

Project Overview

You will build a Django REST API system that allows users to transfer file ownership between users and revoke (get the ownership back of the Resources) those transfers. This system will track all transfer history for audit purposes.

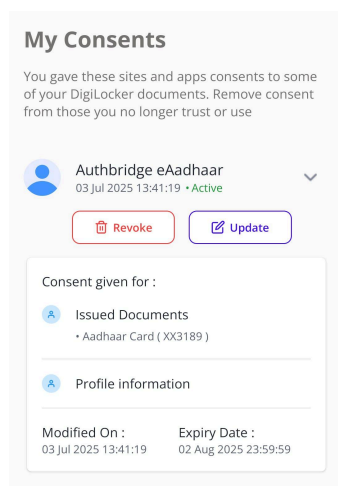
Ownership - Assume there are 2 resources A and B

A had a resources and if it transfers the resource to B (Assume Property Papers)

B is now owner of that Papers

And if A wants to revoke the access (Take ownership back it can do it)

(Assume something like sharing access in Google Docs and Revoking it)



(Just for understanding you can also take same analogy as my consent tab in Digilocker)

Learning Objectives

- Implement Django models with relationships
- Create REST APIs using Django REST Framework
- Handle file uploads and ownership management
- Implement business logic for transfer and revoke operations
- Test APIs using Postman

System Requirements

Core Functionality

- **File Transfer:** Owner A can transfer a file to User B (ownership changes from A to B)
- **Transfer Revocation:** Original owner A can revoke the transfer (ownership returns to A)

- **History Tracking:** All transfer actions are logged with timestamps

Database Models

1. User Model

2. File Model

Fields Required:

- name (CharField) - Name of the file
- file (FileField) - The actual file upload
- owner (ForeignKey to User) - Current owner of the file
- created_at (DateTimeField) - When the file was created

3. TransferHistory Model

Fields Required:

- file - Reference to the file being transferred
- from_user - User transferring the file
- to_user - User receiving the file
- action (CharField) - Type of action ("TRANSFER" or "REVOKE")
- timestamp (DateTimeField) - When the action occurred

API Endpoints Required

1. Transfer API

- **Method:** POST
- **Endpoint:** /api/transfer/
- **Purpose:** Transfer file ownership from current owner to another user
- **Logic:**
 - Only the current owner can transfer the file
 - Update file ownership
 - Create transfer history record with action "TRANSFER"

2. Revoke API

- **Method:** POST
- **Endpoint:** /api/revoke/
- **Purpose:** Revoke a previous transfer (return ownership to original owner)
- **Logic:**

- Only the original file owner can revoke
- Update file ownership back to original owner
- Create transfer history record with action "REVOKE"

Deliverables

1. Code Implementation (GitHub Link of the Code Base)

2. Postman Testing Screenshots (API Testing Output Screenshots)

3. Database State Screenshots