



# **SNS COLLEGE OF ENGINEERING**

**Kurumbapalayam(Po), Coimbatore - 641 107**

**Accredited by NAAC-UGC with 'A' Grade**

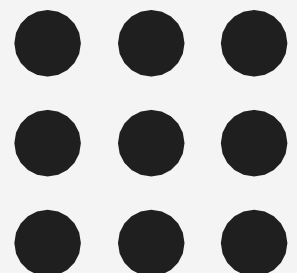
**Approved by AICTE, Recognized by UGC & Affiliated to Anna University, Chennai**

## **Department of AI & DS**

**Course Name - 19AD505-Internet Of Things & AI**

**III Year / V Semester**

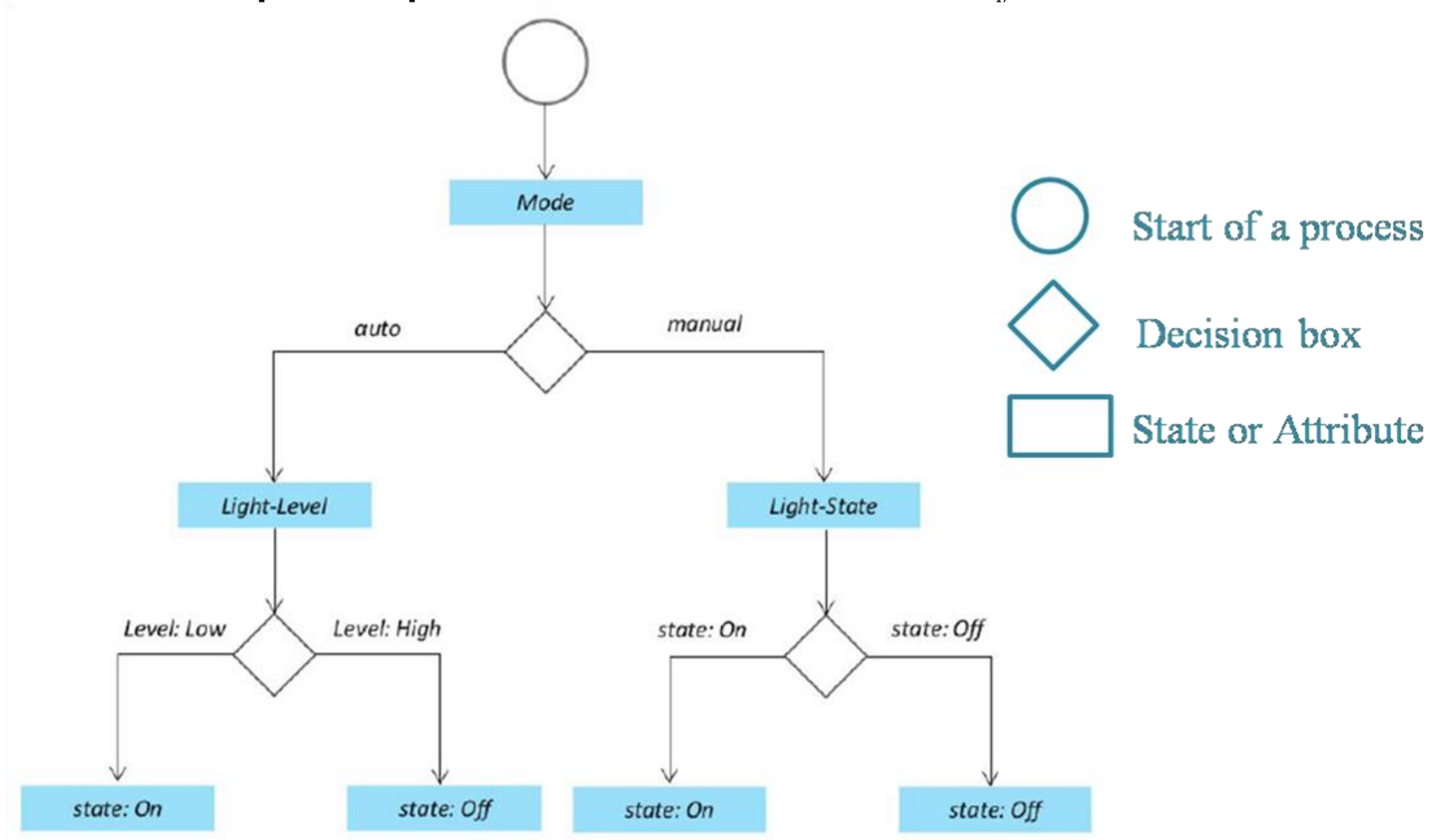
**DESIGN METHODOLOGY**



**SWATHIRAMYA AP/AIDS**

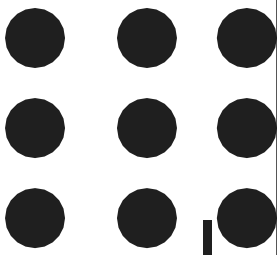
# Process Model Specification

The process specification for home automation system is as shown below





# Domain Model Specification



- Domain model defines domain level details (example if its telecom then frequency range to transfer )
- The domain model describes the main concepts, entities and objects in the domain of IoT system to be designed. Domain model defines the attributes of the objects and relationships between objects.
- Domain model provides an abstract representation of the concepts, objects and entities in the IoT domain, independent of any specific technology or platform.

