

# ScholarLendingPortal API Documentation

## Team Members (Group 24) and Contributions :

Team Member	Contribution
Yash Jha	Backend setup, Django API integration, documentation consolidation
Raju Kartik Jha	Frontend React components and AI prompt generation
Gokul G Gowda	Testing, debugging, and database schema design
Akshat Mishra	UI design and user flow (Student, Staff, Admin dashboards)

## Project Overview:

ScholarLendingPortal is a full-stack web-based equipment lending system designed for schools. It enables role-based access for students, staff, and administrators to manage borrowing, approval, and return of shared equipment such as lab instruments, sports kits, and cameras.

## Architecture Diagram:

React Frontend → Django REST API → SQLite Database

## Database Schema:

Table	Key Fields	Relationships
User	id, username, role	1:N with BorrowRequest
Equipment	id, name, category, available	1:N with BorrowRequest & MaintenanceLog

Table	Key Fields	Relationships
<b>BorrowRequest</b>	id, equipment_id, user_id, status	FK to User & Equipment
<b>MaintenanceLog</b>	id, equipment_id, issue, resolved	FK to Equipment

## Setup Documentation

### Frontend:

Navigate to the frontend/ScholarLendingPortal folder, install npm and start the npm using `npm start`

If it doesn't start, then follow below steps,

```
rm -rf node_modules
rm package-lock.json
npm install
npm start
```

Once npm is started, frontend application will automatically open at –

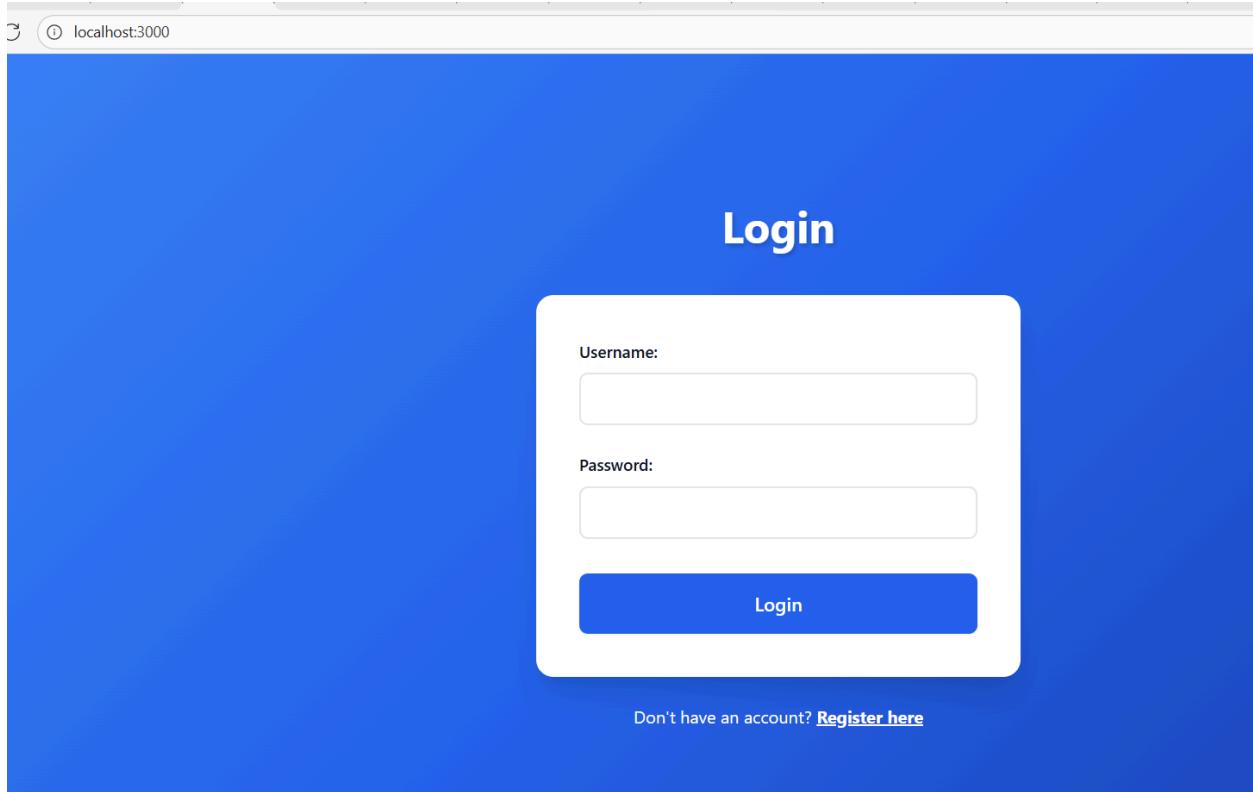
<http://localhost:3000>

### Phase 1 –

Register here'."/>

The screenshot shows a web browser window with the URL `localhost:3000` in the address bar. The page itself is titled "Login". It contains two input fields: one for "Username" and one for "Password", both with placeholder text. Below these fields is a "Login" button. At the bottom of the form, there is a link that reads "Don't have an account? [Register here](#)". The browser interface includes standard navigation buttons (back, forward, search) and a toolbar with various icons.

