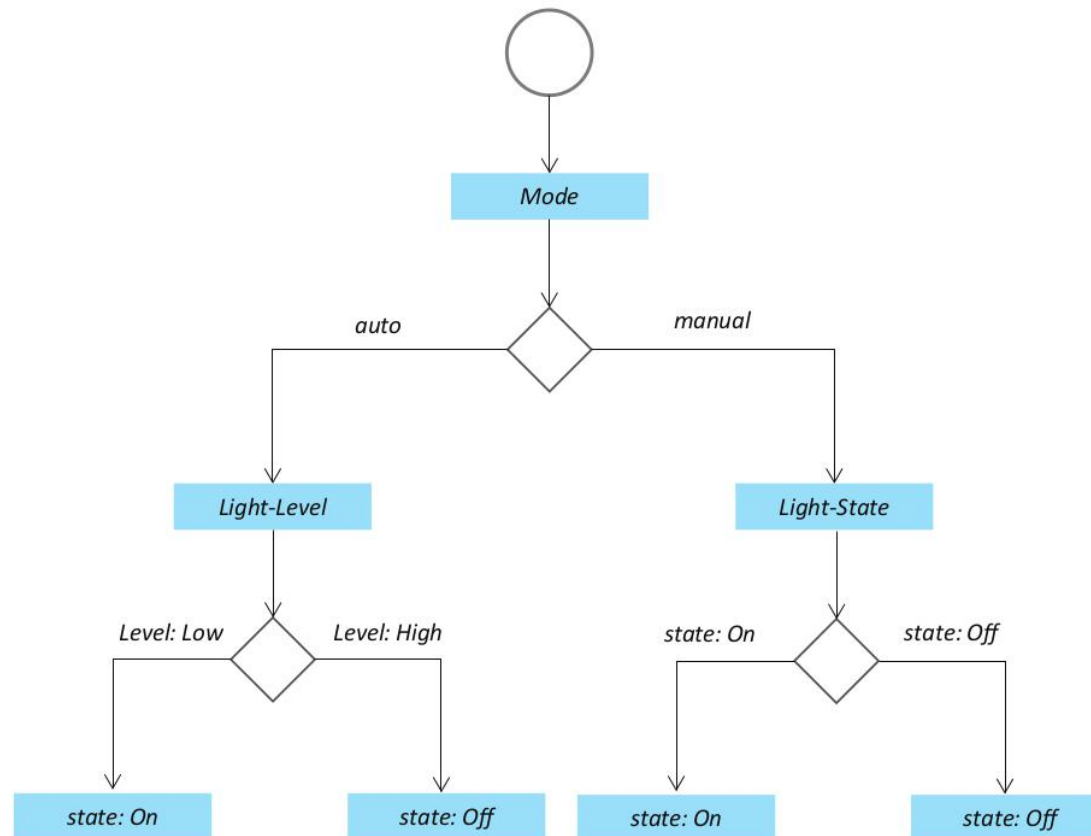


# Home Automation Case Study

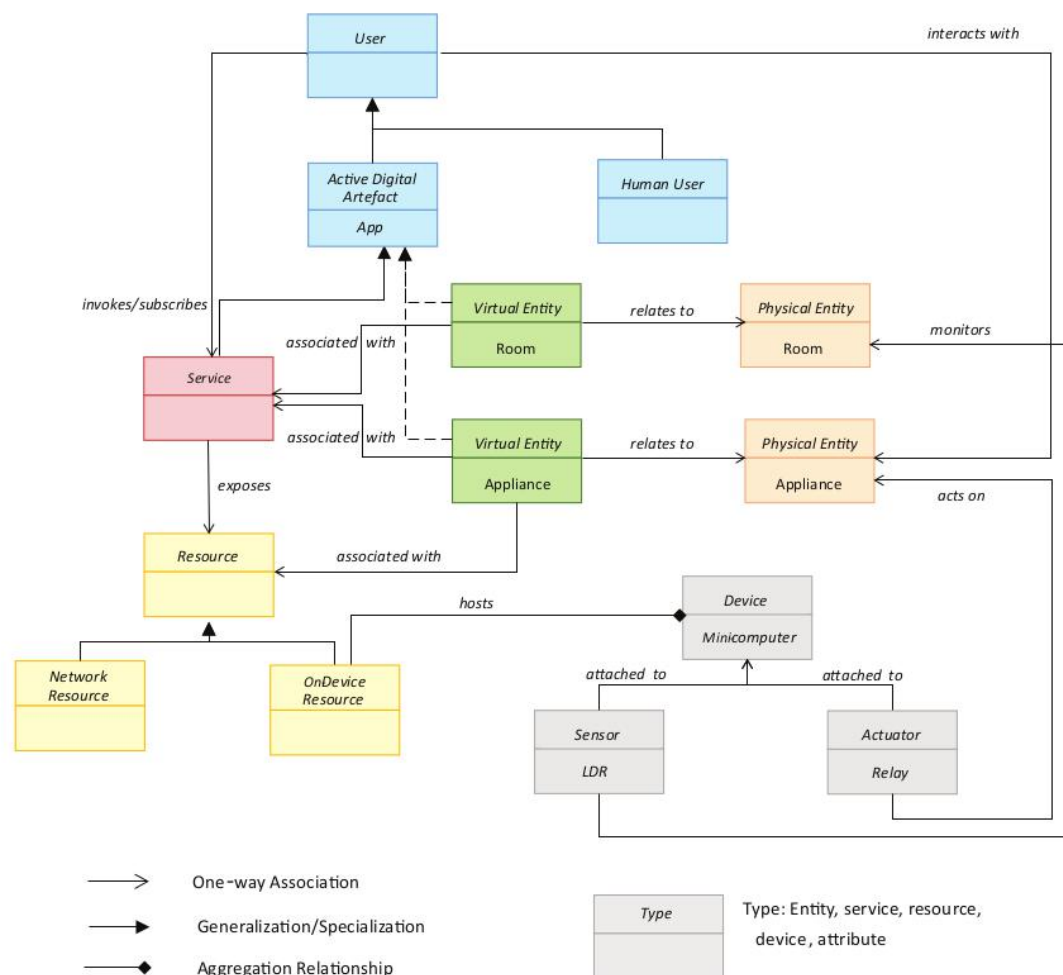
# Step:1 - Purpose & Requirements

- Applying this to our example of a smart home automation system, the purpose and requirements for the system may be described as follows:
  - Purpose : A home automation system that allows controlling of the lights in a home remotely using a web application.
  - Behavior : The home automation system should have auto and manual modes. In auto mode, the system measures the light level in the room and switches on the light when it gets dark. In manual mode, the system provides the option of manually and remotely switching on/off the light.
  - System Management Requirement : The system should provide remote monitoring and control functions.
  - Data Analysis Requirement : The system should perform local analysis of the data.
  - Application Deployment Requirement : The application should be deployed locally on the device, but should be accessible remotely.
  - Security Requirement : The system should have basic user authentication capability.

