COMSM0104 Web Technologies

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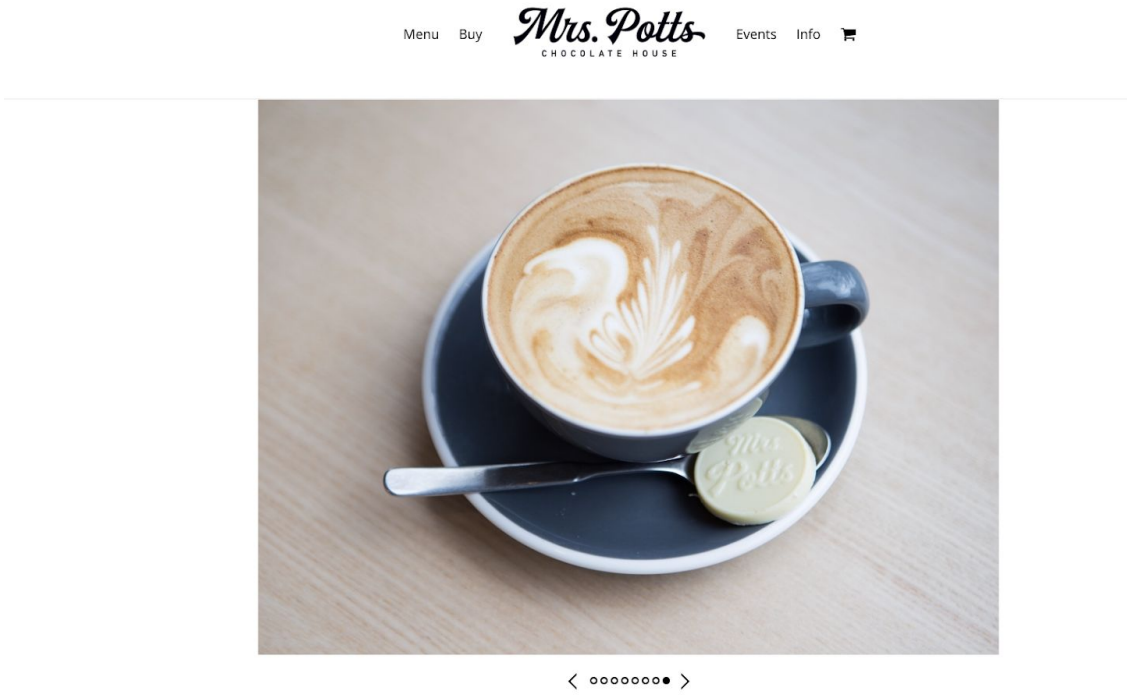
Candidate #'s: 97608 and 97549

