Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation: Ministry of Micro, Small and Medium Enterprises.

PS Code:1398

Problem Statement Title: Integration and Utilization of data-based being maintained by various Ministries/Departments for better utilization of raw materials and production capacity.

Team Name: Data Dementors

Team Leader Name: Aditi Sirigineedi

Institute Code (AISHE): C-19793

Institute Name: Mahatma Gandhi Institute of technology

Theme Name: Agriculture, FoodTech & Rural Development

Idea/Approach Details

➢ **Solution Idea:**
- Develop an agritech application with modern technology stacks for supply chain optimization and real-time analytics.
- Integrate data from ministries/departments ,IOT devices and Satellites for resource utilization.

➢ **Key Features:**
- Create a centralized data repository with cloud data integration.
- Leverage machine learning for predictive analytics and cloud computing for real-time revenue forecasting.
- Implement an AI-driven recommendation engine for crop types based on local conditions.
- Enable real-time demand tracking and production shortfall identification through cloud-based dashboards and analytics.
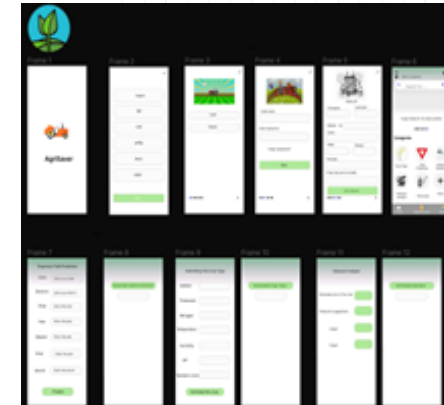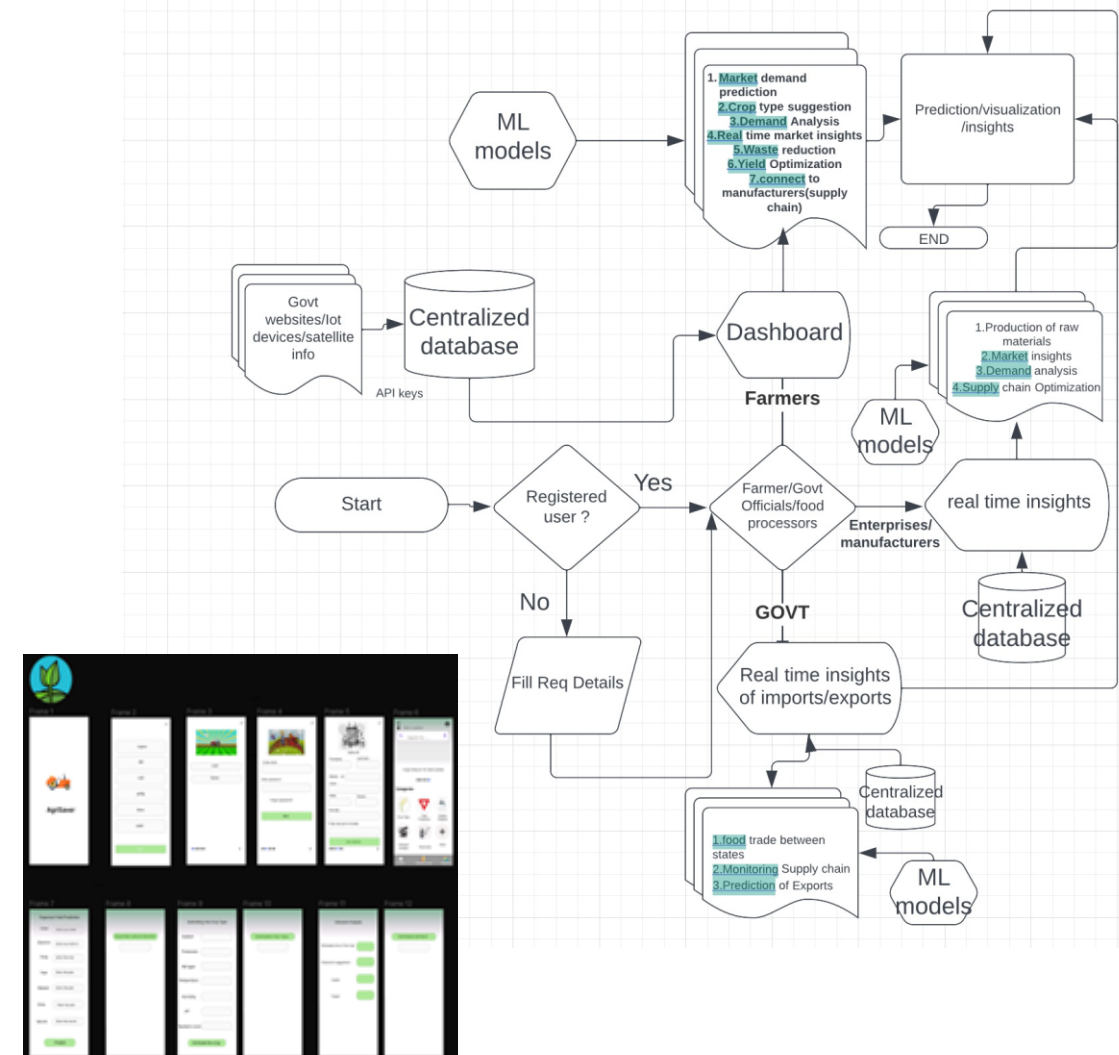
➢ **Problem Solving:**
- Solve data fragmentation with cloud data centralization.- Provide users with data-driven decision-making tools through user-friendly cloud-based interfaces.- Optimize resource allocation using cloud optimization algorithms.- Improve supply chain efficiency by bridging demand and production gaps with real-time cloud analytics.
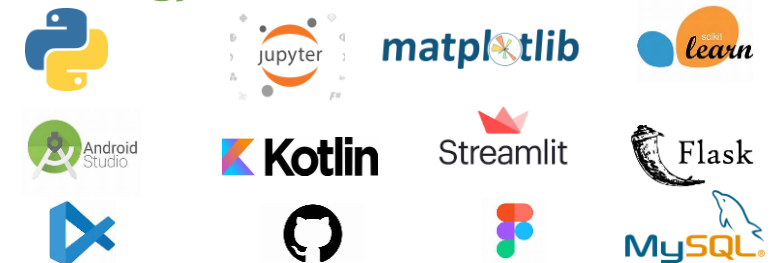
➢ **Other Functions:**
-Offering cloud-based educational resources and training materials.
- Reduce waste in the supply chain with cloud-based logistics optimization.
- Ensure agile development using cloud-based DevOps practices based on continuous user feedback.

