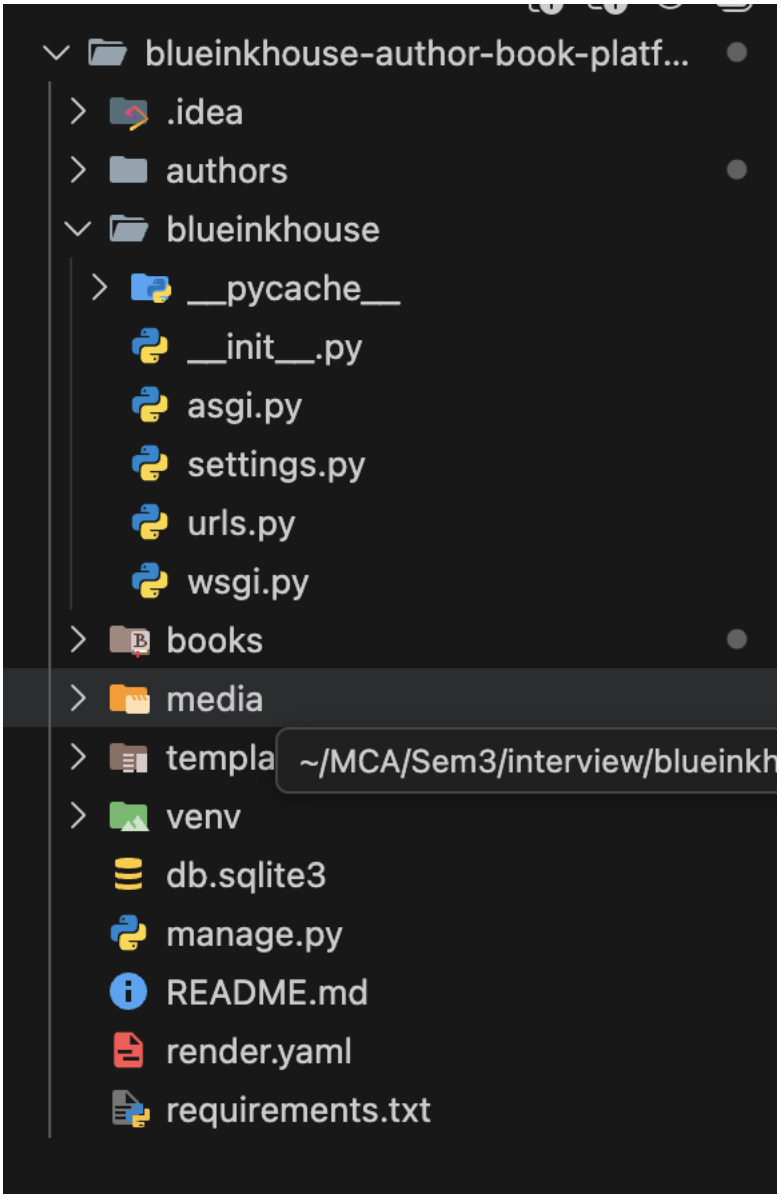
- Add Book form



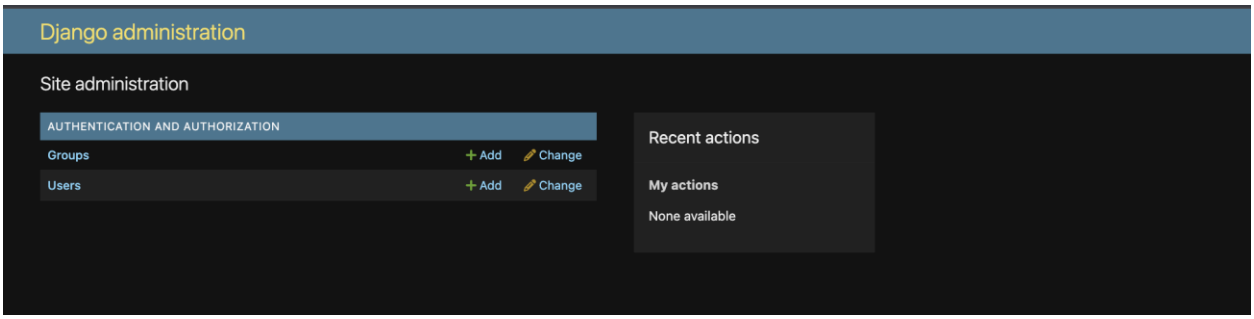
- Book List with search filter



- Directory structure screenshot



- Admin panel screenshot



11. 🧩 Design Decisions

✓ Why Django?

- Rapid development
- ORM for clean database handling
- Built-in form validation
- Image uploads are straightforward
- Easy to maintain for small/medium teams

✓ Clean Architecture

- Each module is isolated into apps
- URLs modular
- Forms manage validation
- Views handle only required logic

✓ Media File Handling

Stored under /media/, configurable for production (e.g., AWS S3).

12. ⭐ Bonus Features Implemented

- Profile image upload
- Cover image upload
- Search functionality

- Clean Bootstrap UI
- Organized modular structure

13. 🚀 Recommended Enhancements (Not required but suggested)

- JWT Authentication (for production use)
- Pagination
- Deleting or editing authors/books
- Logging & error tracking
- REST API version using Django REST Framework
- Containerization (Docker)
- Deployment to Render / Railway / AWS

14. 🔐 Confidentiality Note

This project and its contents are created solely for **Blue Ink House SDE Intern Assignment** and must **not be published or shared publicly**.