# Domain Model Specification

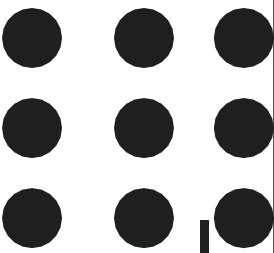
The entities, objects and concepts defined in the domain model include:

**Physical Entity** : Physical Entity is a discrete and identifiable entity in the physical environment (e.g. a room, a light, an appliance, a car, etc.).

IoT system provides information about the physical entity (using sensors) or performs actuation upon the physical entity

**Virtual Entity** : Virtual Entity is a representation of the Physical Entity in the digital world.  
For every physical entity there is a virtual entity

**Device** provides a medium for interactions between Physical Entities and Virtual Entities.  
Devices are either attached to Physical Entities or placed near Physical Entities.

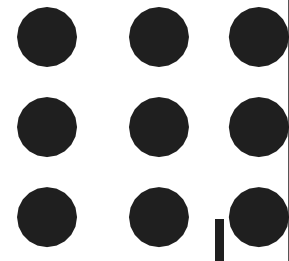


**Resource :-** Resources are software components which can be either "on-device" or "network-resources".

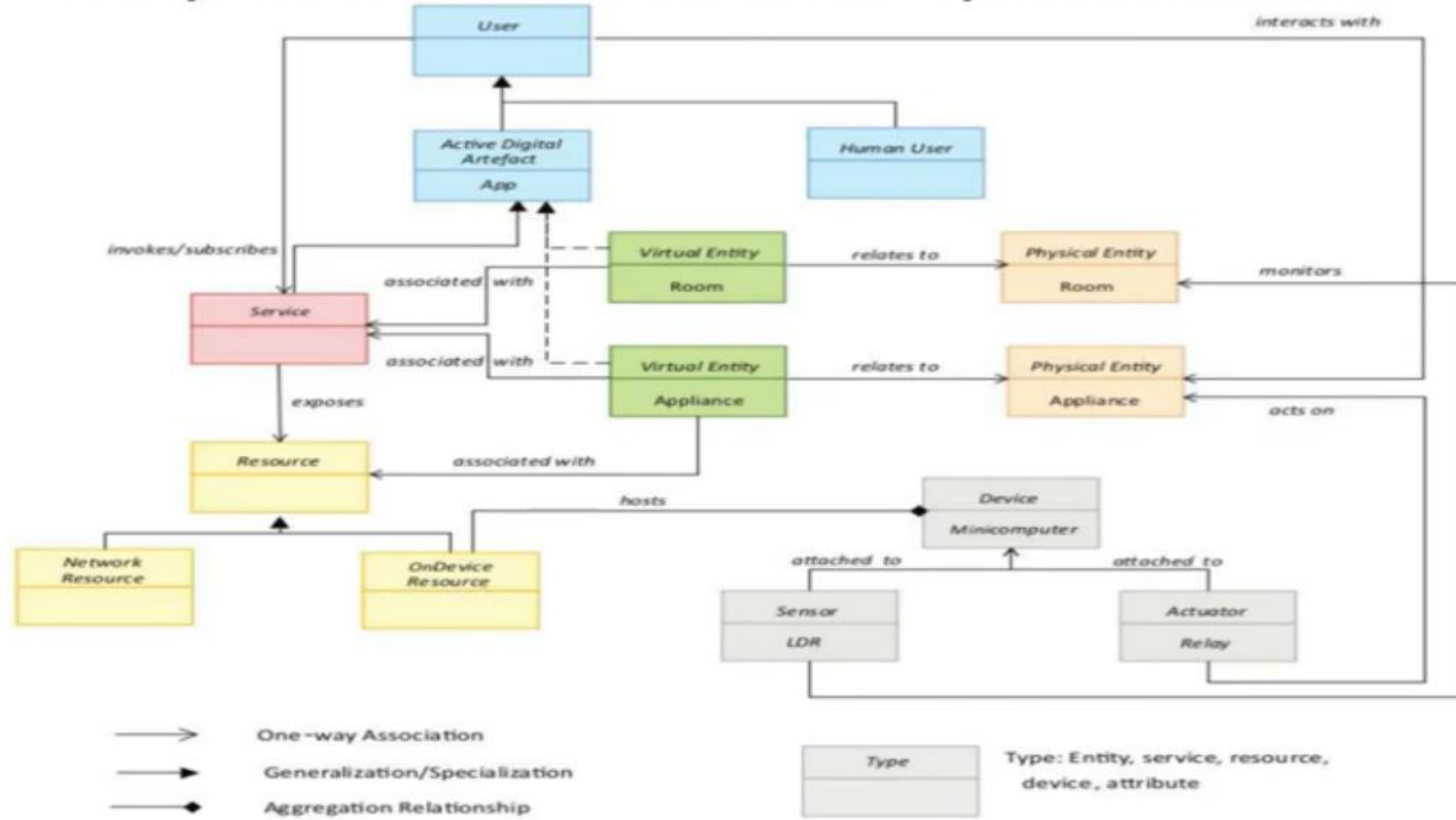
On-device resources are hosted on the device and provide sensing or actuation eg:os

Network resource - include software components that available on network eg:database

**Service :** Services provide an interface for interacting with the Physical Entity. Services access the resources hosted on the device or the network resources to obtain information about the Physical Entity or perform actuation upon the Physical Entity.



# Step 3: Domain Model Specification





**THANK YOU**