



Ramon's Organic Grain Fed Organ Emporium

Final Report

University of British Columbia Okanagan
COSC 304 - Fall 2016

Team Members:

Nino Gonzales
Julius Wu
Emerson Kirby
James Rogers

Table of Contents

1.0 Introduction

1.1 Mission Statement

1.2 Executive Summary

2.0 Known Issues and Limitations

3.0 Walkthrough

4.0 UML Diagram

5.0 Features Implemented

Section 1: Introduction

Ramon's Organic Grain Fed Organ Emporium is a store that specializes in the sale of 100% organic, grain fed, premium grade organs. We have multiple brick and mortar stores located in Canada, India and the Philippines, with plans to expand into the UK and USA in 2018.

The purpose of this document is to describe the framework and the technologies behind Ramon's Organic Grain Fed Organ Emporium's push into the e-commerce space via ramonsorganicgrainfedorganemporium.org.

1.1 Mission Statement

To pour your hearts into our business, of selling human hearts. And kidneys. And livers. And whatever other organ a customer may wish for.

1.2 Executive Summary

Ramon's Organic Grain Fed Organ Emporium currently has a hefty share of the international human organ market, and is poised to dominate the e-commerce sphere as well. It couldn't come at a better time either, as the world need for organs is expanding rapidly. Current estimates value the profits of organ trade at \$600 million to \$1.2 billion, with long term growth expected as far the eye can see. Currently, about 90,000 people in the world are reported to be waiting for a new organ, paying anywhere from \$2,000 to \$160,000, organ dependant. Ramon's Organic Grain Fed Organ Emporium intends to serve them all, with the highest quality organs available.

The website acts as a broker between Ramon's Organic Grain Fed Organ Emporium (hereinafter referred to as the The Company) and consumers. The customer can visit The Company's website when they are looking to purchase an organ. They are able to browse organs, and search for organs by keyword. The customer is able to browse and add organs to their cart without signing in, but must create an account to make a purchase.

The website will displays what organs The Company has available, and displays the organs picture, a description, size and blood type. The Company facilitates the financial transaction and organizes the shipping to the customer (free shipping!).

The Doctor Portal is a special log-in with elevated credentials for certified doctors. It allows them to add/remove/update organs and organ information, and to track inventory levels. It will also allow doctors to generate simple sales reports to track trends in the organ trade. Admin users have an elevated login as well, detailed later in the report.

2.0 Known Issues and Limitations

We want to get the known issues and limitations out of the way first, so one can experience the walk through without it being spoiled by any unpleasant surprises.

2.1 Security

The system is limited in its security precautions, particularly for sensitive data such as personally identifying health information. Namely, passwords, visa, and other sensitive information are stored in plaintext. They should be stored as salted hashes. Inputs are sanitized from SQL injections via the use of Prepared Statements, however there exist places on the front end that lack data validation, ie the system will allow empty strings and other non useful data to be input on forms.

2.2 User friendliness

As mentioned above, the system lacks scripting to do client side data validation. From a user interface standpoint it would be useful to have the site check all the forms a user is trying to input before they submit, and give immediate feedback. The front end for the user profile home page can be difficult to read, as the layout isn't as visually intuitive as it could be.

The login flow is not as frictionless as we would like either. When a user attempts to checkout a cart, the system asks them to login. Once they have logged in however, it sends them to their profile home instead of directly to the checkout page. They must click the cart button on the navbar to continue to checkout.

2.3 Lack of detail in description

If this were an actual public facing website we would likely post more biologically relevant information to the product.

2.4 Redundant Files & Tables

There exists redundant files in the system. At some point, they served a purpose but as the project evolved they got left behind. Not really a limitation, but something that would be nice to fix for the sake of tidiness

