

Shalom Health Care Registration Form

Butler University

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Chapter 1: Introduction

The task that we were assigned this year was to work with the Shalom Health Care Center located in Indianapolis, Indiana. They are a nonprofit organization that specializes in treating and helping the low income communities in Central Indianapolis. They have two offices and hold an annual health fair that houses over 3000 people every year. However, they ran into issues when they had a registration process that was not digitized. The problem assigned to us was to design a registration form that would be online and would also allow the Shalom Health Care Center to transfer that data and gather metrics with it.

This registration system would process information such as the contact, housing, and other general background information on the individual patients and their families. This report will provide an in-depth analysis of this current project. We will focus on a variety of concepts, including but not limited to, project management, customer relationship management, and project specifications. It will also discuss the team structure in the approaches that we used in order to solve the project issues, implementations, and future structures. We will also discuss the future work that will be planned out for the upcoming semesters for the next set of Epics engineering students. Our contact was Destiny Smith, who is in charge of community outreach at shalom healthcare center Our contact was destiny Smith, who is the community outreach coordinator at shalom healthcare center.

Chapter 2: Requirements and Specifications

Our main task in this project was to create a form to ease the registration process for Shalom Health Fair's summer health fair. Shalom previously collected registration information from paper forms so we used that form as a reference point for the data that needed to be collected including Name, Phone number, Email along with other general demographic information. Another one of our requirements was to ensure that the form was HIPAA compliant so that the health center could guarantee that the patient's sensitive information was protected. In addition to collecting the data, our client also wanted the ability to view reports of the data in terms of race and zip code among others. Apart from these goals Shalom also had a few lower-priority goals that we were not able to get to. These included creating a raffle tracking system and sharing the demographic information with the different vendors at the fair to prevent repetitive work. Hopefully the groups that take on this project in future semesters will be able to integrate these features into the form.

After extensive research, and having issues with the client regarding hosting capabilities, we decided to create a simple form using a wordpress plugin that could be easily incorporated into our client's pre-existing website. The main pieces of our architecture are the front end of the form that will eventually be on the shalom website, and the form backend that can be found on the JotForm website. We used jotform to mimic the physical paper registration form. The form consists of 15 different fields including, but not limited to, phone number, email, and zip code along with other patient specific general medical information. The other large part of our product's architecture is the JotForms website that holds each of the responses to the form. This backend consists of a table structure that shows each different field for any given response and will allow Shalom to sort the responses as needed and create different visual reports.

Chapter 3: User Interface

The main features of our user interface are simple form entry fields. Initially our plan was to build a form using a wordpress plugin called Forminator, and we created this mock design containing a text entry box for Name, Phone Number, and Email along with dropdown boxes for number of children. For the multiple questions on the form that had a simple yes or no answer we had planned on having the user select yes or no. We used many of the colors and fonts that were previously integrated into the Shalom website in order to have a continuous style that the users would be comfortable with. We did not get far enough, in planning this form before we had to change paths, but the plan was to have a button at the top left in order to return to the Shalom Health main website, and a button at the bottom of this form to submit with a dialogue box popping up on whether or not the submission was successful.

The image displays two side-by-side mobile app mockups for a 'Health Fair Registration' form. The left mockup shows the top section of the form, featuring a title 'Health Fair Registration', a language selector set to 'English (US)', and input fields for 'Name' (split into 'First Name' and 'Last Name'), 'Phone Number' (with a placeholder '(000) 000-0000'), and a Jotform logo. The right mockup shows the 'Race' section with a list of checkboxes for various ethnicities: American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, Asian, Black or African-American, White, Hispanic/Latino, and Other. Below this is a question 'Are you a patient of Shalom?' with radio buttons for 'Yes' and 'No'. At the bottom of the right mockup is a section for 'Children 0-17'.

After planning this form out, we were forced to change plans, and use a different wordpress plugin in order to create our form. Upon meeting with the client, we learned that the Forminator plugin would not be an option to create this form, and we were forced to use the JotForms website to build our form. With this change, we had to make slight adjustments to our plans, because there were far fewer options to fully customize the form using this new

Adults 18+

How many are in your home?

Type a number 0-10

How many are with you today?
(including yourself)

Type a number 0-10

Do you have a doctor?

☐ Yes

☐ No

Jotform Create your own Jotform

☐ Other

Are you a patient of Shalom?

☐ Yes

☒ No

If no, may we contact you?

☐ Yes

☐ No

Children 0-17

How many are in your home?

