The majority of our testing is handled by Dusk. Dusk is a browser automation and testing API that lets you test a Laravel web app by clicking through the UI and entering information as if a person was actually using it. All Laravel tests are stored in “tests/Browser/”. To create a new test, you use the command “php artisan dusk:make nameoftest”. Before you can run any of the tests you need to set up two things. Make sure you’re running the project using the command “php artisan serve --env=dusk”, this uses a separate database that is rolled back after each test. This makes sure that each test is consistent, and the main database isn’t ruined. You also need to start chromedriver, you can do this by running the command “chromedriver”. You can run all tests using “php artisan dusk” and you can run a single test using “php artisan dusk path/to/test”. Tests are written in php and consist of telling Laravel the actions it should do. You can have it go to a url, click an element, and type into an element. All interactable elements have dusk tags on them to make them easy to select when writing tests. The naming convention we follow is “type\_name”. For example, a textbox that stores a name would be called “input\_name” and a button that adds data to a table would be called “button\_add”.

Usability testing was done somewhat frequently by having people that would be using OpenTray use it and give feedback.