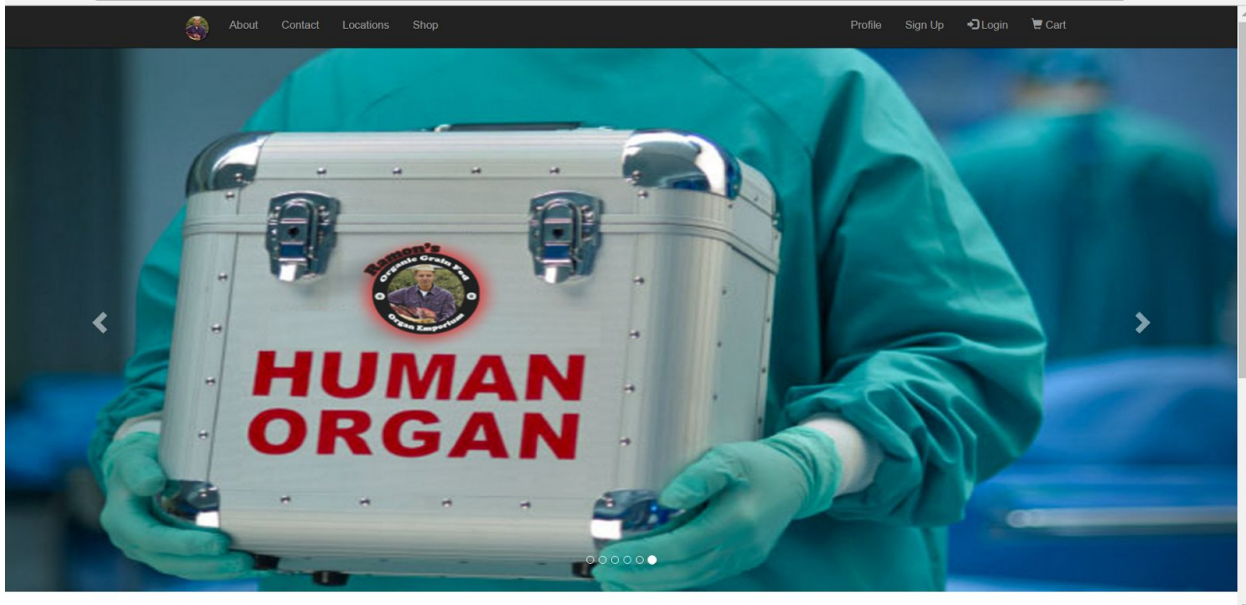
3.0 Walkthrough

For the walkthrough, you will need an Admin profile, which we've created for you.

Login email: rlawrence@ramonsorgans.com

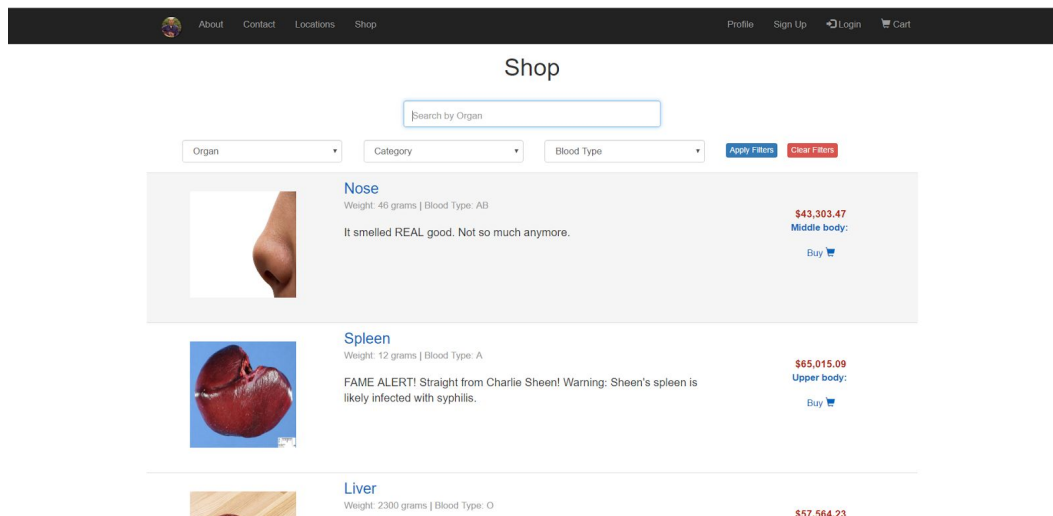
Password: heart

The tour starts at the homepage: <https://rogfoe.herokuapp.com/>



The top bar provides links to different aspects of the site, depending on the user. For us right now, the left side shows: About, Contact, Locations, Shop. On the right: Sign Up and Login

Without logging in, we will move onto the shop page. The shop page allows users to browse the available organs without needing to log in.



