Food smart dryer Ontology

Key Components of the System

1. **Sensors**
   - Detect temperature and humidity levels in the drying chamber.
2. **Microcontroller (ESP32)**
   - Processes data from sensors.
   - Executes control algorithms.
   - Sends commands to actuators (fan, heater).
3. **Fan**
   - Regulates airflow for uniform drying.
4. **Heater (Heating Element)**
   - Provides controlled heat to dry food items(range 30-110) .
5. **Physical Structure**
   - Encloses the drying chamber.
   - Guides airflow and heat.
6. **Food Items**
   - Fruits and vegetables being dried.
7. **Control Algorithms**
   - Logic for real-time adjustments of fan speed and heater power.
8. **User Interface**
   - Displays real-time system status.
   - Allows user to input settings (via LCD button or mobile app).

Class Relationships

Subject (Classe)	Predicate (Relation)	Object (Classe)
Sensors	Sends Data	Microcontroller
Microcontroller	Processes Data	Control Algorithms
Control Algorithms	Controls	Fan
Control Algorithms	Controls	Heater
Fan	Moves Air	Physical Structure
Heater	Heats Air	Physical Structure
Physical Structure	Applies Process	Food Items
Sensors	Provides Feedback	Control Algorithms
Microcontroller	Sends Status	User Interface
User Interface	Sends Commands	Microcontroller

Relation schema