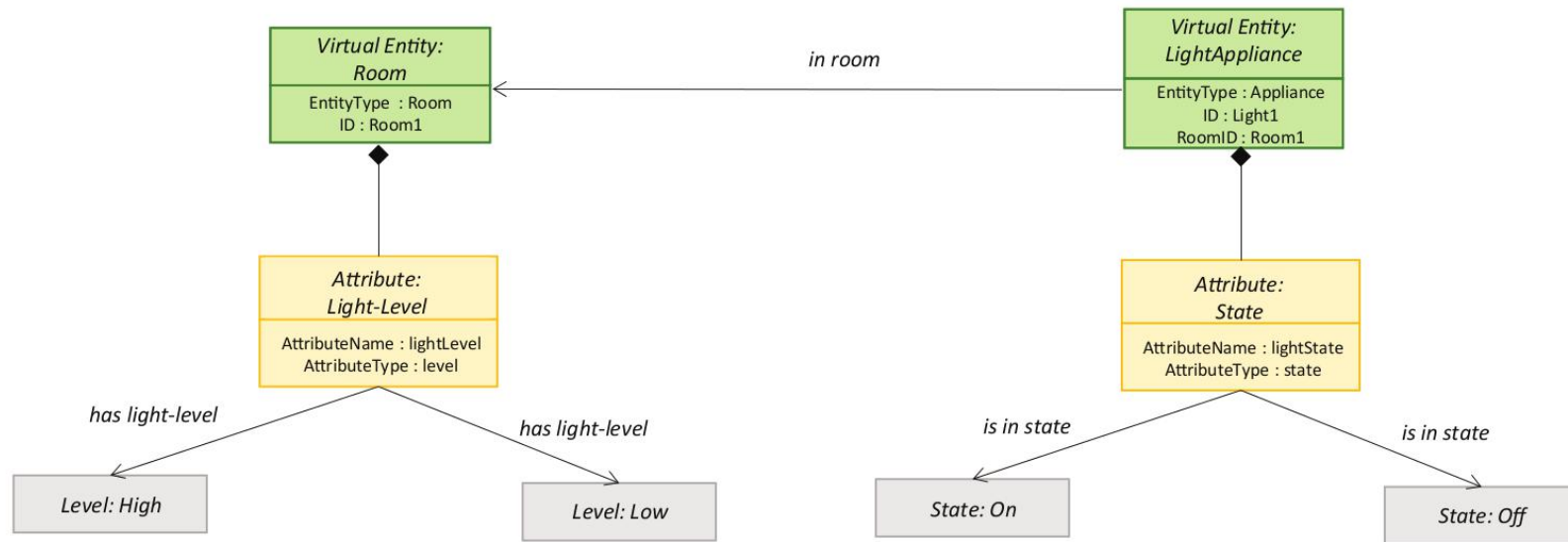
## Step:2 - Process Specification



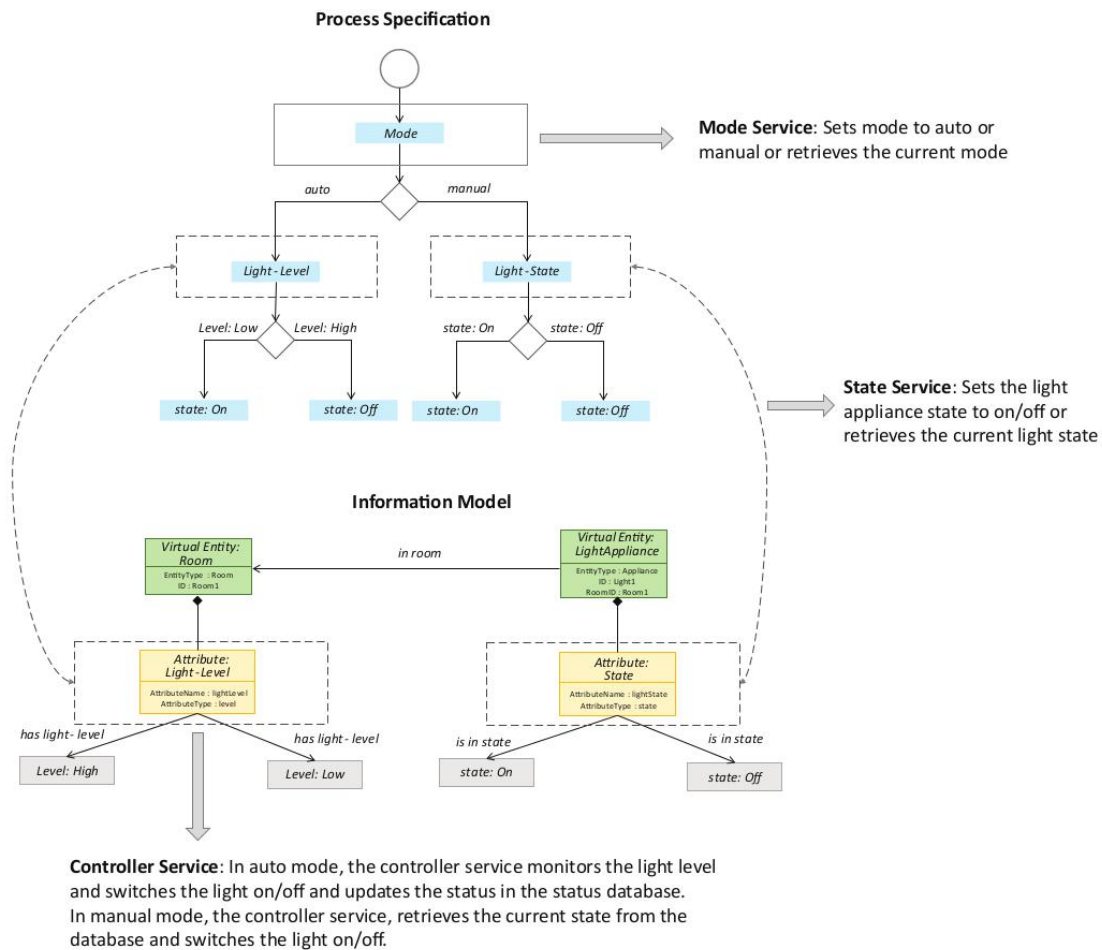