## Phase 2 (AI-Enhanced) –



### Backend Setup:

Navigate to the backend/ScholarLendingPortal

Install `sudo apt install python3.12-venv`

Create Virtual env -

```
python3 -m venv venv  
source venv/bin/activate
```

Install dependencies -

```
pip install -r requirements.txt
```

Install setup tools -

```
pip install setuptools
```

Run this -

```
python manage.py makemigrations api
```

Run Migration -

```
python manage.py migrate
```

If you get while running migration, then follow below steps,

```
rm db.sqlite3
```

```
rm api/migrations/0*.py
```

**Is api/migrations – should see `__init__.py`**

Recreate fresh migrations,

```
python manage.py makemigrations
```

```
python manage.py migrate
```

Create a superuser --

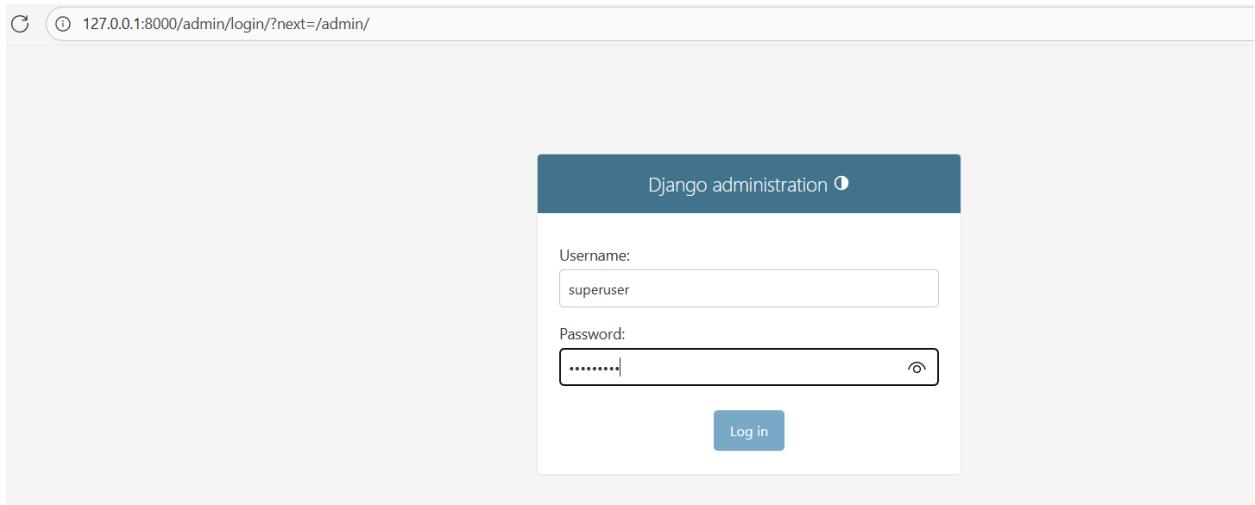
```
python manage.py createsuperuser
```