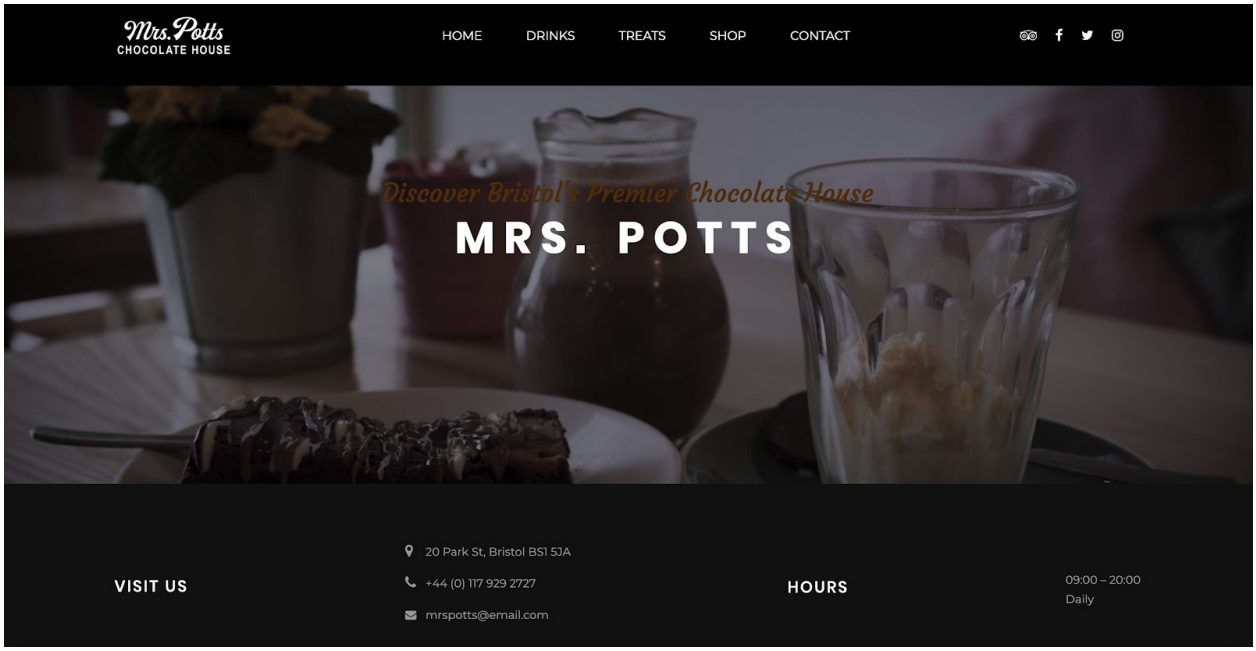
Introduction

Mrs. Potts Chocolate House is a boutique dessert shop located a short distance from the University of Bristol's Merchant Venturers Building at the bottom of Park Street. Our group has visited this establishment many times and find it to be one of the unexpected, great surprises of our Bristol experience. As we decided on a topic for this assignment, we sought out to improve the online presence of a local small business and potentially pitch these improvement suggestions to the business owners at the conclusion of the project. We found their current website design to be uninspiring with a lot of room for improvement when compared to competitors and similar businesses such as Peggy Porschen in London and Sprinkles Cupcakes in the United States. After analysing the design, offerings and structures of dessert shops, restaurants, pubs, and other businesses in the food/hospitality industry, we believe we have designed a website that will greatly improve Mrs. Potts' online presence and website usability. We used a simple open source template for our basic design and then modified and added many features to it. Images were taken from the Mrs. Potts website and their other social media accounts.

Current Homepage Design:



Proposed Homepage Design:



HTML – A:

We have investigated a variety of different issues and have gained a high level of confidence with the structure of html pages. We validated pages by ensuring they are XHTML compliant, then moved the code to Pug templates provided in the Express framework. Additionally we have multiple pages that display a plurality of information for the Mrs. Potts business.

CSS – A :

We have investigated a variety of different issues and have gained a high level of confidence with the structure of CSS style and making the pages consistent in design and layout. We gained quite a lot of experience using stylesheets versus using <style> tags. We explored the

wide range of customizability through the use of a variety of CSS frameworks. In addition to styles, we also investigated the use of CSS to facilitate animations.

JS – A:

We have gained a high level of understanding of how client-side JavaScript works and a knowledge of client-side frameworks. We utilized JavaScript to facilitate some animations, operate the shopping cart by carrying items and adding item values for a cart total, and operate the checkout page. Quantity can be changed after adding an item to the cart, which dynamically changes the price total. Cookie/cache storage is enabled to save cart information even when the user navigates away from the shop page and then comes back, so the items remain in the cart list. Clicking the "purchase" button on the checkout page deletes all cart items.

PNG – A:

Using Gimp and Sketch we created completely original artwork for the menu to showcase their Hot Chocolate and Coffee offerings in the Drinks page. These colours used for the hot chocolate ranged based on the pure chocolate content in the product. The colours used in the coffee drawings represented the coffee and milk content in each espresso-based item. This involved creating and then shaping multiple layers for the image. Based on their current website, we felt their current artwork was severely lacking. We also used images directly from the Mrs. Potts website, some of which need to be cleaned up before used on the website. In addition, we found a file containing some of the original Mrs. Potts logo work from an online source and proceeded to apply the colour tools to match the colour scheme of our webpage.

SVG – A:

Using Sketch and Inkscape, some of the original artwork was created using these programs and their text and grouping tools. We applied shadows and gradients to each hot chocolate model and coffee cup to produce a three-dimensional effect as if the cups were sitting on plates. These images were then converted to PNG format for use on the webpage. To create the various cup designs we started with basic shapes, which were then transformed to make for the basis of our coffee cup shapes.

Server – B:

We used the Node.js Express framework for the server. We configured it to deliver XHTML for HTML pages and ban uppercase URLs. We directed links on the index.html page to other node.js files in the routes folder, which then show Pug templates on the website that correspond to the html pages in the public folder. Cart information stored in the cookies are retrieved from the client-side and stored into variables on the server side to insert into the database. We generated a self-signed certificate, which can be seen on the https version of the site under the Security tab of "Inspect".

Database – A:

We used an SQLite database to store menu items shown on the Drinks, Treats and Shop pages inside corresponding tables. These tables store the item names, prices and image file names.

The database is first populated by running the create.sql file in sqlite in the Terminal. Once the user purchases items on the checkout page, this information is stored back into the database. Customer name and email are added to the Customer table if not already there, and the join table customer_items (containing foreign keys to the Customers table and the Shop table) saves the email, item id, quantity, total price and date/time of purchase for each item.

Dynamic Pages – B:

The menu items from the Drinks, Treats and Shop tables in the database are extracted and saved into variables in the node.js files within the routes folder, which are then used to populate the corresponding Pug templates with item names, prices and images. The Drinks and Treats webpages use the same Pug template but with different data.

Depth:

Getting the shopping cart to work as intended using JavaScript took a long time. It was tricky to get the individual items to show up at the bottom of the Shop page and also to store item data in the cache. Requesting these data variables to insert them into the database once they were "purchased" was an equally challenging task, especially when working with requests and responses and figuring out different prepare statements. We put the most work in this area, as the majority of this code was written from scratch and it took a lot of manual user testing.

We also linked Mrs. Potts' social media accounts (TripAdvisor, Facebook, Twitter, Instagram) to the icons on the top right hand corner of each page. We also have a contact page displaying a contact form and a map of Bristol using our Google Maps API, with a hot chocolate icon to show the location. This is the same icon displayed on the browser tab, which we found online.

We intended for the large image on the homepage to be a clickable mp4 video of the highlights of this chocolate shop, which we found on youtube. However, we were only able to get the video to play in the standalone html page, but not when it was on the server. Therefore, we decided to leave it out of the final project.