Assignment 3 Implementation Notes

Jeremy Clark
CSCIE-97, Fall 2017

Extensions of/Deviations from design

- I needed to add the following extensions to ASN 2 classes, that I didn't foresee originally:
  - Added an isActive property to the Occupant class, in order to track occupant activity via cameras.
  - Set Feature to extend Observable
  - Added 'has_window_count' and 'has_occupant_count' as predicates the Room class when calling saveState() to store room state to the KG

Thoughts on Integration of components

In general I stuck to my design…I found that my plan to "Observe" the 'feature' construct that I built into ASN2 worked pretty much as I had planned. Centralizing the 'machinery' into the "Rule" class and attaching commands, context and predicates worked pretty well. I didn't have a lot of crazy logic in any single method. But what I realized when I created my command scripts was that they're kind of verbose and the use of embedded javascript can cause extra debugging issues in the scripts. I actually like the design, but would need to harden the configuration mechanisms (like figure out some simple predicate language instead of raw javascript, or maybe implement a system that can interpret DRL (drools) syntax).

Was Design document useful?

Absolutely, yes! Like I mentioned, I spend less time on the design this time, and was able to get to a good design state in a much shorted time than on Asn2. The design doc was VERY helpful while I implemented, and while I had to make some changes, it didn't change substantively once I started implementing.

How could the design have been better or made more useful?

- Better description and planning of the testing phase. I will definitely do that next time. While I had definitely envisioned what I would do, and ended up doing exactly what I thought, I didn't write it out the best way up front. I also think better crafting of the 'narrative' will make for a better design document.
- While I believe I captured the 'generic' requirements I could have thought about concrete requirements more. The system I created is intentionally generic and configurable, which is why I stuck with general use case requirements, but when I got into creating the required output, I encountered some things I hadn't accounted for, like the need to extend the ASN2 model to include stuff I hadn't added (occupant activity, certain triples being saved to KG).

Did the design review help?

Yes the design review did help. Unfortunately, I didn't get any feedback initially from my group members so I reached out to Eric who reviewed my document. His advice, specifically around the need to flesh out testing plans was helpful. I also added my use case diagram (which I had already created but forgot to put into my initial draft) and properly labeled my sequence diagram. Eventually, one of my group members responded, and they had a good piece of feedback that my class diagram was too small in the document. I tried to make it bigger, but I'm not sure I can really get it to show up on one page very well…I've attached it as a separate PDF. I also adjusted the multiplicity of my associations after Sean's Advice.

Peer Comments and Peer Reviews

Unfortunately, I never received a design document from either of my group members…I reached out a number of times over email and Canvas, but I never got one.

Here's the feedback I got from Eric:

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Eric Gieseke 2 days ago
Review notes:
Use case diagram is missing. This is required.

Sequence diagram is mislabeled as an Activity Diagram.

Do all of the methods on the HMCS interface really need to be public? Or are some of them implementation specific and can be encapsulated by the implementation class?

Remember to reference the requirements from the body of the design document to show how your design considers and addresses the requirements.

Testing section needs more thought. How are you testing and validating the various rules. What about testing for error handling?

=======END FEEDBACK FROM ERIC========

And here's the canvas thread where I posted and got feedback from sean:

==========CANVAS THREAD======================

Jeremy Peer Review

Jeremy Clark

Hi Team: I'll post my design document for review to this thread, then when you're ready you can post feedback inline. If you think this will work for you as well, we can create threads for each of you separately. Let me know what you think.

Sean Misra

Oct 14, 2017 Oct 14 at 4:01pm

Hey Jeremy.

Thanks for posting your draft. Admittedly, I am behind with this - have been focused on work all week. Will put in some hours now and hopefully post my own draft and get feedback to you over the next couple of days.

Thanks,
Sean

Jeremy Clark

Jeremy Clark
Oct 15, 2017 Oct 15 at 12:45pm

Hi team, I've attached my Draft design document for peer review here.

House Mate Controller Service Design Document - Draft 2.pdf

Jeremy Clark
Oct 15, 2017 Oct 15 at 10:21pm

Here's a newer draft that I've been working on. Please use this draft for review. Thanks, Jeremy.

House Mate Controller Service Design Document - Draft 3.pdf

Jeremy Clark
Oct 15, 2017 Oct 15 at 10:21pm

ClassDiagram.png

Sean Misra
Saturday Oct 21 at 12:28pm

Hj Jeremy,

Sorry for the delayed response. Here are some initial comments I had.

Things I Like:
- The separation of concerns between the Rules, Commands, Observers, and Features is well done
- Some nice additional features such as logging and command-line interactivity (for example, asking if the Sensor might be in another room)
- Interesting how you have one Observer class. I had an Interface, with many sub-classes for different Sensors/Appliances. Looks like a clean solution that way.
- Document is well-structured, is easy to read

Suggestions:
- Typo on page 16 (deatch Observer)
- Maybe include more details about what you tested for and how many tests passed
- Increase size of class diagrams within PDF if possible (including the images did help)
- Maybe show multiplicity and association names in the class diagram (comes down to readability vs. details I guess)

Hopefully plan to submit an initial draft of mine tonight or tomorrow. Know it's getting late. Thanks,

Sean

Jeremy Clark
Saturday Oct 21 at 10:10pm

Manage Discussion Entry

Hi Sean - thanks for the feedback. Look forward to seeing your document.

==========END THREAD==========