Deployment Plan

Infrastructure and Environment

For the infrastructure and environment, we have decided to use a cloud-based hosting solution such as MySQL Server to ensure scalability and reliability. We will use the latest versions of server operating systems, databases, and web servers to ensure optimal performance for the duration of the app.

Development and Testing

For development and testing, we will use a version control system such as Git to track changes and collaborate on the code on an ongoing basis. We will also use a continuous integration and deployment pipeline to ensure that changes are tested and deployed automatically across all versions of the app. Automated testing tools such as Selenium and Jest may be used to validate the code and ensure that the app is functioning as expected outside of a beta roll-out for a small amount of users in the beginning.

Security and Compliance

We will ensure that the app meets the security and compliance requirements of University of Tampa. This includes using HTTPS for secure communication, encrypting sensitive data at rest and in transit, and implementing access control mechanisms to restrict access to data – encrypting stored data such as usernames and passwords. We will also comply with relevant regulations such as FERPA and COPPA to ensure that student data is protected in the event of a data breach.

Deployment Process

The deployment process will be automated using our current development pipeline. Once the code is committed to the version control system, it will be automatically built, tested, and deployed to the staging environment. Once the app passes the testing in the staging environment, it will be deployed to the production environment.

This process may also include a small test sample of users before scaling to adhere to the overall student population. Mainly strategizing the overall data payload and the necessary server space would be the most significant aspects outside of the overall functionality across all devices.

User Support and Training

Ideally, providing training and support to future users to ensure that they can use the app effectively. We will provide documentation, tutorials, and user guides to help them get started with the app. In regards to app launch and monitoring, we will roll out the app to users in phases to ensure that any issues are identified and addressed before a full rollout.

In future iterations, future developers can provide a consumer front facing dashboard and also monitor the app using monitoring tools such as New Relic to ensure that it is performing optimally and to identify any issues. In the future, statistics dashboard for the overall demand of the certain reserved items in the makerspace can be created to observe overall demand for the given items.