Sprint #4 - Status Check #2

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***Abstract*—This is our team's status check for the practicum project for Sprint #4 for CS 6440 - Intro to Health Informatics. The purpose of this status check is to go over what we have accomplished this week, challenges we have encountered, and our plans moving forward.**

1 WHAT WE HAVE ACCOMPLISHED THIS WEEK

1.1 Vamsi

Vamsi Gadireddy has set up a HAPI FHIR server in Azure cloud for testing data ingestion and extraction mechanisms (Gadireddy, 2021). This FHIR server is based on reference HL7 implementation and runs on docker in a VM for high availability. Vamsi is able to ingest all required FHIR resources as suggested by Dr. Julien into the FHIR server. Vamsi is also able to push all FHIR patient resources into Smart on FHIR public instance which is used to demonstrate the application functionality.

1.2 George

George Singhal has been instrumental in setting up the scrum meetings with the team and the mentors and helping clarify the requirements, scope, and objectives. He described the pros and cons of various architectures including mobile architecture versus web app architecture. He created a demo of the mobile application, presented to Abhishek, Julien and team, with authentication and Medcards. He worked on the FHIR api and tested for patient and observation data on the FHIR server. Based on the new specific requirements from Julien, we are planning to go with the web app using FHIR server.

1.3 David

David Strube collaborated with the team in meetings, Slack, and GitHub. In particular, he worked with Daniel on creating some branches and pull requests in the shared `med_cards` repository on Daniel's account (Tuttle, 2021) in attempts to improve the UI. He reviewed and approved the code in some pull requests from Daniel, and David collaborated with Vamsi to get the data for testing the web app. David also provided the template for this document based on the original JDF example document.

1.4 Daniel

Daniel worked in collaboration with the team to refine the requirements and update the UI accordingly. Specifically this involved getting the exact FHIR resource requirements from Julien and then coming up with an altered design to the application. He then implemented the altered design in the UI which consumed the updated FHIR payload provided by David and Vamsi. He also set up an S3 bucket in AWS with website hosting so that the team can easily demo the application to Julien. He also assisted team members get set up with the angular application so they can run it locally and contribute to the code base.

2 CHALLENGES WE HAVE ENCOUNTERED

The main challenge realized this week (which is classic to all software projects) was miscommunication. It was apparent this week that what our external mentor wanted out of our application was actually a more specific use case than we began to implement. It also became apparent that the use case we were solving is pretty much what the Cerner application already does. The Cerner application provides a generic med cards interface for physicians. This forced the team to backtrack a little and re-evaluate our goals amongst ourselves and with our internal mentor. We had to re-think the design of the UI, as well as what data we would consume from the FHIR server, and what would be the functionality of our final product.

3 OUR PLANS MOVING FORWARD

Moving forward, we will continue communicating with our external and internal mentors in our regularly scheduled meetings, and on Slack on an as-needed basis. We will also continue communicating amongst ourselves to make sure we are all on the right track and all contributing to the team's success. We are planning on recording a presentation of our project at our next meeting with our external mentor on Sunday April 25th at 11 AM Eastern Time. A link to the presentation will be added to the Sprint #5 - Practicum Submission.

4 REFERENCES

1. Tuttle, Daniel. (2021). Med_cards. GitHub. https://github.com/danielptm/med_cards. Accessed April 17, 2021.
2. Gadireddy, Vamsi. (2021). HAPI FHIR server. Azure. http://40.118.207.254:8080/metadata. Accessed April 18, 2021.