CS Capstone Final Reflection

This document is intended as a guide for the capstone team to assess its performance in a number of dimensions. You need not answer each question in detail, rather, use the questions as a guide for the kinds of items to assess. Add items you feel are appropriate.

This self-assessment will be one of multiple elements that your advising instructor uses to arrive at an assessment of the team's performance for the term. The other elements that the advising faculty will use include: direct observation of the team, team peer evaluations, sponsor evaluation, and project deliverables. These self-assessments will also be used as part of the CS program's accreditation and curriculum improvement efforts.

To complete this self-assessment the team should carefully consider each of the questions and provide an honest evaluation of the team's performance.

Team: Know-Nothings

Project: Bookse, a Visual Book Search App on Android

Sponsor: Steve Hodges

Product

1. Did the team prepare all the documentation artifacts requested by your advising faculty and sponsor? Were these documents carefully inspected prior to delivery? How would you assess the quality of the document artifacts?

Yes, we submitted all of the documents for each sprint and any additional assignments. Our sponsor did not require any documents, but he did want updates on how the project was going. Usually the team member in charge of submitting the documents would look them over before submitting. We did the best that we could as far as details go, when filling out the requested documents.

2. How well did the team elicit the requirements? What approaches were used to elicit the requirements? Were key requirements missed? What methodology was used to document and validate the project requirements?

I think that, as a team, we created a strong list of requirements. This document rarely changed because there were not many changes from what we set out to finish on day one. The majority of the requirements were formed while planning out the project in person. Once we had an idea of the app as a whole, we started to list the requirements in order to get the app we wanted.

3. Did the team explore the entire design space before arriving at a final design? Have there been many errors found in the design? Was it necessary to make major changes to any part of the design? What were the reasons for the change?

Our team tried the best to create a solid design plan for the app. I think we did an excellent job on this aspect, because there were only a few minor changes and no errors. These changes depended on the back end of the app, such as the camera functionality, and how we will implement two different ways to read the book cover. We changed a few things to better suit our programming needs and to create a better experience for the end-user. One of the best choices that we made was to use the Google Cloud Platform. It is designed for new developers and students as well as provides a lot of documentation to support projects.

4. How has the development and implementation progressed? What percentage of the product do you estimate was completed? Is the team providing the documentation within the implementation artifacts?

During the transition to physical class and online class, we had a lull in development. Once Todd got everyone back on track with the Zoom calls, we were making much more progress. We are currently still working on merging the apps together. By the time of presentation we expect to have a final app that combines all of the individual tasks.

5. What was the team's testing strategy? Did the team develop a test plan? If so, was it followed? Did the team perform unit testing? Did the team use any test frameworks, such as JUnit? What are the testing results? Were any major defects found during the system test? If so, were they fixed? Did the team do regression testing?

The testing strategy was for us to debug while developing our own apps. Android Studio has a built-in debugger to help us by using AndroidTest and a robust build system that checks for errors before and during compilation. We developed a very loose test plan because the functions that we developed are quite straight forward after we have a working part. We did not use any test frameworks, therefore we don't have any testing results. No major defects were found in our final individual apps.

6. Products need to be designed within guidelines and constraints appropriate for each project. It is also important to consider the impacts of the products that are designed. In the following categories discuss the constraints and impacts that have a bearing on your project. Note that all of these categories may not have bearing on your project but your project is probably affected by many of them.

Our project was designed with usability in mind. For our team, this meant that it could be used by the most number of users possible. The intent was to build a phone application that would make the process of discovering detailed information about books as easy as possible. In addition, we wanted to provide recommendations that might otherwise not be obvious but may spark interest for the user.

7. What industry and engineering standards was your project required to adhere to? Were these new standards that the team had to learn? Did your sponsor provide you support for understanding these standards? Did you have to educate your sponsor about these standards?

Our book search app was not required to adhere to any standards, and luckily our sponsor did not add any additional standards. However, we chose to use industry standard technologies like Android, Google Cloud Platform, and OpenCV.

