

## Cybersecurity Ontology for Smart Home Devices

This ontology is called a sensor network ontology for a smart home. It is a basic simulation for home use for systems such as Home Appliances, Heating systems and Security systems. All devices are connected to communicate and there is a main system control (master node).

### Cloud Architecture Model with Multiple Layers for IoT-based Home Automation

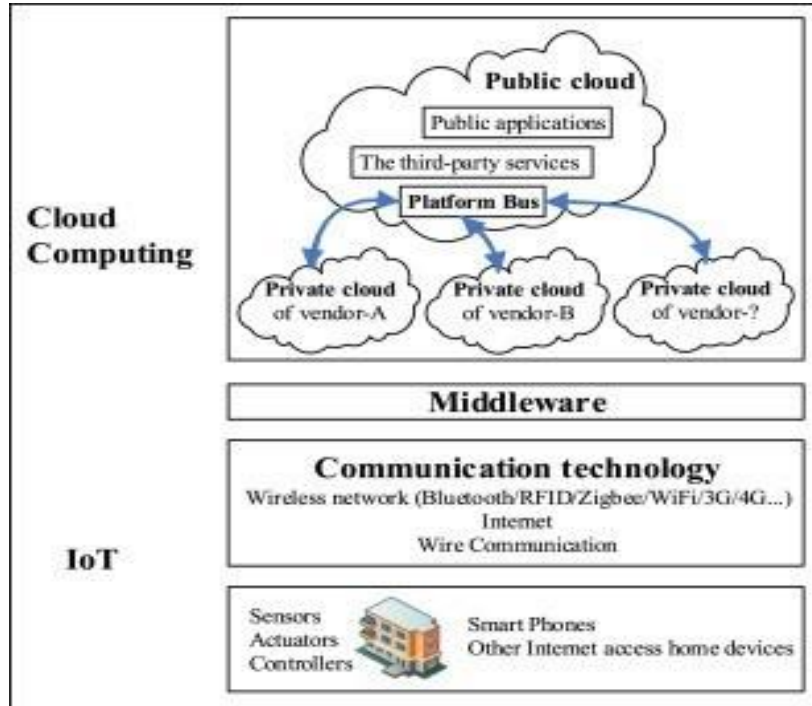


Figure 1. The IoT-based smart home's tiered cloud architecture paradigm

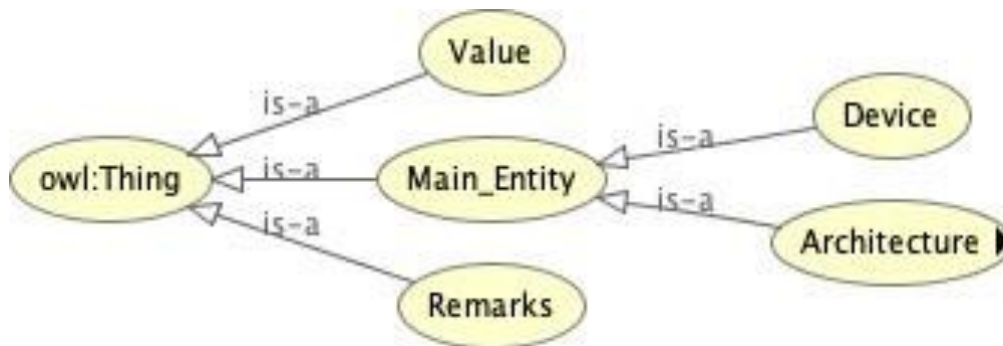


Figure 2. A Graph showing Class Diagram of Smart Home Security Model

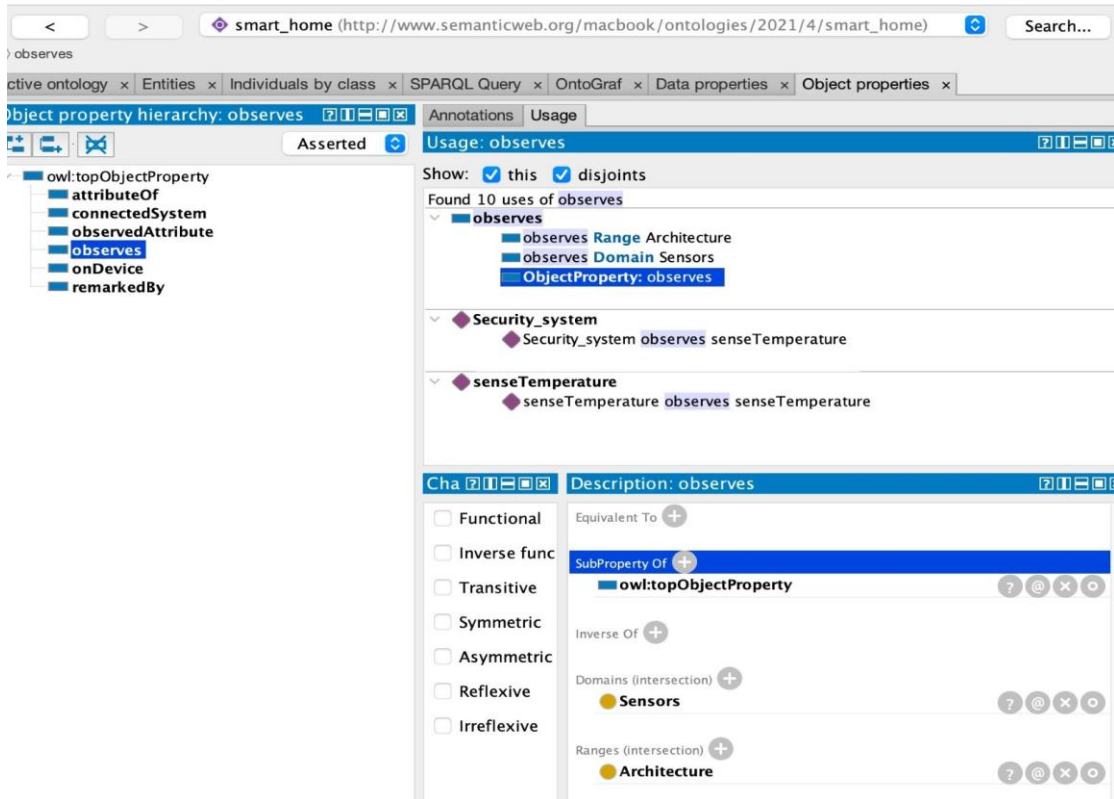


Figure 3. Describes the Object property of observes

