Mike ASN2 Feedback

3 8

Michael Blanchard

Hey guys,

Here's what I have so far, theres still some work to do in solidifying the associations (and many other things hah including exceptions). Still no refs to authTokens which I'm trying to determine if it makes sense to create a separate authorization class that keeps track of the authorization level of each occupant and each device. Otherwise the broad strokes are there. One big mystery to me is how to define predicates. It seems like they should be the commands that a sensor or appliance can perform. That way a user could query the knowledgegraph with an applicance_name ? ? and find out all of the possible actions the appliance could take and on what. Does that make sense? Also is it improper to say a Home Model can contain 1...* HomeDevices which are an interface in this case or should I draw a line from the final objects themselves to the model?

Thanks,

Mike

MikeASN2.png

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Reply

(https://canvas.harvard.edu/groups/33458/users/4605) Vinay Mishra (https://canvas.harvard.edu/groups/33458/users/4605)

Sep 25, 2017

Hi Mike,

The design looks good and I have few points to make about it.

It looks like you have aggregation of Room interface with HouseMateModel(and its implementation class is missing as well). I believe that might be of some problem as it seems there is no relation between a house and its rooms. Similarly there is no link between occupant and its location.

Thanks,

Vinay

Michael Blanchard (https://canvas.harvard.edu/groups/33458/users/96884)

Sep 25, 2017

Vinay,

Yeah like you said in your response to my feedback email it makes sense to have a house instance as opposed to just having the HouseMateModel represent the house. I'll make that change for sure should be easy to slide everything over and it will probably make it easier to relate the room interface as you say. Good point.

Mike

Reply

Jeremy Clark (https://canvas.harvard.edu/groups/33458/users/78924)

Sep 25, 2017

Hey Mike - will take a look this evening and offer some feedback!

Michael Blanchard (https://canvas.harvard.edu/groups/33458/users/96884)

Sep 25, 2017

Awesome thanks!

Jeremy Clark (https://canvas.harvard.edu/groups/33458/users/78924)

Sep 25, 2017

Hi Mike, here are some thoughts for consideration - in no particular order:

- Are are the HMM.occupants and HMM.homeDevices meant to be counts? Probably don't need to be attributes of the model, rather could be methods that return the count of occupantList and deviceList
- I think Vinay mentioned this, but I don't see a way to support multiple houses in the system.
- What will the HMM::commandHomeDevice() method do? What type of int would I pass to it?
- What if I have 'sensor-like' features or actual sensors in my appliance...how would I grabSnapshot() of those?
- If Occupant.location is a Room and HomeDevice.room is a room there should probably direct dependencies indicated in the diagram. Also, maybe use the same property name if they're both rooms. You may want to model them as direct aggregations, even.

- What is Occupant.controlLevel? Is that meant to capture entitlements?
- What does it mean for an occupant to be 'known'?
- For implementers the Appliance interface, what sort of behavior will they implement in the "command()" method?
- Why include an explicit HomeDevice::shutdown() method? Maybe a more generic state change method would work, then you could achieve a 'start up' command as well.
- Will KnowledgeBase::addTriple() be any different from KnowledgeGraph::importTriple() that we implemented in Asn1?
- If I have HomeDevice::predicateList() what will the methods you have on the concrete types actually do?
- I'm not sure it's common practice to include attributes on an interface as you have in HomeDevice and Occupant. I don't think it's explicitly prohibited, but keeping state in a variable defined on an interface might not be the best. Constant properties may be OK. See this little write: **http://tutorials.jenkov.com/java/interfaces.html#interface-variables (http://tutorials.jenkov.com/java/interfaces.html#interface-variables)**
- What are HMM::setRoom() and HMM::setOccupant() intended to do?

Please let me know if my questions/comments are misguided, or if you want me to follow up with any more information!

Thanks-

Jeremy

(https://canvas.harvard.edu/groups/33458/users/96884) Michael Blanchard (https://canvas.harvard.edu/groups/33458/users/96884)

Sep 26, 2017

Hey Jeremy,

Thanks for the feedback. And yes totally, I hear you on the interface attributes definitely need to straighten out those and get them in the right place. And I agree there are way too many duplicate methods that probably can be placed in parent classes or even up in the API. I'll let you know if I have any questions.

Thanks again,

Mike

Reply

(https://canvas.harvard.edu/groups/33458/users/96884) Michael Blanchard (https://canvas.harvard.edu/groups/33458/users/96884)

Sep 26, 2017

Hey guys,

I'm continuing to update my diagram. No pressure for feedback but I figured I would post it here in case. These edits occurred before some feedback was received.

Mike

HouseMateModelImage.png (https://canvas.harvard.edu/files/4616951/download?download_frd=1&verifier=qPcE1ygViObIkS3srpYC4jPVXmTzTZMDJ0XHqqPK)

Vinay Mishra (https://canvas.harvard.edu/groups/33458/users/4605)

Wednesday

Hi Mike, I think it looks good now. One point is I do not prefer weak composition (blank diamond) and text book also discourages it so probably use the association (with arrow)? Just a suggestion though. Further, setters/getters are not needed to show in UML diagrams.

Thanks,

Vinay

*Edited by **Vinay Mishra** (https://canvas.harvard.edu/groups/33458/users/4605) on Sep 27 at 9:27am*

Reply