

Beverly's Birthdays

Community Partner

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Martina Caruso

Student Development Team

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Background

Founded by Megs Yunn, Beverly's Birthdays is an organization that provides birthday celebrations for children and families experiencing homelessness in the Pittsburgh region. They believe in spreading birthday cheer 365 days a year and that every child, regardless of personal or financial circumstances, deserves a special birthday. Since its inception in 2011, the organization has distributed birthday presents to and celebrated the birthdays of more than 6000 children. Our main point of contact was with Martina Caruso, one of the program managers who coordinates volunteer events and needs.

Project Description

Project Opportunity

Beverly's Birthdays has grown exponentially over the past four years, a rate at which its current technology infrastructure cannot keep up with. The organization tracks amount of donations it receives using an Excel sheet and tracks inventory through memory, which was sufficient for daily operational needs in the past when it served only a small fraction of the population it does now. Manually tallying donations such as candy bars, big gifts, etc. is time-consuming and at times, takes an entire day. Since Excel only tracks inflow, there is no way of knowing how much of each item remains, which item donations are needed most or how many items are bought in addition to donations. Implementing an inventory management system will help Beverly's Birthdays streamline internal operations so that it can save time and money with accurate inventory values, better communicate its needs to donors and volunteers and remain stable for the upcoming years.

Project Vision

Our goal is to provide a system that will enhance the business processes of the organization so that they can realize their full potential and continue to do what they do at improved pace and accuracy. We propose a custom web application using barcode scanners that scans items moving in and out of the inventory, records additional details such as agencies and provides metrics based on this information.

Project Outcomes

After understanding the core problem of our client and gathering requirements, we performed a comparative analysis of alternative solutions such as customizing an existing POS system, our team decided to build a custom Ruby on Rails web application that operates on a Postgres database, all deployed on Heroku and readily available on both desktop and mobile devices. We streamlined the inventorying process so that the check-in and check-out processes only require a simple barcode scan, implemented an advanced filter to facilitate item search, provided a dashboard with metrics such as number of birthday bins delivered to each agency, total bought and donated value and provided an export option so that other metrics that measure organizational performance can be evaluated in Excel with the data collected. To ensure sustainability of the project, we have provided extensive documentation and identified key personnel responsible for both the application and the code and worked weekly with our client to ensure that she has a thorough understanding of how to use the system.

Project Deliverables

The final application is deployed on Heroku and hosted at bbinnventory.herokuapp.com. Full ownership of the GitHub repository and Heroku server will be transferred to Beverly's Birthdays. We have also created extensive application documentation and code documentation (including the ERD).

Recommendations

The application currently has core functionality, i.e. check-in and check-out of items working as intended and is fully useable. Since the application has multiple users, each of them should be trained in their area of use although there is a 'Help' page and the design is easy to use and intuitive. In case of any technical glitches or server breakdowns, it is advised to periodically export all the data as a backup. We advise future development teams to build an interactive and responsive dashboard where different attributes can be selected for metrics needed for reporting purposes.

Student Development Team

Jeanine Huang led the team as quality assurance manager and application developer. She is a Junior Information Systems major with a double major in Statistics. She will be interning at PNC this summer and is looking toward a career in software development and user interface design.

Gaury Nagaraju led the team as client manager and application developer. She is a third year student double majoring in Information Systems and Business Administration. She will be interning at Credit Suisse this summer and is looking toward a career in technology consulting and application development.

Ibrahim Soltan led the team as project manager and UI developer. He is a Junior Information Systems major with a minor in Business Administration. He will be interning at KPMG in Qatar this summer and is looking toward a career in technology consulting and entrepreneurship.