

Product Review System - Backend Assignment

Submitted for: Pfactorial.ai Backend Technical Assignment

This Django REST Framework project provides a RESTful API for a product review system as part of a backend technical assignment. It supports:

- Role-based authentication (Admin and Regular User)
- Product management (CRUD) for Admins
- Review submission (one per product) by authenticated users
- Rating aggregation and review listings

Technologies used:

- Python
- Django
- Django REST Framework
- SQLite (default)

Core Features

1. User System:

- Token-based login via /login/
- Role-based access (Admin can manage products, regular users can only review)

2. Product Management:

- Admins can create, update, delete products
- All users can list and retrieve product details

3. Review System:

- Authenticated users can submit one review per product
- Reviews include rating (1-5) and comment
- Duplicate reviews are prevented
- Reviews are linked to the logged-in user automatically

4. Rating Aggregation:

- Product listing shows average rating computed from user reviews

5. API Structure (Key Endpoints):

- POST api/register/ : User registration
- POST api/login/ : User login, returns token
- GET api/products/
: List products (public)
- GET api/products/<id>/ : Get product details
- GET api/products/<id>/reviews/ : List reviews for product
- POST api/products/<id>/reviews/ : Submit a review (auth required)

Setup & Usage

To run this project locally:

1. Clone the repository
2. Install dependencies: `pip install -r requirements.txt`
3. Run migrations: `python manage.py migrate`
4. Create superuser: `python manage.py createsuperuser`
5. Start server: `python manage.py runserver`

Developed by: Nabeel Sadiqu N

Qualification: BE Computer Science (2024 Graduate)

Training: Completed 6-month Full Stack Development in Python Django Training at DDU-GKY Inductus, Trivandrum

Location: Malappuram