## Step 3: Domain Model Specification



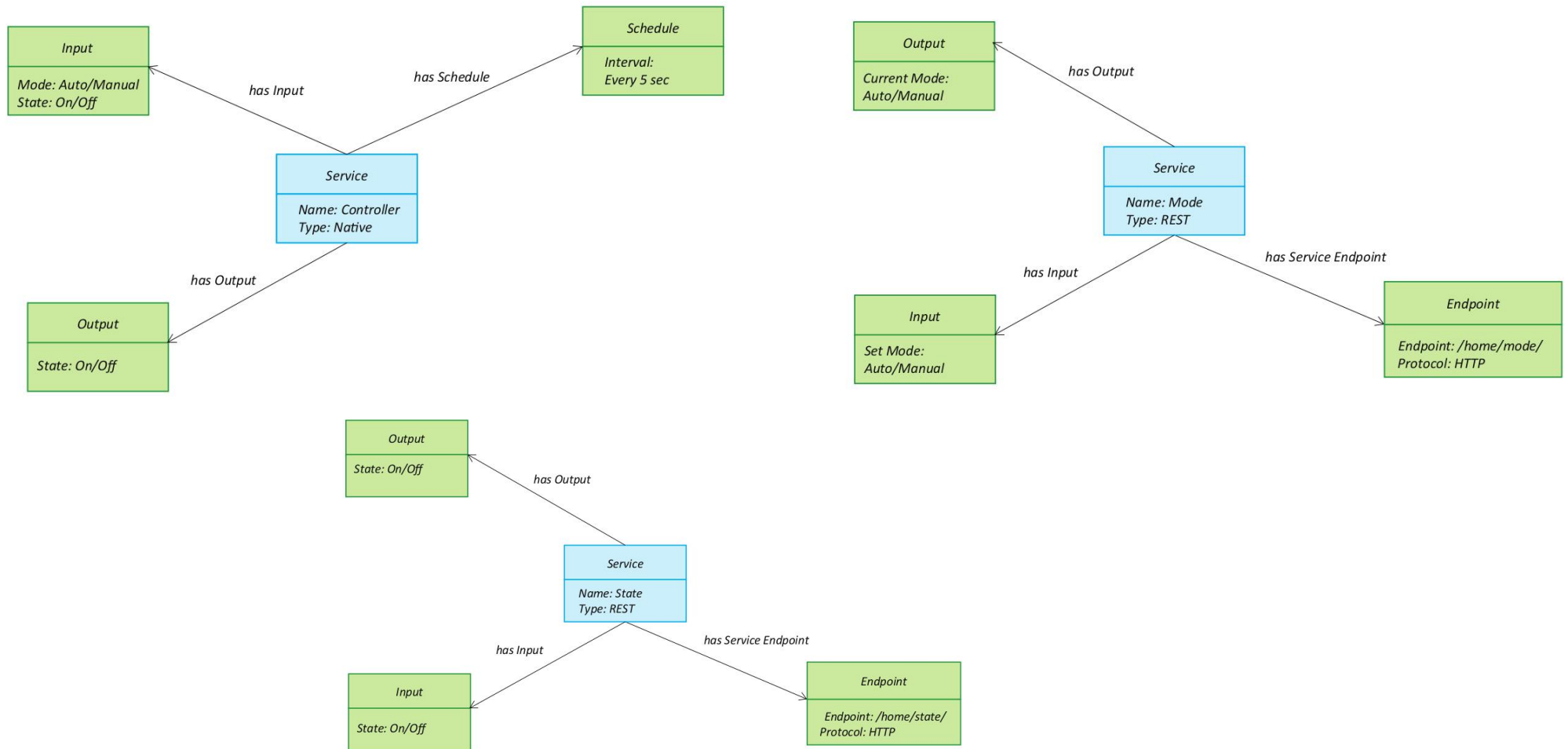
# Step 4: Information Model Specification



