

Opentray Testing Report

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Introduction

The Opentray system is a compilation of individual software and frameworks, with the intention of providing a reliable, secure, and testable development platform that will be maintainable in the future. This has given the developers and any future developers the ability to expand upon human testing with automated testing. The automated testing is to ensure the functionality of the entire system while moving forward. The quality of documentation and community support were also factors influencing the choice frameworks.

Testing

Testing was an integral part of developing Opentray. There were two major categories of testing performed, automated and usability.

Automated

Automated testing was conducted by using PHPUnit and Dusk. Open tray does not have large amounts of PHP or MySQL code, so the primary automated testing was done with Dusk. Dusk simplifies testing by using the chrome driver. This allowed us to write tests along side new code to test as we go. These tests allowed us to run them repeatedly before pushing the changes to the repository. These tests make identifying unforeseen issues with changes much quicker.

Usability

Usability testing is done by both the end-user and the developers. Each developer would run an instance of the Opentray system either in a virtual or bare metal machine. Once the core was finished we built a publicly accessible server. The web server allowed us to have end-users test

the system without any extra effort on their part. This allowed Matt the IT field support technician and Laura the corporate dietitian to test and give feed back on the development. Developers would work on their local instances and after having passed all the tests, they could push it to the live test environment for end-user testing. This process gives quick feedback on the functionality and intuitiveness of the system.

Accessibility Testing

Open tray was built to replace a current piece of software in use. The current software does not comply with any accessibility standards, and this was not a concern for the end-users. Although it was not required and Opentray does not guarantee functionality with screen readers for the blind, we did take precautions for the software to function effortlessly with color blindness.

Conclusion

Due to the decision to use frameworks during the design process, we were able to create automated tests easier by using pre-built systems. The end-user testing has proven to be irreplaceable, and it is one of the most valuable testing techniques.

References

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