

## Step 1: Project Setup

- Install Django and DRF (do not forget about venv).
- Create a new Django project (I hope you know the command).
- Create a new Django app (I hope you know the command).

## Step 2: Model Setup

- User model (do not inherit from Django User model !!!):
  - username (CharField): The username of the user.
  - email (EmailField): The email address of the user.
  - password (CharField): The password of the user.
- Product model:
  - name (CharField): The name of the product.
  - description (TextField): A description or details about the product.
  - price (DecimalField): The price of the product.
  - quantity (PositiveIntegerField): The quantity of the product available in stock.
- Order model:
  - user (ForeignKey): A reference to the User model, representing the user who placed the order.
  - products (ManyToManyField): A reference to the Product model, indicating the products included in the order.
  - created\_at (DateTimeField): The date and time when the order was created.
  - status (CharField): The status of the order (e.g., "Pending", "Shipped", "Delivered").
- Category model:
  - name (CharField): The name of the category.
  - description (TextField): A description or details about the category.
- Review model:
  - product (ForeignKey): A reference to the Product model, representing the product being reviewed.
  - user (ForeignKey): A reference to the User model, representing the user who wrote the review.
  - rating (PositiveIntegerField): The rating given by the user for the product (e.g., on a scale of 1 to 5).

- comment (TextField): A comment or review text provided by the user.

### **Step 3: Configure database**

- Set up the database connection in the project's settings file (if you want to use a db engine other than sqlite ).
- Create database migrations (I hope you know the command).
- Apply the migrations (I hope you know the command).

### **Step 4: Create serializers**

- User serializer, including all fields.
- Product serializer: including all fields.
- Order serializer: including all fields. For the 'products' field, use a nested serializer for the Product model.
- Category serializer: including all fields.
- Review serializer: including all fields. For the 'product' field, use a nested serializer for the Product model.

### **Step 5: Views**

- Create views to handle the creation, retrieval, update, and deletion of users for all models: User, Product, Order, Category, Review.
- Use the proper serializers for request/response data serialization and validation.
- Apply relevant permission classes to ensure proper access control.

### **Step 6: URL Configuration**

- Create URL patterns for creation, retrieval, update and deletion for all views. Some might also have a listing url.

### **Step 7: Run and test Application**

- Start the Django development server (I hope you know the command).
- Use tools like Postman or cURL to send HTTP requests to the defined endpoints and verify the responses.
- Test various scenarios like creating users, tasks, categories, and comments, updating and deleting them, and retrieving lists or individual instances.