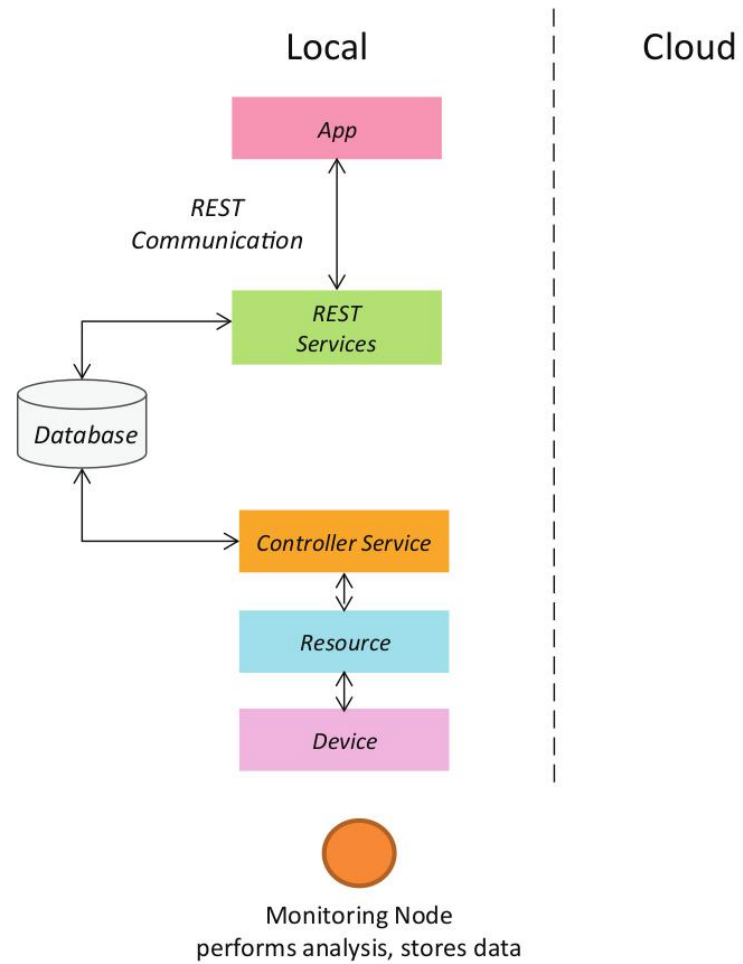
# Step 5: Service Specifications



# Step 5: Service Specifications

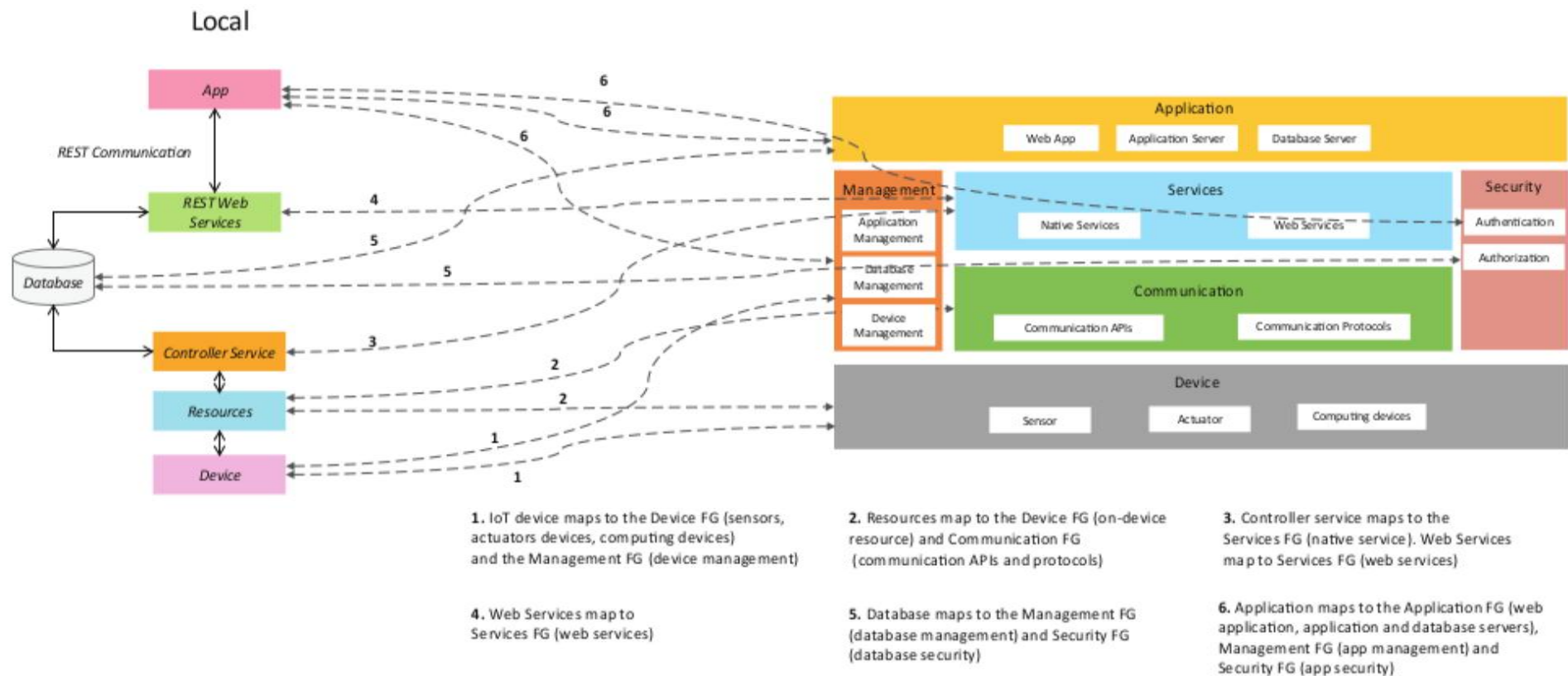


# Step 6: IoT Level Specification

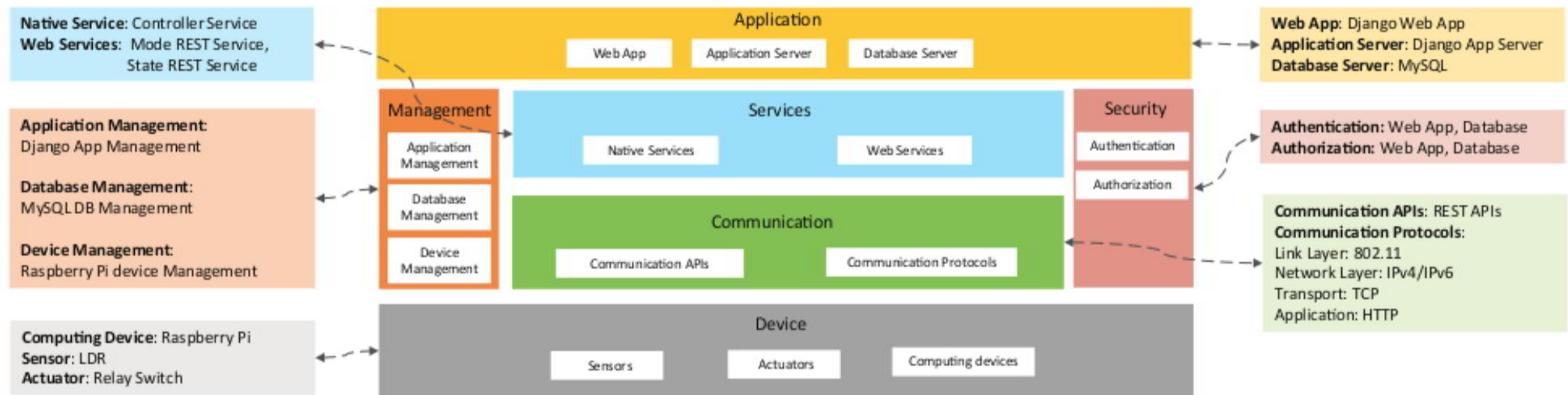