Start the server -

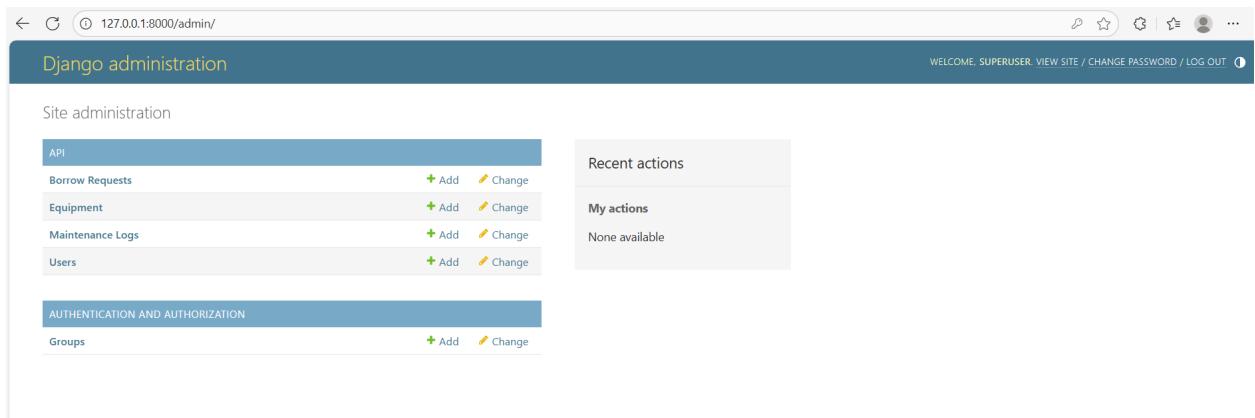
```
python manage.py runserver
```

Once backend server is started, will run at <http://127.0.0.1:8000>

**Access the Admin Panel** - Visit <http://127.0.0.1:8000/admin/> and login with your superuser credentials.



Once logged in using superuser creds, below dashboard will appear,



Now to create new user, go to <http://localhost:3000>

Click on **Register Here**,

## Phase 1 –

The screenshot shows a basic registration form titled "Register". The URL in the address bar is "localhost:3000/register". The form fields include:

- Username:
- Email:
- Password:
- First Name:
- Last Name:
- Role:
- Phone Number:

Below the form is a "Register" button and a link "Already have an account? [Login here](#)".

## Phase 2 (AI Enhanced) –

The screenshot shows an AI-enhanced registration form with a blue background and rounded corners. The URL in the address bar is "localhost:3000/register". The form fields are identical to the Phase 1 form:

- Username:
- Email:
- Password:
- First Name:
- Last Name:
- Role:
- Phone Number:

Below the form is a large blue "Register" button.

Create 3 users by selecting role.

**student** (who will request / borrow the equipment)

**staff** (who will reject / approve the request)

**admin** (who will take care of addition or removal of equipments and other stuffs)

## Student Dashboard (Phase 2) –

The screenshot shows a web browser window for the 'Equipment Management System' at localhost:3000/dashboard. The dashboard has a blue header with the title 'Equipment Management System' and navigation links for 'Dashboard', 'Equipment', 'My Requests', and 'Logout'. Below the header, a 'Dashboard' section displays a welcome message 'Welcome, student (student)' and five summary cards:

- Total Equipment: 0
- Available Equipment: 0
- My Total Requests: 0
- Pending Requests: 0
- Currently Borrowed: 0

## Staff Dashboard (Phase 2) –

The screenshot shows a web browser window for the 'Equipment Management System' at localhost:3000/dashboard. The dashboard has a blue header with the title 'Equipment Management System' and navigation links for 'Dashboard', 'Equipment', 'Borrow Requests', 'Maintenance Logs', 'My Requests', and 'Logout'. Below the header, a 'Dashboard' section displays a welcome message 'Welcome, staff (staff)' and five summary cards:

- Total Equipment: 0
- Available Equipment: 0
- Pending Approvals: 0
- Approved Requests: 0
- Currently Issued: 0

## Admin Dashboard (Phase 2) –

The screenshot shows the Admin Dashboard with a blue header bar containing the title "Equipment Management System" and navigation links: Dashboard, Equipment, Manage Equipment, Borrow Requests, Maintenance Logs, My Requests, and Logout.

The main area is titled "Dashboard" and displays a welcome message: "Welcome, admin (admin)". Below this are five summary boxes:

- Total Equipment: 0
- Available Equipment: 0
- Pending Approvals: 0
- Approved Requests: 0
- Currently Issued: 0

Log in as Admin and add equipment by going to **Manage Equipment** section and click on **Add equipment**,

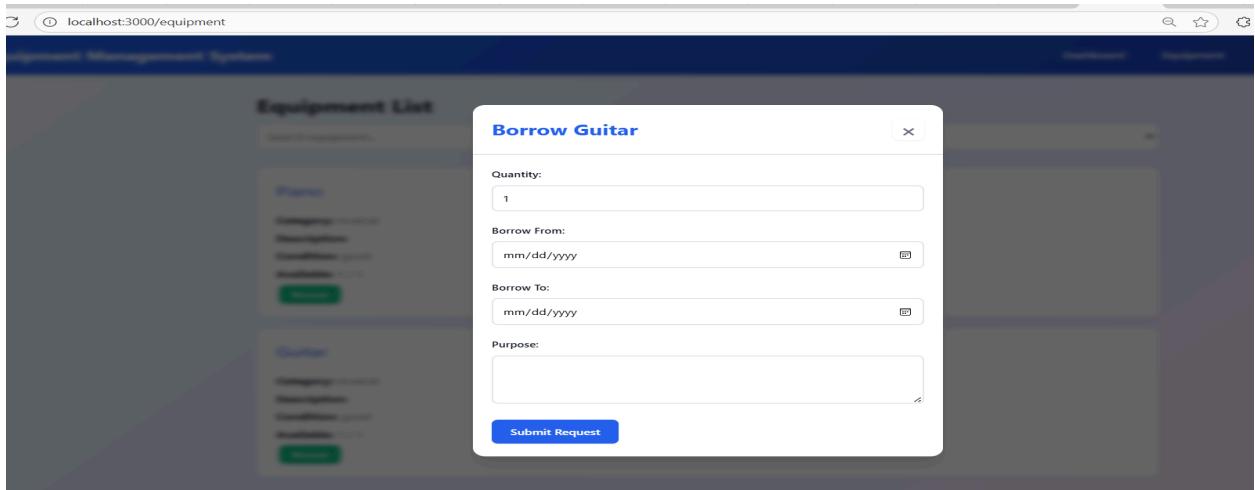
The screenshot shows the "Manage Equipment" page with a blue header bar containing the title "Equipment Management System" and navigation links: Dashboard, Equipment, Manage Equipment, Borrow Requests, Maintenance Logs, My Requests, and Logout.