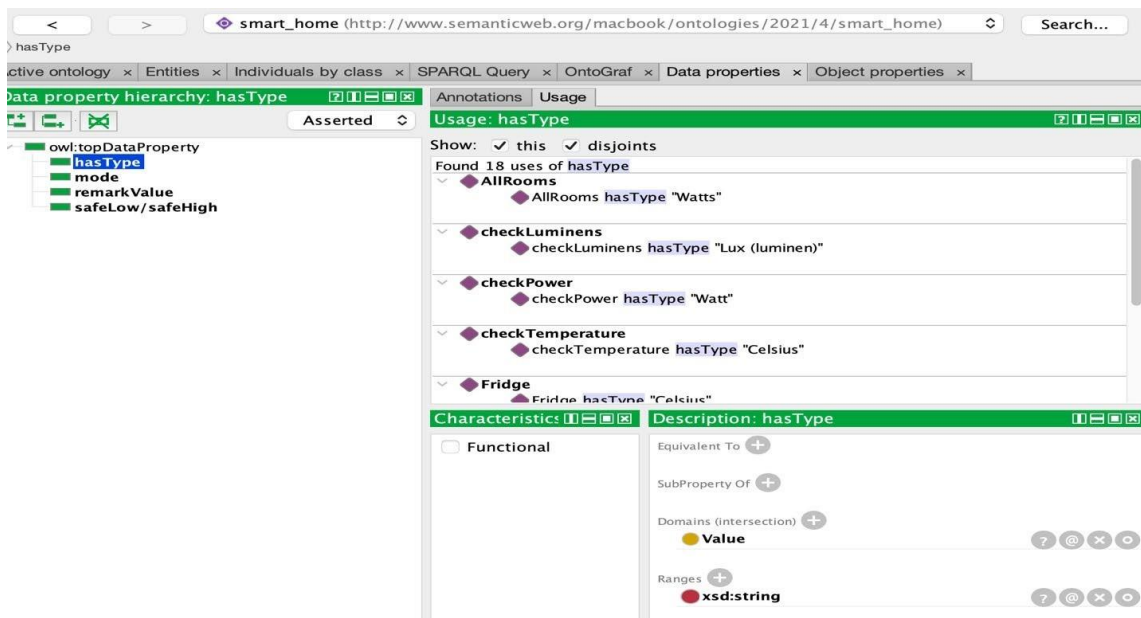


Figure 4. describes the Data properties

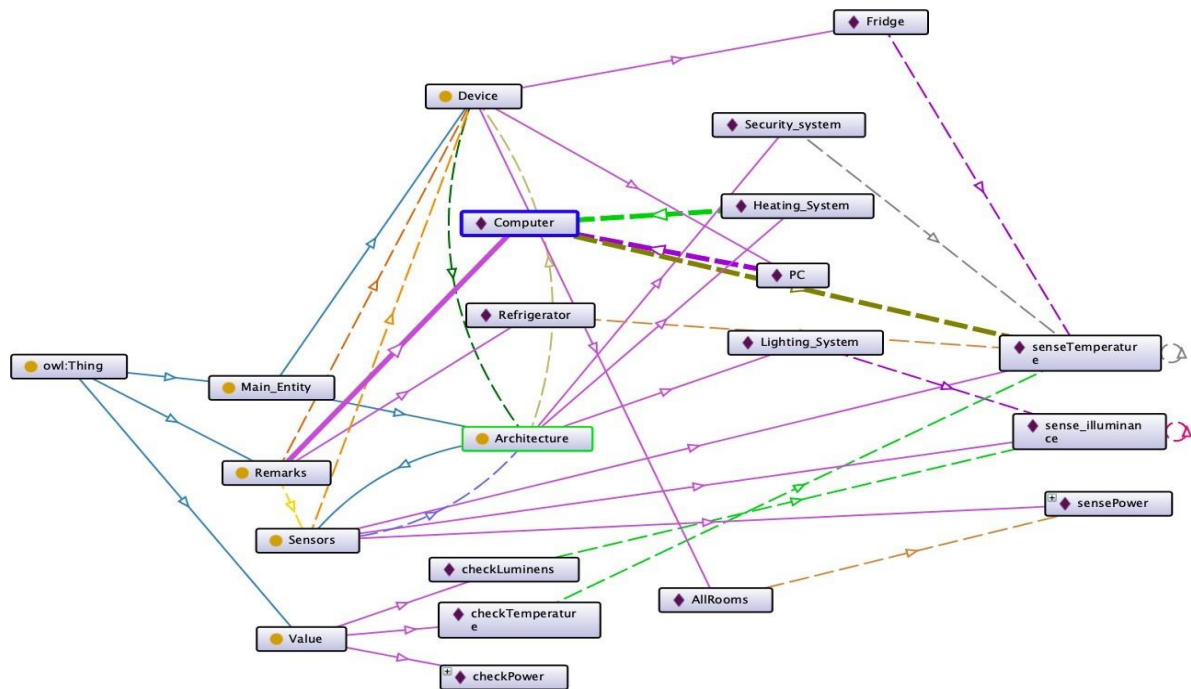


Figure 5. Smart home automation concept to its lowest level

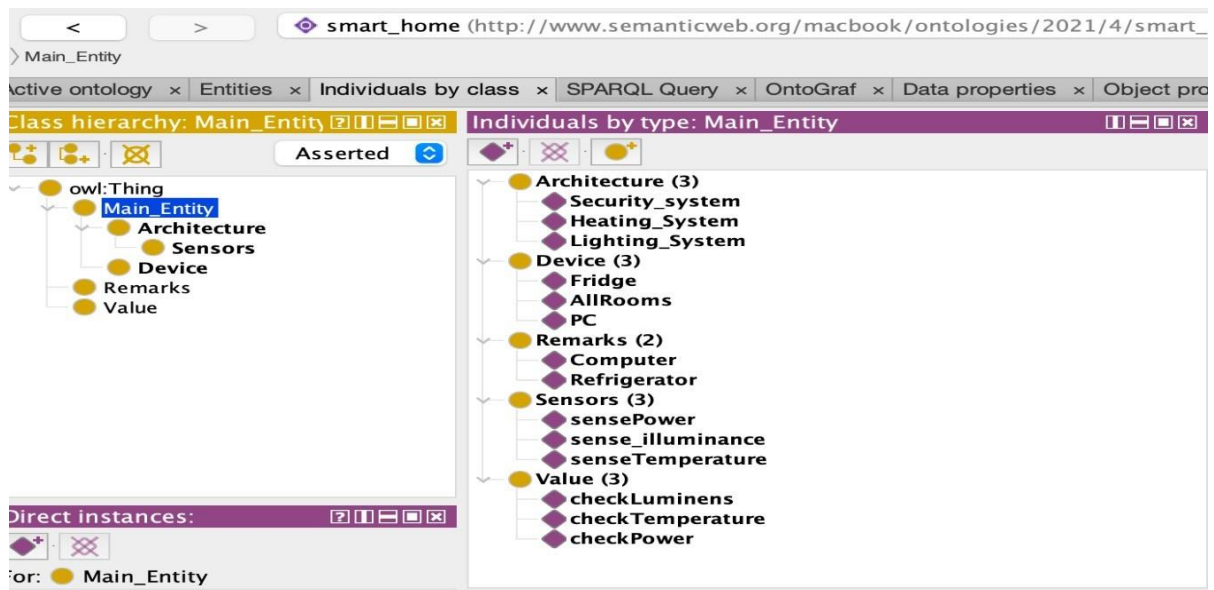


Figure 6. The Individuals are created for each class, and each class can have multiple individuals from other classes