Shop

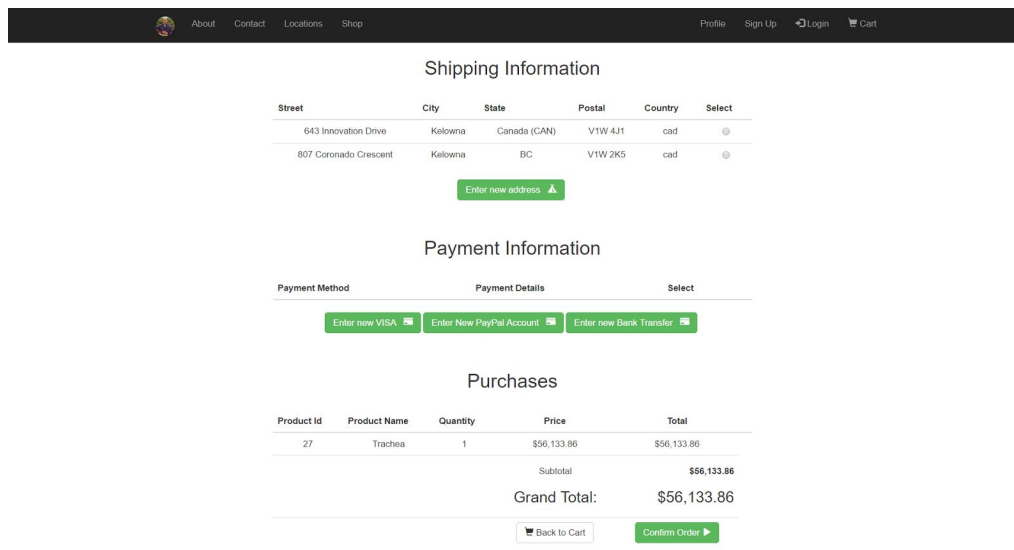
The shop page also has a powerful search bar to increase the chances of a user finding a product they want. It searches both organ names and descriptions. After playing around with the search bar and filters for awhile, we find a few organs we like and add them to the cart by clicking the “Buy” button under the price.

Cart

Clicking the buy button leads us to the cart page. All the organs for which you clicked buy are listed here. In the bottom right is the green “checkout” button. When we click on checkout however, the system detects that we have not logged in and forces us to log in. It is here that we enter the Admin username and password previously supplied. As discussed in **Known Issues and Limitations 2.2 - User Friendliness** the login flow detects we are an admin user and sends us to the admin profile home page (adminhome.jsp). We must then click on the cart button in the top right corner, and click checkout again to continue.

Check Out

Check out is a fairly standard procedure. The system pulls up your home address and offers that as the initial shipping address, however feel free to add a different address to ship to. The system will remember it and offer it as an option next time you go through checkout. Your profile won't have any payment information associated with it, so add a payment option. I would suggest PayPal, as it's only one field to enter. It's here that more consistent client side data validation would be nice.



The screenshot shows a checkout page with a dark navigation bar at the top containing links for About, Contact, Locations, Shop, Profile, Sign Up, Login, and Cart. The main content is divided into three sections: Shipping Information, Payment Information, and Purchases.

Shipping Information

Street	City	State	Postal	Country	Select
643 Innovation Drive	Kelowna	Canada (CAN)	V1W 4J1	cad	⊙
807 Coronado Crescent	Kelowna	BC	V1W 2K5	cad	⊙

Enter new address ▲

Payment Information

Payment Method	Payment Details	Select
Enter new VISA	Enter New PayPal Account	Enter new Bank Transfer

Purchases

Product Id	Product Name	Quantity	Price	Total
27	Trachea	1	\$56,133.86	\$56,133.86
Subtotal				\$56,133.86
Grand Total:				\$56,133.86

Back to Cart Confirm Order ▶

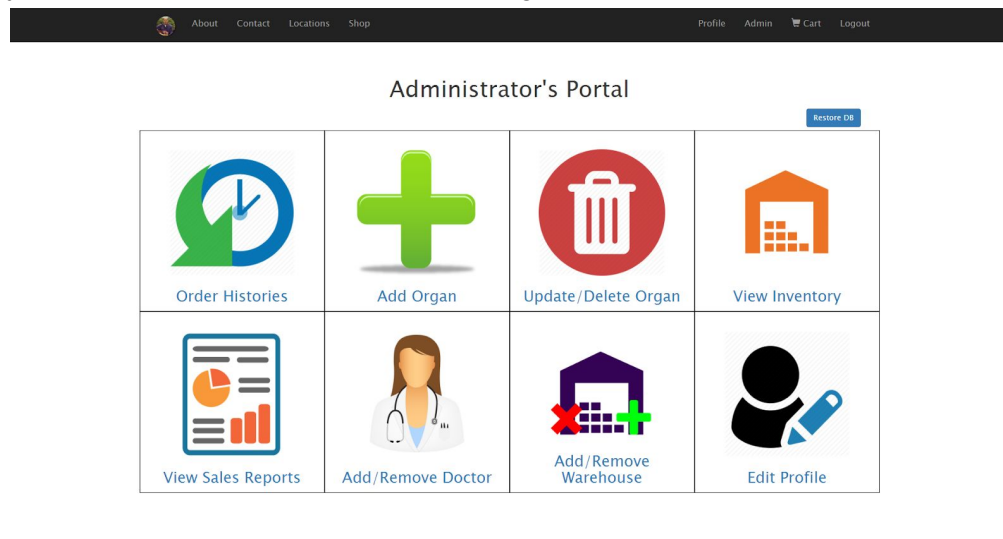
Once done, we click confirm order and the order is submitted to the database!

