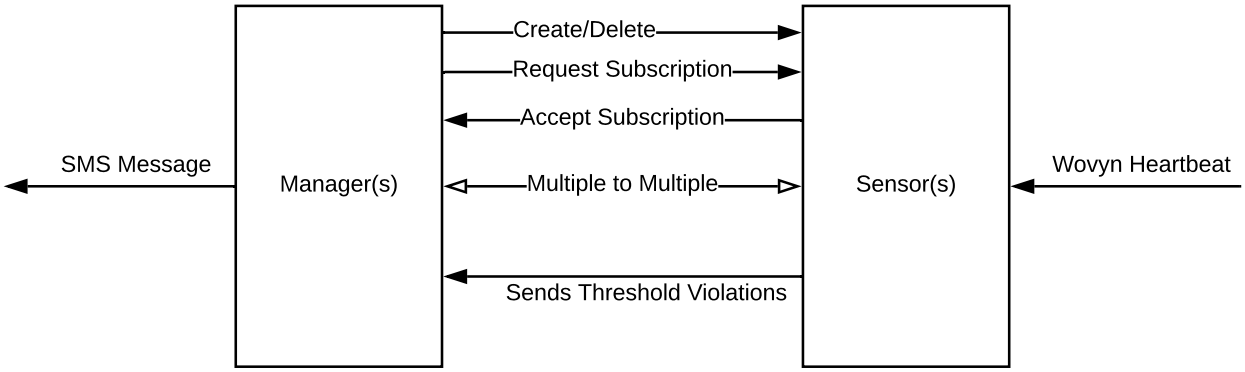
Deliverables

Turn in the following:

1. The URLs for your rulesets
   - https://raw.githubusercontent.com/josephjjones/distrabution_labs/master/Lab7/lab7.manager_profile.krl
   - https://raw.githubusercontent.com/josephjjones/distrabution_labs/master/Lab6/lab6.manage_sensors.krl
   - https://raw.githubusercontent.com/josephjjones/distrabution_labs/master/Lab5/lab5.sensor.profile.krl
   - https://raw.githubusercontent.com/josephjjones/distrabution_labs/master/Lab3/lab3.wovyn.base.krl
2. A diagram showing the relationships between the picos.



3. Short screencast (with sound) showing
   See submision
4. Answers to the following questions:

Questions

1. Why might an auto-approval rule for subscriptions be considered insecure?
   - Because then any other entity that has access to the sensor can set up subscription without any verification and they might be malicious.
2. Can you put a sensor pico in more than one sensor management pico (i.e. can it have subscriptions to more than one sensor management pico)?
   - Yes, if you want multiple managers to be notified and have access to a pico just add another subscription
3. Imagine I have sensor types besides temperature sensors (e.g. pressure, humidity, air quality, etc.). How would you properly manage collections of sensors that include heterogeneous sensor types?
   - One way is to create managers for each type of sensor or a subset of sensors, and maybe super managers that can query each of the sensor managers
   - Another way is to make each of the different kinds of sensors work with the same interface, say get_reading rather than get_temperatures then the manager does not care what kind of information or violations it is getting it just collects and reports it. This manager could focus on grouping different sensors with a group name.
4. Describe how you'd use the techniques from this lesson to create collections of temperature sensors in particular rooms or areas of a building. For example, I would still have the sensor management pico, but might have collections for each floor in a building.
   - I would add floor and room information to the profile, and use that floor and use that floor and room information to query a new ruleset on a supervisory pico set that tells the sensor what manager(s) it should report to, then the sensor would reach out to the manager to be added to the collection through a subscription. Then the managers would be able to query their collection as needed, and be reactive to a query to add a new sensor. Managers would be in charge of informing the supervisors what floors they desire to watch. I would also add some verification to the subscriptions created so that a new manager or sensor would be checked before added to each part of the system.
5. Can a sensor pico belong to more than one collection? After the modifications of this lab, if a sensor belonged to more than one collection and had a threshold violation, what would happen?
   - Yes, my modifications would have the violation be sent to every collection the sensor had a subscription to
6. When you moved threshold violation notifications from the sensor to the management ruleset, did you add the rules to an existing ruleset or create a new one? Why?
   - I added it to the manager_profile ruleset because it seemed to fit with profile information such as notification number or type. In a more complex system requiring many different kinds of notification, I would create an addition ruleset.
7. When you moved threshold violation notifications from the sensor to the management ruleset, did you add only one rule or more than one rule to achieve this end? Which rules did you add and why (i.e. justify the architectural decisions did you made)?
   - I only added one rule, because the manager does not need to store the fact that a violation occured. The manager only needs to report it, and have the ability to query sensors for recorded temperatures and violations. If the manager had multiple responsibilities to complete it would add a rule for each responsibility.