Process

1. What was your process methodology? Was the process appropriate for the project? Did you follow the process or modify it as the project progressed? If you could repeat the project, what would you do differently?

Our process is Agile Software Development Methodology. This process is appropriate for our project. We follow the process to track and control our project.

If we can repeat our project, we will continue to develop our project with this process methodology.

2. Was there a large requirement to learn the problem domain? What approach was used to gain domain expertise?

Each team member has own problem domain. Everything is new for us. Luke requires to learn about the camera, Huy requires to learn about neural network, Chase requires to learn about Google Book's API, and Todd requires to learn about the Firebase.

We research problem domain. After that, we try to build a sample application and we test it until it works as we expected.

8. What mechanisms did the team use to track project progress? Did they give the team and sponsor adequate insight into project progress and issues? How well did the team track its project progress? How often did these artifacts get updated on the department project website?

We are using Groupme and Github to keep everything from the project. It can give the team and sponsor adequate insight into project progress and issues. We track the project every week with our professor, Ms. Do. We will announce to our team when anything is done.

9. Did the team conduct effective meetings?

Yes, in our group meetings we assigned tasks for our project and clarified any uncertainties that any group member had.

10. Did the team meet all project milestones? Which milestones, if any, were missed or were met ahead of schedule? What contributed to schedule changes? What could the team have done differently to ensure that milestones were met?

We did not meet all project milestones. We did want to train and include an artificial neural network, but instead went with a text recognition alternative. Work/personal issues contributed to schedule changes. Greater understanding and research of neural networks would have boosted that venture.

11. Was the team required to adopt new technologies? What were these technologies? What approach did the team use for selecting the appropriate technology for the project? Did the sponsor provide any support for learning these technologies? How well did the team ramp up on the new technologies and begin to apply them effectively?

Yes, some of us were unfamiliar with android studio. To get familiarized with this technology, we each followed a beginners tutorial for android studio. The team started to apply them beginning in Sprint 1.

12. How well did the team maintain quality control over the project artifacts? Have all artifacts been reviewed for adherence to quality standards? What was the review process used by the team?

We maintained quality control pretty well, we mostly just tested the quality of our own applications and reviewed with the team in a zoom meeting.

13. Did the team have any issues with configuration management? How were these problems solved? What percentage of project artifacts is under configuration control?

No, we did not have any issues with configuration management.

Communication and Interaction

1. How well did the team communicate project progress to the sponsor? What regular communication did the team have with the sponsor? Did the team been maintain this communication to the satisfaction of the sponsor? Were any adjustments needed in the communication over time? Were these changes initiated by the team or the sponsor?

The team communicated briefly with the sponsor, Luke relayed information of our progress to them. No adjustments were needed in communication.

14. Did the team need to provide technical input to the sponsor? How well did the team educate the customer in these areas? What mechanism did the team use?

The technicality of the project was described to the sponsor, who mostly understood it as they too are in the computer science area.

15. Was this an effective team? What has been contributing to and detracting from the team's effectiveness? What are the team's weak points? What are the team's strong points? What changes could the team have made to make it more effective?

Yes this team was effective, our group meetings greatly contributed to our effectiveness in helping us regroup and get objectives in order. Work and the ongoing unrest from the virus has detracted our work some. One weak point was the occasional short period of radio silence, but we did always come together near the end of a sprint or due date to get the work done.

Achieving Customer Satisfaction

1. In the team's opinion did the work satisfy the project sponsor? Were there any weak spots in this regard?

Since the group came up with the idea for our project, the sponsor did not have much say in how we developed our app. As for our opinion on the app, we don't see any weak spots, other than wishing we had extra time to polish the final app before presentation.

Achieving Team Satisfaction

1. Did the project satisfy the team's expectations for learning? Were there any weak spots in this regard? What could have been done differently to improve the team's learning experience?

Each of the team members specifically worked on parts of the app we were unfamiliar with and eager to learn more about. I think all of our expectations were met in this regard because we got to choose our parts to work on. As a team, we helped each other out in order to learn more while doing this project.