**Collaborative Farming**

**1. Title**

**Collaborative Farming: A Web-based Platform for Agricultural Sustainability and Efficiency**

**2. Introduction**

**2.1 Purpose**

This platform aims to connect farmers, companies, and service providers to facilitate land leasing, shared resources, and digital market access for agricultural sustainability.

**2.2 Scope**

The Collaborative Farming web platform is designed to:

* Register companies to supply farmers with essential products and services.
* Facilitate land leasing/rental for professional farmers or companies.
* Share government schemes and digital support for agriculture.

**3. Problem Statement**

Agriculture in India faces numerous challenges, including:

1. Lack of direct market access for farmers leading to low profits due to middlemen.
2. Difficulty in finding suitable land for professional farming or expansion.
3. Lack of real-time information on government schemes and agricultural support.
4. Inefficient resource utilization, leading to wastage and low productivity.
5. Limited access to modern farming techniques and IoT-based precision farming.

**4. Proposed Solution**

The Collaborative Farming platform aims to address these challenges with the following solutions:

**4.1 Web-Based Platform**

* A centralized digital platform where farmers, companies, and service providers can interact.
* User-friendly UI with multilingual support.

**4.3 Land Leasing & Rental System**

* A platform for farmers to lease or rent land to professional farmers or companies.
* Digital agreements and payment integration.

**4.4 Government Schemes & Support**

* Automated updates on relevant government schemes.
* recommendations for subsidies

**4.6 Database Management (ColabDB)**

* **User Tables** – Farmers, companies, service providers.
* **Property Tables** – Land leasing/rental details.
* **Service Tables** – Marketplace and IoT integration.
* **Government Schemes** – Storage of updated agricultural policies.
* **Payment**
* **Agreement table** -

**5. Functional Requirements**

1. User authentication and role-based access.
2. Marketplace for farmers and companies to trade agricultural products.
3. Land leasing feature with agreement management.
4. Government scheme updates and personalized recommendations.

**6. Non-Functional Requirements**

1. High availability and scalability to support multiple users.
2. Secure transactions and data encryption.
3. Responsive design for mobile and web users.
4. Performance optimization for real-time data processing.

**7. Conclusion**

The **Collaborative Farming** web platform leverages technology to bridge the gap between farmers, businesses, and government support. Digital land leasing, the platform aims to enhance agricultural efficiency and sustainability in India.