Profile Home Page

Clicking the confirm order will lead you to your home page. It will list all your previous orders and their current status followed by your profile information and your addresses. Profile information is editable, if you are so inclined, click the little edit button on the right of the table.

Administrator Capabilities

Now for a quick glance at the administrator capabilities. On the nav bar at the top on the right you will see an Admin link. Click that to go to the **Administrator's Portal**:



Each of the images is a link to a different Admin functionality. The names are self explanatory, play around with them as you wish. Note the restore DB function on the top right.

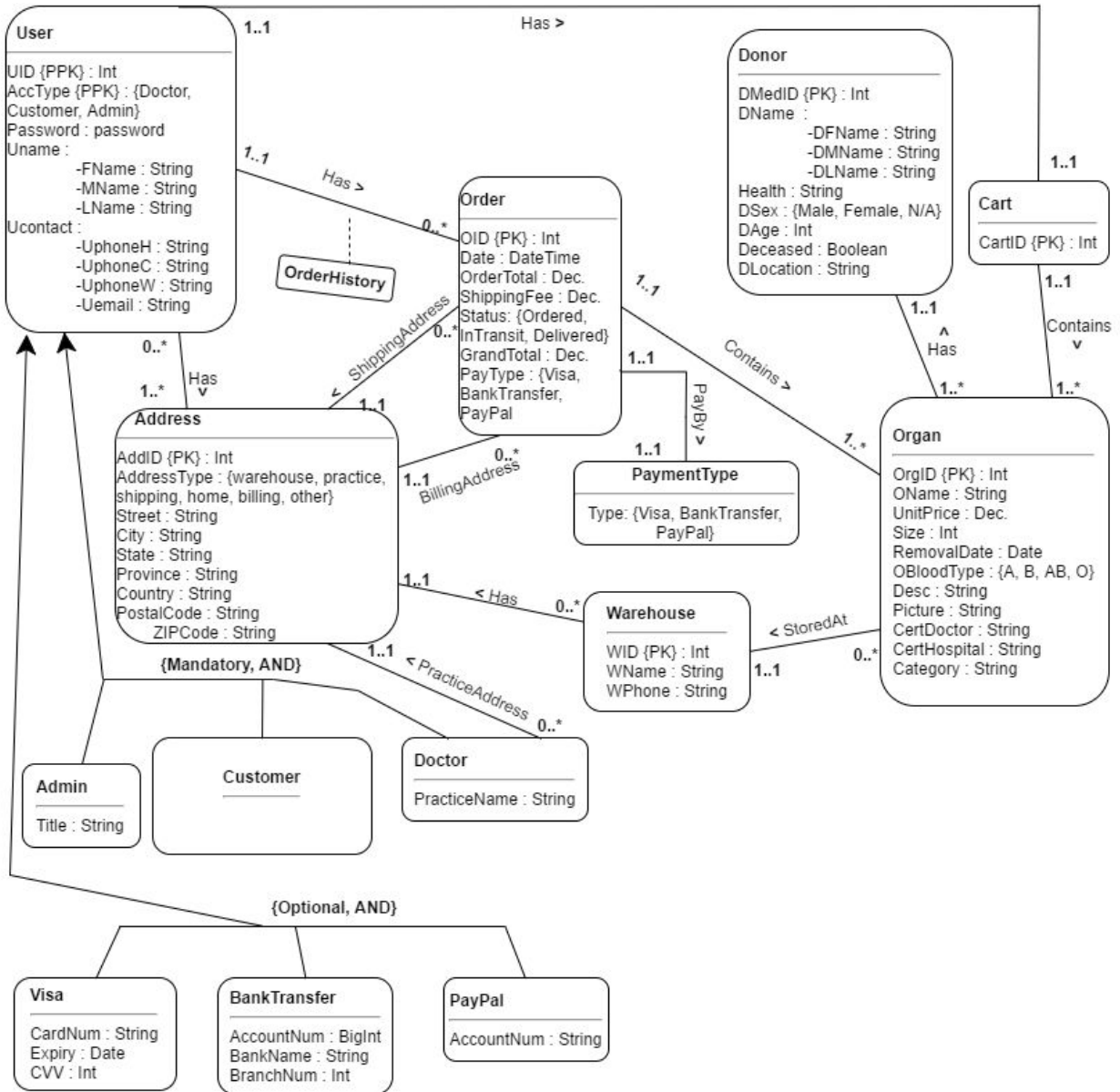
Doctor Capabilities:

Click the Add / Remove Doctor link and create a doctor user for yourself. Log out and log in again as your doctor user. The system detects you are a Doctor and sends you to the **Doctor's Portal**. Notice its similarity to the Administrator's Portal, except it is lacking Add/Remove Doctor and Add/Remove Warehouse functionalities. Otherwise, it functions the same as an admin. It's worth noting that admins and doctors can shop and order organs as well, feel free to try that out as well.

User Capabilities:

A user doesn't really have any capabilities worth showing off, the only page that a user has access to that is behind login is the user homepage, which you have already viewed after placing an order. Both Doctors and Admin's have one. However, if you wish to see a user view of the site, log out and sign up as a new user.

4.0 UML Diagram (updated)



5.0 Technology Features

5.1 Business Logic

We moved database connections and queries to the dbTransactions package. This was to reduce repeated code and prevent errors resulting from incorrect database access information, as well as to improve security. The DBConnect class is responsible for opening and closing the connection to the database. The FetchData class extends DBConnect and contains business logic and queries. For example, when a Developer wants to the system to list all the organs, they will instantiate a FetchData object "data" and call data.listAllOrgans(). Due to inconsistencies in team member programming preferences however, not all pages utilize the FetchData methods. There is also a LoadData class that populates the database, for testing purposes.

5.2 Shop

The shop page is the bread and butter of any e-commerce site such as Ramon's Organic Grain Fed Organ Emporium. As mentioned in the walkthrough, the shop page contains a powerful, real-time filtering search bar. Using Javascript, it implements search functionality that utilizes html class tags to manipulate the visibility of rows that don't match the input text in order to filter the search results appropriately. There are also filters available on the shop page: Organ, Category, and Blood Type.

5.3 Cart

The cart is implemented using sessions to store objects in the cart, with organs to add being passed to the cart page via url. Initially we had considered using a cart table in the database and querying it every time a user added an organ, but that was deemed too inefficient. Note that a user can add to the cart without being logged in. The cart page displays the organs currently in the cart. Users can also remove organs from the cart by clicking the blue 'x'. The ability to change the quantity does not exist, as each organ is unique in attributes and price. The page offers users the option to either checkout or continue shopping.

5.4 Checkout

The checkout process draws information from the session object used by the cart page so as to see the organs the user wishes to purchase. The system displays the users home address as the default shipping option, along with addresses the user has input into the system in previous checkouts. The user can also add new addresses. The system also displays payment methods used for previous checkouts, and buttons to add new payment methods. It then gives users the option to go back to their cart and change their order or to place their order.

5.5 Admin / Doctor Capabilities

5.5.1 Admin

Administrators have special capabilities within the site. The Administrator's Portal offers 9 functionalities not available to the standard user. They are:

Order Histories - Gives a complete list of orders the system has processed.

Add Organ - Interface for adding an organ to the inventory.

Update / Delete Organ - Update or delete an organ already in the system.

View Inventory - View current inventoried stock.

View Sales Report - See aggregated information about sales.

Add / Remove Doctor - Add or remove a doctor in the system.

Add / Remove Warehouse - Add or remove a warehouse in the system.

Edit / Profile - Edit your profile. Leads to the same page as the edit button on profile page.

There is also a "Restore DB" option available to Admin users. The button is located on the top right of the page. It recovers the database in the case of accidental deletion.

5.5.2 Doctor

Doctors have the same functionalities as Admins except Add / Remove Warehouse, Add / Remove Doctor, and Restore DB.