**📘 Project README Overview**

The README will include:

**1. Project Title**

**Poultry Farm Management System**

**2. Description**

A modular, scalable system for managing poultry operations, inventory, commerce, infrastructure, analytics, and admin settings. Built with Django and designed for web, mobile, API, and future IoT integration.

**3. Architecture**

* **Operations**: BirdApp, FeedingApp, WaterApp, CleaningApp, HealthVaccinationApp
* **Commerce & Inventory**: CatalogApp, InventoryApp (in cartapp)
* **Infrastructure & Control**: FarmApp, HousesApp, FlocksApp, SectorApp, AccountApp
* **Analytics & Reporting**: DashboardApp, ReportApp
* **Admin & Configuration**: SettingsApp, NotificationApp

**4. Setup Instructions**

git clone &lt;repo&gt;

cd poultryfarm

python -m venv env

source env/bin/activate

pip install -r requirements.txt

python manage.py migrate

python manage.py runserver

**5. API Usage**

* POST /flocks/{id}/feed/ → Feed a flock
* GET /inventory/ → Check stock
* POST /notifications/ → Send alerts
* GET /metrics/feed/ → View feed usage

**6. Contribution Guidelines**

* Use feature branches
* Follow PEP8
* Write unit tests in tests/
* Submit pull requests with clear descriptions

**📄 Technical Specification Document**

This document includes:

**✅ Module Interactions**

| **Source** | **Target** | **Interaction** |
| --- | --- | --- |
| FeedingApp | InventoryApp | Deduct feed stock |
| BirdApp | DashboardApp | Log health and production metrics |
| HealthVaccinationApp | NotificationApp | Alert for due vaccinations |
| CatalogApp | InventoryApp | Define product types |
| SectorApp | BirdApp | Assign flocks to zones |

**🔄 Data Flow Example: Feeding**

1. BirdApp identifies flock and feed requirement.
2. FeedingApp checks stock via InventoryApp.
3. InventoryApp deducts feed quantity.
4. DashboardApp logs feed usage.
5. NotificationApp alerts if stock is low.

**🌐 API Endpoints**

* GET /products/
* POST /inventory/deduct/
* GET /reports/production/
* POST /settings/update/

**🧱 Models**

* Product: id, name, category\_id, price, stock\_quantity
* InventoryItem: id, product\_id, quantity
* Flock: id, house\_id, sector\_id, bird\_count
* FeedingLog: id, flock\_id, product\_id, quantity, timestamp

**🛠️ Services**

* FeedingService: feed\_flock(flock\_id, product\_slug, quantity)
* ProductionService: register\_production(flock\_id, product\_slug, quantity)
* NotificationService: send\_stock\_alert(product\_name, quantity)

**🧩 Would You Like:**

* A **Markdown version** of the README and spec?
* A **PDF export** (with encoding fixes)?
* A **GitHub-ready folder structure** with these files?

Let me know how you'd like to proceed!