

# Greater Valley Community Services

## Executive Summary

### Community Partner

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### Student Consulting Team

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## Background

Greater Valley Community Services (GVCS) is a nonprofit organization located in Braddock, PA serving Braddock and neighboring cities with a focus on foster care and in-home crisis services. Beyond supporting families, they also are aiming to branch out into food programs, community health and education. GVCS has many programs that are offered based on external factors such as funding and pandemic circumstances.

## Project Description

### Project Opportunity

GVCS faces a problem with its monthly reconciliation process, through which they compare GVCS in-home crisis hours and billings against the Allegheny Office of Children, Youth, and Families' (OCYF) Key Information and Demographic System (KIDS). The monthly process has many steps, including receiving paper forms from case workers, manually entering information into an Excel spreadsheet, performing calculations to determine the number of units, and checking for discrepancies against the OCYF invoice. To carry out this work, GVCS employees spend lots of time analyzing forms to see where information may be entered incorrectly. Overall, the complexity and lack of automation makes this process tedious and prone to errors.

### Project Vision

At the start of the semester, we had a lot of freedom in defining the solution. There needed to be an emphasis on maintainability and education, as GVCS does not have an organized technology team. We wanted to provide GVCS with a tool that would greatly decrease time to compare against the OCYF invoice and reduce human error, as well as a system to organize large quantities of information. Moreover, employees should be able to perform queries and get reports, such as getting employee hours or time spent with one family over a time period, in an intuitive and efficient manner.

## **Project Outcomes**

The Microsoft Access database the team built provides GVCS staff with many features to aid in the reconciliation process. Data entry can be performed through forms, which validate data and automatically compute time units where needed. We created queries and reports for different use cases, specifically to aid in paying employees and comparing GVCS numbers against OCYF. Our project included plenty of documentation in the form of Google Docs walkthroughs and videos. We also show how to scrape the OCYF invoice for even easier comparison and handle details like tracking goods for children.

## **Project Deliverables**

The Google Drive given to GVCS includes our final Microsoft Access database, prior versions, and extensive documentation. Documentation includes the ERD, getting started instructions, guides for creating the database, and walkthroughs of how to use use-case specific features.

## **Recommendations**

The team is confident in the solutions' ability to cover, at the least, all essential project requirements. There are other functionalities that we recommend be added to the system to further decrease time spent with the process. For example, we recommend automating the data entry from caseworkers' paper forms to the database in the form of a Excel file upload. Our current system only supports individual data entry. Potential risks to the system include changes in the OCYF invoice format and the need to track more data than initially anticipated. We feel confident that our documentation will be able to guide future teams or GVCS staff in making these changes as needed.

Another recommendation is to explore hosting this database in the cloud. The current version requires data to be entered, saved, and then sent in an email format to another user. Thus, multiple users cannot enter data at the same time, and updated versions must be manually uploaded or sent.

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## **Student Consulting Team**

**Austin Leung** served as client relations manager. He is a third-year student majoring in Information Systems with minors in Computer Science and Software Engineering. He will be interning at Doordash this summer and hopes to pursue a career in software engineering.

**Vivian Sun** was the quality assurance analyst. She is a third-year student majoring in Information Systems. She will be interning at Expedia Group this summer and is looking toward a career in software engineering.

**Mahima Shanware** served as project manager. She is a third-year student majoring in Information Systems with an additional major in Computer Science. She will be interning at Google this summer and Facebook this fall and is looking toward a career in software engineering.