Type a number 0-10

Jotform Create your own Jotform

plugin. The only things we really had control over were the prompt, the type of entry, and constraints on the input. In the switch to Jotforms, we decided to make the Name, Phone Number, Email and Zip Code all single line text entry boxes. The yes or no questions look slightly different, but are essentially the same thing, giving users the option to check yes or no. The “Race”

prompt is now a dropdown menu with the ability to choose multiple races, a change made at the request of the client. Another slight change that we made was changing the questions regarding the number of children to a single line text entry that is restricted to numbers rather than a dropdown.

One cool feature that we were able to utilize within jotforms was the ability to program a field to be invisible on a given condition. For example, upon checking no for the “Are you a patient of Shalom?” prompt, a new field appears asking if Shalom is allowed to contact you, since that is a question that only needs to be answered upon selecting no for the previous question. Upon submission of the form, a dialogue box pops up thanking the user for their response, and the form can be resubmitted by refreshing the page.

Chapter 4: Quality Assurance and Testing

Testing protocols that were required ensured that the registration form was being populated properly and that the text boxes were displaying the correct information. Our form primarily relied on text boxes for typing direct information, drop down lists, and checkboxes. We also had to ensure that the database was correctly being populated with the user information. We had decided to use Fortress Database however we later scrapped this idea since the company managing the client's website, Continuu'd, was able to implement this within their system. The plugin, JotForm, has a built-in database that allows creators to access the entered information from the users. We thoroughly tested the simplicity and interactiveness of the UI form. During our required sprint presentations, students also had the opportunity to scan a QR code, which would give them access to our form and would allow them to enter information. Within some of the fields there were also specific constraints.

For example, when a user is asked to enter how many children are in their home do you have an option of selecting a specific amount of children in a range.. Within the race category users have the option of selecting multiple races. There is also a list of predefined ZIP Codes that reflect the local areas around the organization which are low income communities. We also needed to ensure that in the text fields if nothing was entered, it would display a warning error to the user saying that this certain field was required before, submitting by default the other questions that would allow the user to select between "yes" or "no", we're already "yes" by default. When testing we needed to keep in mind that the main goal of this form is also simplicity. The target audience may not have the proper understanding to fill out a form that is much more complex due to a number of inequalities, including but not limited to education. This kind of approach also draws much more attention to Shalom and their mission.

Chapter 5: Project Organization

Our team operated based off of the scrum environment however, since we only had three members, we had to structure our meetings a little bit differently and work accordingly. We focused on working on the same tasks since we had a low count of team members. We would also meet in class and discuss the different steps that we would need to take in order to complete the project. Jack, Nic, and I all worked on the tasks together. Nic had already had enough experience with WordPress, which was utilized and helped us progress forwards without having to learn as much new information about an unfamiliar technology. Jack's effective communication allowed us to communicate our goals clearly with our client. I was also able to get in contact with people from the computer science department, in order to provide assistance with the technologies used within our project. Every team member focused on the proper design of the form, and ensuring that form was simple, interactive, and populated each field correctly. In the early weeks we made it our goal to try and communicate as best as we could with the client in order to document their needs and our abilities. We also began speaking to Butler's technology department in order to discuss some of the possibilities that we could use in terms of tools and technologies. We ran into issues at the beginning since the client had a lot of new management and not too much of a background in technology. We also had to decide which server this would be hosted on. We were granted a temporary server on Butler's network, however this information is easily transferred onto Shalom's server.

Once the new management had been settled in, we were able to communicate effectively and decide on the steps that were needed in order to complete the project successfully. We were able to get in contact with Continuud, which is the company that manages Shalom's website. They were able to take care of the database, backend and integrate our form within Shalom's

website. Upon the next annual health fair in the summer of 2024 patients will have the opportunity to register online in a comprehensive yet simple registration form. They will be able to enter their names, the number of children in the house, their insurance providers, and all other details that are necessary for the client in order to be successfully registered. They will also be able to select the ZIP Code that they are from within the nearby community, their race, gender, and other relevant background information.

Chapter 6: Future Work

Future works would focus on allowing our client to access different metrics from the data collected from the patients and health fair attendees. Shalom would be able to gather information regarding headcount, and categorizing patients based on different demographics. They would also be able to automatically transfer their current data into the new digitized registration form.

This data would then be able to be shared with other vendors that attend the annual health conference as well as medical providers. Other implementations will need to be adjusted as the client progresses in their outreach and mission. For example, new implementations such as other language options, in addition to the current English and Spanish formats, could be implemented depending on the local community present at the time.