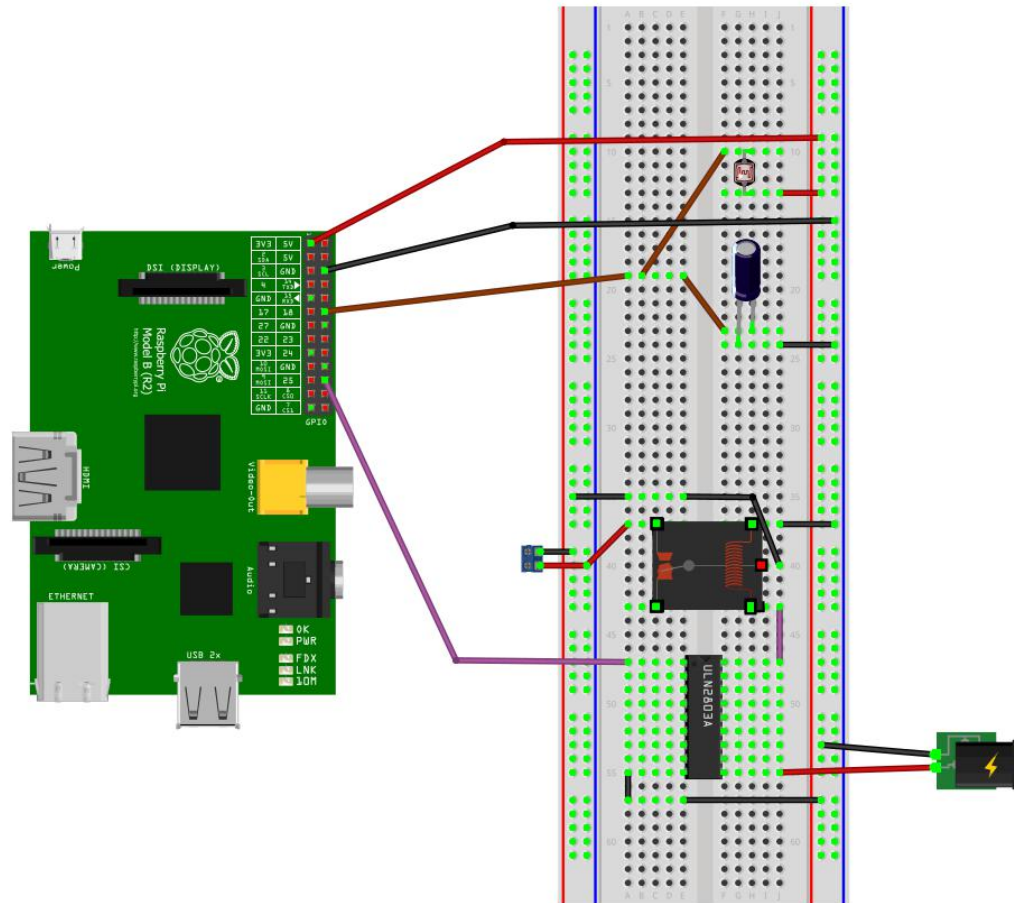
# Step 7: Functional View Specification



# Step 8: Operational View Specification



# Step 9: Device & Component Integration



# Step 10: Application Development

- Auto
  - Controls the light appliance automatically based on the lighting conditions in the room
- Light
  - When Auto mode is off, it is used for manually controlling the light appliance.
  - When Auto mode is on, it reflects the current state of the light appliance.

