

Assignment 5 Review Document

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1. Did the modular approach to the design help?

I think the modular approach absolutely helped my design. I often prefer a modular approach while doing other software projects as well because I think it makes it easier to break things up into modules and well defined interfaces since it forces you to think more about how each part of the application communicates with one another.

2. Once you had the high level architecture defined, were you able to design each of the modules sequentially?

Most of my work flow was done sequentially. After defining the high level architecture I designed the Model Service then the Controller Service and after those initial designs I went back and forth and made revisions as needed, of which there were still quite a few.

3. Did the reuse of the Authentication Service and Ledger Service help or hinder your design?

A little bit of both. I think using those two services helped because they were already made and provided a decent interface to perform useful operations with on them but at the same time it forced the design to adhere to what those two services were capable of. I think that goes with most outside vendor APIs as well though. You get convenience by using a component or API that does a few things well but the price you pay is that your application has to be able to work with that APIs interface, which isn't always convenient.

4. What patterns did you apply? Did you find that they helped simplify the design?

For my Smart Car System I used the observer pattern for decoupled communication between the Model and Controller services. I also used the command pattern in the controller service as well as the integration broker to create a RESTful HTTP proxy between the Controller and Model Services and the Admin and Mobile GUI. That absolutely helped the design and I think the design would have been far more messy if I hadn't implemented any standard design patterns. The Controller Service also implements the singleton pattern.

5. Were you able to brainstorm with your peer review team?

We didn't do much brainstorming before our peer review. Although I did extend the option by creating a discussion post where we could ask general question back and forth but none of my peer review team seemed to take advantage of that.

https://canvas.harvard.edu/groups/96945/discussion_topics/599634

6. Did the peer review team help improve your design?

Elena provided good feedback that certainly helped me refine my design more. She also helped by pointing out things my document was missing from a grading perspective and I implemented almost all of those things she mentioned so that was very helpful. She had a good comment on GraphQL which made me think through the reasons I chose a RESTful interface and I think that definitely helped.

https://canvas.harvard.edu/groups/96945/discussion_topics/602714

Unfortunately, I think our other peer review group member, Ioannis Kapolos ran into some timeframe difficulties with the assignment and didn't have time to peer review our work as of now (Dec 14th, Monday 16:45 Mountain Standard Time)

7. Do you think you could have implemented this design?

I do think I could have implemented this design although im sure that I would probably end up changing the design a bit as I discover opportunities to improve it while implementing it.

8. Comments from the peer design review

Comments on my design document can be found in the below Canvas discussion thread

https://canvas.harvard.edu/groups/96945/discussion_topics/602714

Comments on Elenas design document can be found in the below Canvas discussion thread

https://canvas.harvard.edu/groups/96945/discussion_topics/603057

Unfortunately, I think our other peer review group member, Ioannis Kapolos ran into some timeframe difficulties with the assignment and didn't have time to peer review our work as of now (Dec 14th, Monday 16:45 Mountain Standard Time) so their comments are missing from the above two discussion threads. Ioannis just posted their design document earlier today (Dec 14th) and I will go ahead and try to leave a review. Those review comments for Ioannis' design document should be viewable here

https://canvas.harvard.edu/groups/96945/discussion_topics/605006