Software Implementation and Testing Document

For

Group 10

Version 1.0

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1. Programming Languages (5 points)

We have chosen to use Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) for our web application interface. We have chosen these due to the fact that HTML is a standard to use for designing web pages and CSS is used for advanced styling. We have also chosen to compose our class functions with C# provided that all team members have been well introduced to the C++, C or Java.

WebSight version 3 includes much more Javascript, including HTTPs requests that communicate with our localDB. By using Angular, data is transmitted and displayed onto the applications front-end.

2. Platforms, APIs, Databases, and other technologies used (5 points)

In the last increment, we shifted our application to the ASP.NET Core framework to allow development on Apple machines, but the shift caused many problems, forcing us to revert back to the ASP.NET framework in Visual Studio. We continued to use Microsoft SQL to handle any databases, but decided against using the SendGrid API and Azure.

In this increment, we shifted back to ASP.NET and used SQL for our database and data tables. We used the IIS Express Web Server to host our site locally.

3. Execution-based Functional Testing (10 points)

Local communication between application and DB is established using GET (HTTPs) methods, but due time there were difficulties in presenting working POST methods, so appending data is not functional.

4. Execution-based Non-Functional Testing (10 points)

We have tested that the application runs successfully on various machines (Windows/Mac) and various web browsers (Safari, Chrome, Firefox, etc). We have tested that the site runs efficiently, without any

pages or additions/access to databases taking an extraneous amount of time. We will soon test site security to ensure that user's data is securely stored and hackers are not able to compromise the site by entering data into any request fields. We have tested the site for usability to ensure that users are able to operate the site without requiring any additional instructions or training. While the site works functionally on various browsers, it currently only runs on Windows machines and causes issues on Macs.

5. Non-Execution-based Testing (10 points)

Overall, the back-end logic looks fine. The front-end logic needs quite a makeover as it's a blob of code that's structured through inexperience. Separation of the newly implemented Javascript could have been separated from the HTML/CSS page if not due to time constraints.