Status Update One – CS 2063
2020-02-10

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Completed Work Overview

Primary functionality for our sketching application, temporarily named Etchpad, has been completed. The application is capable of responding to rotations of the device and will use these rotations to guide a red pen around the screen. Users are able to adjust the deadzone (or "range till activation") via a settings screen exposed via an expandable menu. Actions are able to be undone one at a time when the device is shaken. Additional functionality that has been implemented includes saving the canvas as a JPEG image which is added to the gallery, or exported and imported to/from a JSON file. Currently, users may only swap between red and blue colours by tapping the screen and the screen must be flat and portrait; though this is currently being fixed. Beyond this, a focus on code quality and documentation is being pushed to improve bug fixing and readability.

Decision Changes and Scoping

Since the proposal of this project, the scope for the app has not been expanded beyond the goals provided in the proposal. The priority of core and stretch goals has been better defined, with prioritization on importation and exportation of content. Additionally, the stretch goal of allowing inter-device communication has been deemed more possible with the ability to convert core components to JSON being implemented as part of loading and saving data. As the majority of core interactions have been implemented, it is likely that this goal will be included in the final application.

Project Proposal Concerns

Our project proposal review posed questions regarding collaborative aspects of the application. These comments were regarding the ability to save and share doodles from our application as well as questions about our overlaid spaces concept. Regarding sharing, saving and loading was considered and was planned to be implemented in some fashion. As this was posed as a potential addition in the review, it was decided to implement this functionality into the architecture of the application and thus saving, loading, and exporting as JPEG have been primitively implemented with expansions added to the backlog. Regarding overlaid spaces, the intent was to allow users to have multiple drawing surfaces that they could create independent drawings on then have them overlap. This has been deprioritized and is being considered as part of the networking stretch goal, with each layer being a connected user instead.

Problems and Concerns

The majority of issues that have arisen during development thus far have been regarding versioning of Android SDK, primarily migration to androidx. The majority of these issues have been solved, though many examples of best practices need to be adapted to the new packages when being implemented. The largest issue as of this update is regarding the best architecture design to use for the app. Currently an investigation into using an MVVM architecture based on LiveData and ViewModel is being looked into in order to manage the growing number of components in a more formal way.