➢ **User-oriented approach:**
- Adapt the application to different users, including farmers, officials and processors.
-Provide real-time notifications and alerts through cloud-based communication channels.

Technology stack:

Idea/Approach Details

Use Cases:

- **Demand Forecasting for Farmers:** Empower farmers to plan production based on market demand, reducing wastage.
- **Yield Optimization:** Assist farmers in increasing agricultural yields and resource effectiveness.
- **Supply Chain Efficiency**: Optimize transportation and reduce spoilage in the supply chain.
- **Crop Type Recommendations:** Assist farmers in selecting suitable crops for their region and soil.
- **Market Insights**: Provide insightful market information to inform agriculture strategies.
- **Scalability and Adaptability:** Adapt to various agricultural regions and practices.
- **Environmental Sustainability:** Contribute to resource conservation and eco-friendly agriculture.
- **Waste Reduction**: Identify and prevent food waste in agricultural processes.

Dependencies / Show stopper

- **Data Availability:** The availability and accessibility of accurate and up-to-date data from various Ministries/Departments.

- **Interoperability:** Ministries/Departments may maintain data in different formats and systems.

- **Data Privacy and Security:** Handling sensitive data, especially import data and potentially proprietary information.

- **Resistance to Change:** Producers and manufacturers could be reluctant to follow your advice.

- **Technical Difficulties:** Technical challenges may arise during software development, including issues like handling large amounts of data, performance limitations, and software bugs that affect its functionality.

Team Member Details

Team Leader Name: Aditi Sirigineedi

Branch :BTech   Stream :CSD   Year :III

Team Member 1 Name: R Preeti

Branch : BTech   Stream :CSD   Year :III

Team Member 2 Name: Gopalam Bhuvana

Branch : BTech   Stream : CSM   Year: IIII

Team Member 3 Name: Kodimala Vanshi Krishna

Branch: BTech   Stream :CSD   Year : III

Team Member 4 Name: K Shashi kiran

Branch : BTech   Stream :CSD   Year : III

Team Member 5 Name: Ayman Mohammed Shabbir

Branch :BTech   Stream :CSD   Year : III

Team Mentor 1 Name: Rama bai

Category : Academic   Expertise (AI/ML/Blockchain, etc):   Domain Experience (in years):

Team Mentor 2 Name: Swapna

Category (:Academic   Expertise (AI/ML/Blockchain, etc):   Domain Experience (in years):