

Project: Smart Agricultural Management System

Team Members:

1. Maidul Islam – 2021331057
2. Nihal Hasnain Alvi – 2021331063
3. Shamim Hossain – 2021331071

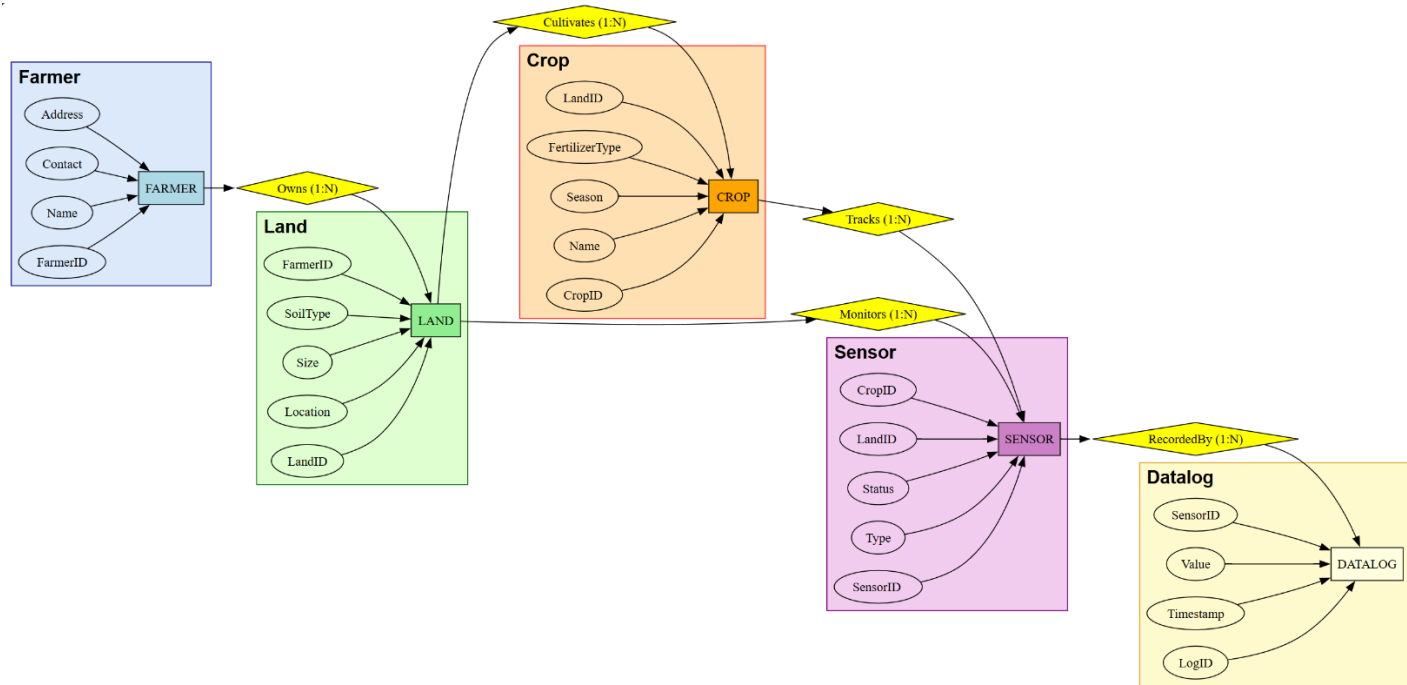
Project Introduction:

The Smart Agricultural Management System is a modern, data-driven platform designed to enhance and streamline farming practices. The system enables farmers to monitor and manage agricultural activities efficiently by integrating real-time sensor data, such as soil moisture and temperature, with weather forecasts and crop/land records.

Farmers can track irrigation schedules, fertilizer usage, and crop health, while receiving automated recommendations to maximize yield and optimize resource usage. The relational database underpins the system, storing key entities including Farmers, Lands, Crops, Sensors, and Datalogs, along with their relationships such as land ownership, crop cultivation, sensor deployment, and data logging.

The system supports detailed querying and reporting, including soil health analysis and seasonal yield summaries, while ensuring data normalization for scalability and accuracy. By merging traditional agricultural practices with modern technology, SAMS addresses the challenges of Bangladesh's agriculture sector and provides a foundation for future IoT and AI-driven innovations.

ER DIAGRAM :



Relationships :

- **Farmer 1:N Land:** One farmer can own multiple lands.
- **Land 1:N Crop:** Each land can have multiple crops.
- **Land 1:N Sensor:** Each land can have multiple sensors.
- **Crop 1:N Sensor:** Each crop may be monitored by multiple sensors.
- **Sensor 1:N Datalog:** Each sensor generates multiple data logs.

SCHEMA DIAGRAM:

