Chris Camano ID#921642160

Zachary Colbert Student ID #921899547

Arielle Riray SFSU ID# 917861209

Group Name: Normal Animal Merchants

CSC 317 Project JS version write up.

For this version of the e-commerce website project we decided to allocate the majority of our efforts towards developing and implementing a backend for our products implemented using express and node .

Node

For the latest iteration of this project we migrated our site onto a Node.js back-end that is supported by a MySQL database. The goal was to have all product data contained in the database so it could be dynamically rendered onto a small set of generalized page templates. Since we had already separated our product data from the visual components by storing it in a JSON file, migration into a database was relatively simple and involved writing an import script that read the JSON data and inserted the product records into a database table. After implementing all of our database functions we ran into some difficulty when approaching the problem of how to render the query results onto a given page. Our previous version was rendering products using client-side JavaScript which was no longer possible due to constraints in how data is passed between the front and back-ends. We solved this problem by using Express routes that allowed us to specify callback functions which handled querying the database and rendering the results before they were displayed to the user. A persistent

database connection is established when the server is launched, which is passed into these callback functions along with query parameters extracted from the URL of the requested page.

Object Rendering

Once queried objects stored in our database had to be sent to specialized template pages that were built with javascript support to procedurally render the page data stored in the backend. This process was very time consuming and difficult to implement. Multiple techniques were used including cookie manipulation, modifying inner html code using identifiers, as well as http requests for the express route. This process was an excellent way to learn the inner workings of the data movement within a webpage and challenged the team members working on this sector of the project a great deal. At multiple moments during its construction the object rendering system encountered bugs that required complete route reconstruction until a proper configuration had been developed. Certain pages were not ready to be populated dynamically due to the customized assets that were already being rendered in the page. An excellent example of this is the shopping cart which had a small photo extracted from a cookie passing system querying a json full of photos. This page was slightly improved with additional javascript work to support incrementing items within the cart.

Styling

During this phase design-wise, there wasn't much to do since the main focus was the back-end. A few visual changes that were done were the resizing of the images and the moving around of the containers within the style sheet. There are four types of animals, with three in each group. Then there are five photos assigned to each animal, which totals up to 60 photos that needed to be cropped and resized. The main goal of the photos were to make each image 400x400 pixels

and in a 1:1 ratio square format. That way, the loading time will be faster, along with page looking much cleaner and put together with the photos/containers being of consistent

Final Notes

Creating this website has been an interesting journey that our team has had a great time experiencing. Observing the project develop with each iteration was both challenging and motivating and encouraged us collectively to reach out of our comfort zone and research solutions to our assigned tasks.