The main area is titled "Manage Equipment" and features a button "Add New Equipment". A green success message box says "Equipment added!". Below it is a table listing equipment details:

NAME	CATEGORY	CONDITION	QUANTITY	AVAILABLE	ACTIONS
Piano	musical	good	1	1	<button>Edit</button> <button>Delete</button>
Guitar	musical	good	1	1	<button>Edit</button> <button>Delete</button>

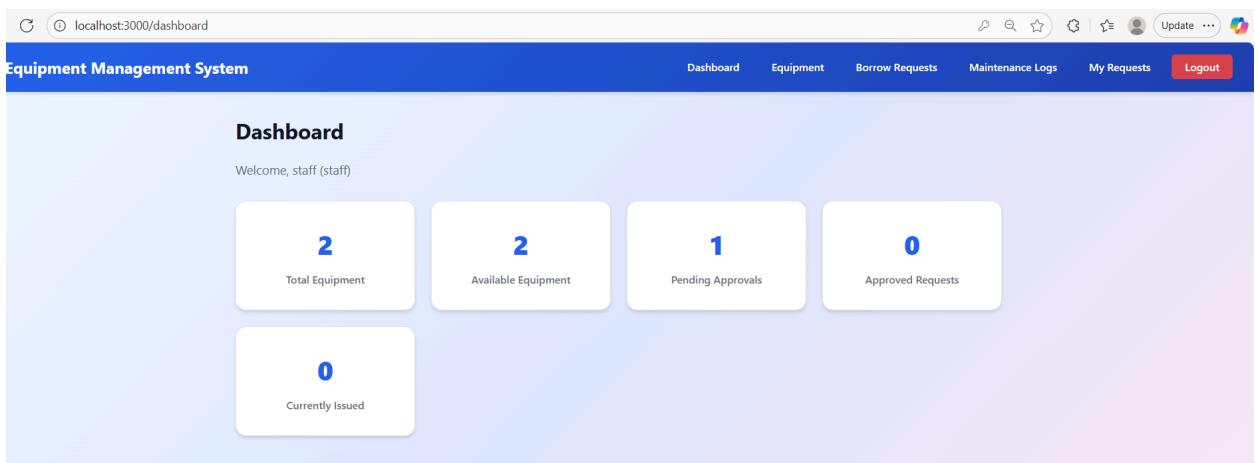
Once Equipment is available, Student will borrow/lend the equipment for specific period of time. Log in as Student, equipment will be available to borrow.

To Borrow Equipment, go to **Equipment** section and click on **Borrow** for the equipment which needs to be borrowed.



Provide essential details to borrow the equipment and click on **Submit Request**.

Staff will approve/reject the request. Log in as Staff.



There is one pending request approval, raised by student.

Now to accept the request, go to **Borrow Request** and approve it.

The screenshot shows a web browser window for the 'Equipment Management System' at localhost:3000/borrow-requests. The page title is 'Borrow Requests'. A dropdown menu shows 'Pending'. Below it is a table with columns: USER, EQUIPMENT, QUANTITY, FROM, TO, STATUS, PURPOSE, and ACTIONS. One row is visible: 'student' borrows a 'Piano' quantity '1' from '2025-11-07' to '2025-11-14'. The status is 'pending' (highlighted in yellow), purpose is 'To Learn', and actions are 'Approve' (green button) and 'Reject' (red button).

Once request is approved, Equipment becomes available to Student for specific period of time.

The screenshot shows the same web browser window after approval. A green success message 'Request approved!' is displayed. The table row now shows the status as 'approved' (highlighted in green).

Login as Student and go to **My Requests** section, Request status will be **approved**.

The screenshot shows the 'My Requests' section for a student. The page title is 'My Borrow Requests'. A table lists one request: 'Piano' borrowed quantity '1' from '2025-11-07' to '2025-11-14'. The status is 'approved' (highlighted in green), purpose is 'To Learn', and the request date is '11/6/2025'.