Testing an Orange Peel

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Abstract

This paper describes the purpose of the project undertaken and is designed to accompany the Poster referenced below. The project is focused around testing the software OrangePeel created by Tim Boyes, with the aim of identifying any issues/defects that could impact the day-to-day users of the software. The Vue JavaScript framework was used to create the software, and to test the software Cypress was used for end-to-end testing while Jest was used to test the backend. An iterative process was utilized for this project, with the focus on time management as well as being able to remain on track with the goals of the project.

1. Introduction

OSSIS are a company that design and build patient-specific orthopaedic implants. Their mission is to empower surgeons with innovative solutions. Enabling patients to have a better quality of life with custom designed implants, catered to the individual needs of the patient. OSSIS use world-class 3D printing technology to fabricate and deliver a solution within a given timeframe that has resulted in them becoming the world leading provider in their field

2. Background

With the growth that has occurred at OSSIS their needs have now changed regarding how they store, gather, and record their data. Currently each patient has their own file, the information in each file is then broken up into sections and the file is organised with dividers to enable the staff to find the required information for a particular patient. The files include information such as: X-rays, patient notes, and other relevant information.

This has led OSSIS to come up with a solution to completely overhaul how they operate with their day-to-day tasks. The current situation is that the software engineer at OSSIS Tim Boyes has designed and created an intranet software for staff. The purpose of the software is to change how the staff interact with the patient

data with a result of no longer requiring the folders, meaning that when they are searching for specific data on a patient, the time it takes to find the data is now a couple of clicks away.

The project to be undertaken is to prepare the software for deployment. This will involve implementing a chosen testing framework to test the software. Then writing and creating the tests while keeping a record of any bugs/issues found, solutions will be created to fix any issues discovered. This will result in the software being ready for deployment and will lay the groundwork for how to test future software with a solid framework for testing being established.

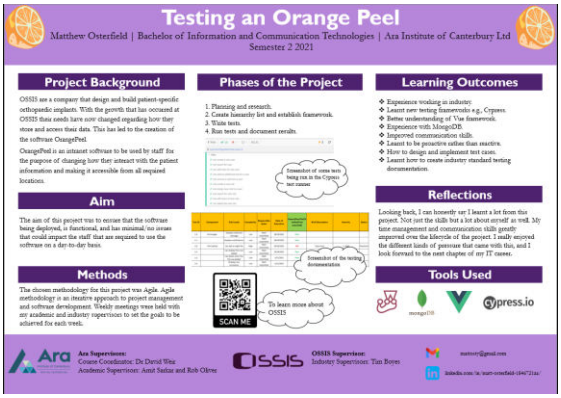

Fig 1: Project poster

3. Methodology

Agile is the chosen methodology for this project. When it came to selecting a methodology for this project there were a few factors to consider. Firstly, what was already in place? And secondly what would be most appropriate for this project? When discussing methodologies with my industry supervisor Tim Boyes, he advised that agile was the methodology that was being implemented currently and strongly recommended that I do the same for this project. Agile methodology is an iterative approach to project management and software development. Using an iterative approach breaks down the project into small, easy to manage parts, which in turn helps the people involved in development to focus on smaller sections one at a time, instead of trying to comprehend the whole project. (Atlasian, 2020)

Agile places far greater importance on people and results, which benefits the rapidly every changing world that is software development. As mentioned, it is centred around being adaptive when it comes to planning, it allows and implores the collaboration of the team and the stakeholders. Agile methodology can track success far more regularly than other methodologies since you get feedback after each iteration. (Altvater, 2017)

4. Conclusion

Through the development of creating the testing frameworks and implementing the tests, the aim of the project has been able to be achieved. With the testing documentation provided any found issues/defects have been identified and logged for the appropriate action to be taken. The framework and documentation that has been put in place can benefit the company in future with any further development of software as testing is always required. It has laid the groundwork for any further testing that could be required for OrangePeel with the documentation being clear and concise as to what has been currently tested and what hasn't. I feel this project has been a success and I indeed hope that OSSIS benefit greatly with the framework for testing that has been obtained via this project.

5. References

Altvater, A. (2017, September 17). *What is Agile Methodology? How it Works, Best Practices, Tools*. Retrieved August 30, 2021, from Stackify: https://stackify.com/agile-methodology/

Atlasian. (2020). *What is Agile*. Retrieved from Atlasian: https://www.atlassian.com/agile