**Minerva**

by

Scott Sabelhaus and Joseph Johnston

Submitted to

the Faculty of the School of Information Technology

in Partial Fulfillment of the Requirements for

the Degree of Bachelor of Science

in Information Technology

© Copyright 2020 Scott Sabelhaus, Joseph Johnston

The authors grant to the School of Information Technology permission

to reproduce and distribute copies of this document in whole or in part.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Scott Sabelhaus Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Joseph Johnston Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Yahya Gilany (Academic Advisor) Date

University of Cincinnati

College of

Education, Criminal Justice, and Human Services

April 2020

## Testing Approach

**1.0 Testing / Methodology**

This section will explain the testing process and methodology used by the system Minerva and its users. The system should be centered around the user’s experience and the safety of their data. We will test the site physically with an outside tester who will attempt to navigate and use the site as if it were a live production. This tester will be unbiased and will not have much background knowledge on how the application works. This is meant to emulate a new hire who has just been hired on and given Minerva as a new resource to take advantage of. Afterwards, we will complete more rigorous testing to find flaws in our application and put more stress on areas we may have reservations about.

**2.0 Scope**

The scope of the testing is to recreate the steps that stakeholders and users would move through to ensure the functionality and success of the Minerva onboarding service. We will be testing this application as if it were ready for production, so that when we are ready to present we will not be missing any information.

**3.0 Objective**

The focus of testing is to make sure that the user and stakeholders have success in the following areas:

1) Being able to log in to the application

2) Being able to view ‘wiki’s’, upload/view documentation, and view communication preferences of the stakeholders

3) Be able to view their individual network drive

4) Be able to log out of the application

**4.0 Entry and Exit Criteria**

Entry Criteria:

1) Web portal and infrastructure build complete

2) Initial compatibility testing

3) Test environment is completed

Exit Criteria:

1) All test were run from all viewpoints of users/stakeholders

2) Documentation and resolution of errors and issues

**5.0 Logging Test and Reporting**

If any errors or unexpected issues arise during testing, they will be documented with steps leading up to the issue. The issue will then be reported and try to be replicated. If there are multiple issues, the team will rank issues by severity and begin working on more critical issues first.

The development team will then prepare hotfixes for each of these issues if applicable and update the documents as we go. This will be completed within the time that we have for this semester and any unsolved issues will be documented with specific instructions on how to recreate and handle these exceptions. The development team will also be sure to form error codes and error pop ups for these instances.

**6.0 System Testing**

Minerva will be tested both as a web application and for its infrastructure and security. Several devices will be connected to the application at once to see the maximum capacity of the application. This will allow for the team to witness any type of issues with the overall architecture of the network and see if any errors will come from too many connections being made to the site. Testing will also be done using all available options to users to ensure all options on the web app to ensure they work as designed.

**7.0 Testing Procedures**

The testing will fall into three categories: the infrastructure, the web app, and the functionality.

Infrastructure testing will consist of ensuring the website is safe from unauthorized users accessing sensitive information or other users’ accounts and making sure the system has enough resources for multiple users.

The web app testing will make sure that users will be able to have all the functionality they need to successfully use the app without incident, and to make sure the portal is user friendly.

The functionality test will test the integration of the web app and the infrastructure. This will test the user’s ability to securely log in, upload files, and view their individual network drive.

**8.0 Pass/Fail Conditions**

It is expected that Minerva will pass all three categories of tests. The application will be able to function with minor bugs in the infrastructure and web app areas. If there were any fail conditions, they would be documented and assessed before being assigned a priority. It will fail if the user is not able to connect to the web service, log in, or securely upload documentation.