Wesley Family Services

Executive Summary

Community Partner
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Student Consulting Team
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Background

Wesley Family Services is a non-profit that provides comprehensive healthcare to children, adults, and elders in Western PA. Their mission statement is "to empower children, adults, and families by providing transformational care". WFS can keep track of their clients and the services they request with the help of a database management system. In the engagement, the project group partnered with Aaron Richards, the software engineer of Wesley, to remodel the database application into a web application that adds usability and reduces maintenance required. These changes will allow Wesley's staff to save a lot of time from doing repetitive work and will reduce the operational costs associated with the non-profit.

Project Description

Project Opportunity

The primary problem with the existing web application created by the previous consulting team is that parts of the application are not very user-friendly. The specific area where a problem arises is the inability to edit a client's information when looking at that client's inquiries. On the other hand, the current Microsoft Access database that is being used does not allow for edits for any object unless the row is duplicated, which leads to normalization issues. The staff is also unable to add notes when editing inquiries. The three main objects: clients, inquiries, and notes are often updated simultaneously so the ability to navigate between the views of all three is crucial. The current situation forces staff members to navigate multiple forms and tabs to update different information, which is a time-consuming process. By implementing a better interface for editing information and completing unfinished features left by the previous project group the consulting team will be able to save both the staff and the maintainer a lot of time and repetitive busy work.

Project Vision

The project team's proposed vision is to improve upon the current dotnet web application left over from the consulting team that worked with Wesley Family Services the previous spring. This can be done by improving upon the usability issues and migrating all the information from the old MS database into this one before deployment. Usability will be improved by allowing the three main objects to be editable on the same view page and rerouting the save function directly to the edit view again. As a result, a staff member will save 1-2 clicks and tab

navigation per edit made, which will add up immensely over a long period of time, where up to 100 calls can be answered per staff member every day. The usability will also be improved after the bugs (ie: allowing SCA questions to save) in the current web application is fixed and the missing features (ie: adding screening questions) are implemented.

Project Outcomes

The project group was able to achieve all three goals in terms of improving usability, fixing bugs, and implementing incomplete features. To improve the user-experience, group members roleplayed as potential clients with the staff members to obtain a better understanding of how calls are taken and the pace at which information is entered and edited. The three user testing sessions with the coordinating staff allowed the team to re-route navigators back to the edit page, enable client, inquiry, and note editing on a single view, and re-organize form questions so that it matched the old application. Bugs were fixed by carefully examining the code-base left by the previous project group and implementing the necessary changes in the controller to fix form saving issues and enabling drop down fields. Lastly, new features were implemented through viewing demonstrations of how the old database application worked and applying similar logic in the back end to create features such as the form-responsive screening questions.

Project Deliverables

The project deliverables includes a link of the GitHub repository containing the application, with the log of changes written in the ReadMe. It also includes access to the project google drive, which contains all the reports, meeting notes, project planning, and more. Lastly, documentation for the community partner regarding how to maintain and update the application will be available.

Recommendations

The group recommends the community partner and any future IS teams to carefully examine the documentation provided to perform future updates. The group also suggests modifying the ReadMe file for the project repository so it is easier to install and test the environment in the future. Finally, the group has recommended adding in a robust testing suite and integrating it with a Continuous Integration tool to save time in manually testing the application.

Student Consulting Team

Abhi Devarapalli served as project manager. He was also responsible for implementing the notes functionality to the application. Abhi is a junior majoring in Information Systems. This summer, he will be interning at Amazon as a software engineering intern.

Raymond Li served as the point of contact for the project. He served as a liaison between the consultants and the client and scheduled all client meetings. Raymond is a junior majoring in Information Systems and will serve as a consultant for the TCGC program this summer.

Jeff Xu was the technical lead for the project. He was responsible for managing the Github repository and was the subject matter expert on the web application. He will be working full-time as a software engineer at Amazon post-graduation.