East End Youth Ministry

Executive Summary

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Background

East End Youth Ministry (EEYM), is a nonprofit organization between local Pittsburgh churches aimed at creating community within youth and their families. EEYM is currently run by two full-time employees, alongside volunteers and Beulah Presbytarian church staff. With Beulah's support, EEYM runs summer camps, afterschool programs, outreach programs, and a preschool. EEYM provides a space for local youth to engage with the community, as well as support families in the area through fundraising. The summer camps typically serve around 70-80 students, with this number expected to grow. Sources of funding include the United Way of Southern Pennsylvania, the Biden Recovery Plan, and other government funding.

Project Description

Project Opportunity

At EEYM, there is inefficient camper data management, compounded by manual report creation, hindering operational efficiency. Stephanie Johnson, the office manager, faces significant difficulties managing data due to outdated processes bringing redundant spreadsheet handling, manual data sorting, inconsistent IDs, and data management inconsistencies. This is exacerbated by software limitations unable to accommodate summer camp program growth. Our proposed solution includes custom-built and off-the-shelf software options to streamline data management and automate report generation, enhancing operational efficiency and consistency. Custom-built software offers integration with current Excel-based registration systems, while off-the-shelf options provide reliability and user-friendliness, though require vendor selection and setup time. We'll consider registration timeline implications for each option, prioritizing pricing, functionality, and setup time.

Project Vision

Our vision is to develop a comprehensive solution for managing student registration data, integrating past records into a centralized system to automate report generation for regulatory compliance, invoicing, and attendance tracking, ensuring data consistency across all platforms. This solution aims to streamline Ms. Johnson's workflow by simplifying data retrieval and organization, replacing manual Excel tasks with efficient filtering, tracking, and export functionalities. Proposed solutions include subscription-based summer camp

management software, PostgreSQL relational databases, or utilizing online platforms such as Airtable, each offering advantages in data normalization, automation, and cost-effectiveness. These options will be presented to EEYM for collaborative decision-making based on a cost-benefit analysis.

Project Outcomes

We streamlined data management, creating an Airtable database that hosts camper registration data. We developed code that automatically links different tables imported from the data. Also, we created custom views that automate formal reports for different county departments. Stephanie can also generate attendance sheets based on the week and create payment invoices for the desired camper, removing the manual labor once needed. These outcomes drive efficient time management for EEYM so they can better serve their mission.

Project Deliverables

Our final deliverable is a Google Drive repository that holds extensive written and video documentation of the Airtable. It discusses how Airtable is set up, data migration, data linking, and exporting of information. There is a designated video for each feature that provides an overview of how it works. In writeups, there are specific directions on what can and cannot be done, to ensure integrity of the solution. We have also attached external resources from Airtable for their reference.

Recommendations

For future members working with EEYM, our team recommends expanding upon the payment invoice functionality we implemented. Creating a smoother interface in which a drop-down selection of each camper's name outputs a payment invoice would save EEYM more time. Additionally, creating a method to upload physical attendance sheets into Airtable will assist in digitizing EEYM's data. Moreover, there would be benefits from bringing on a volunteer from Beulah Church to oversee Airtable. Having another dedicated person to the maintenance of Airtable and addition of new features would be helpful given Stephanie's busy schedule.

Student Consulting Team

Sanmoy Karmakar served as one of the developers. Upon graduation, he will be joining Citigroup and looks forward to a career in technology investing. He primarily worked on ideation, implementation, and testing of automated reporting and database linking.

Sarah Wang served as one of the developers. She will be a UX intern at Adobe this summer and is looking forward to pursuing a career in creative technology. Sarah helped with ideation, implementing daily attendance and invoicing, and creating video documentation.

Serena Yao served as one of the project managers. She will be an DA intern at Tencent this summer and is looking forward to exploring her career path in technology analytics. She helped with project management, overseeing timelines, deliverables, and resource allocation.