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Web Technology Report

Fiels	Self-estimated Grade	Key Implementation
HTML	A	Vue material kit based on bootstrap has been applied to generate html format.
CSS	A	Bootstrap Library, Vue Material Kit, Font-Awesome etc, writing own css method to create transparent card and their shadows. Carousel Activity.
JavaScript	A	Wish List Animation Functionality, Vue Hyperlink
PNG	A	Online Tool, GIMP etc
SVG	A	GIMP, Inkscape etc
Server	B	Basic Node.js application for storing ids,emails and usernames, but failed using Passport-local for authentication.
Database	B	SQLite3, however it can be extended to store the restaurants that usr likes in wish list, and link to log-in usr dash board.
Dynamic Pages	A	Register, Sign-in Boxes, Wish list functionalities, Carousel Activity, etc
Depth Design	B	Modern and neat front-end design with animated wish list. Lack of linking wishlist with user personal id and no authentication for id.

Motivation

In Bristol, more than 1000 restaurants are located with different cuisines and dishes. Without an insightful classification of various restaurants, it would be a burden for local citizens and travellers for restaurant selection. Although some similar perspective website has already been developed, such as TripAdvisor, a clean and user-friendly food guidance website with attached function induce our unique existing value in Bristol society, which also our motivation and inspiration of the development of this food website.

HTML

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In HTML section, standard HTML structure mentioned in the lecture is implemented with our unique extension with bootstrap library. Since the resource open-source library may not suitable for each independent website, in order to obtain our website style consistency, the tool and source code are treated as our reference and have been further modified with our own style and preference. Some HTML5 semantic tags such as <head> tag and its sub-function that have been implemented etc. are applied for context addition and elaboration of the website structure. Furthermore, since node.js express is implemented as our server (will further discuss in Server session), our HTML is converted to Jude(pug) format via the online tutorial for easier content handling and website maintenance in the future, which also can develop our insightful front-end development habits.

CSS

CSS stylesheet is implemented for beautifying our website in front-end design. Our CSS files handles the style, colour and adjustment of our home pages, tabs, button and sub-pages etc. For the colour and some special effect, such as shadow, simple animation, concave shape button etc. We also implement Bootstrap library to further decorate our website with our modification with the code. In terms of the photos, due to the limitation of restaurants' location in Bristol, ie. some restaurants are located far away from our university campus, most restaurant photos and backgrounded in our website subpages are collected from online source (some of the photo qualities are bad because of the limited graphic resources but with our own stylish adjustments in terms of colour, light and resize for overview consistency via Photoshop and online assistance tool (will be further discussed in PNG section for modification and idea of selection). Especially for the size of photos, since our website contains dynamic playlist animation of restaurant photo and environment in description pages, a photo size variant is set to avoid readjustment in every refresh in the sliding windows, such as 1200x630 size for restaurant photos in our case. With the embedded Vue CSS stylesheet with our further sophisticated modification, the overall layout is become descent and elegant. We gain a deeper understanding on aligning image embedded in Carousel, Card, container to an appropriate position by adjusting margin, padding etc. By creating several popover windows.

JavaScript

Regarding the front-end, we gained knowledge for event happening in web design achieved by javascript such as click and hovering , more importantly, event listening. By listening to the properties owned by objects, we achieved to design a wish list that when you click on the star on the bottom of the raised image, where the information for restaurants lie, namely a hyperlink for the restaurant and a button connects to it, you can add the restaurant you like to wish list, likewise, the container for the restaurant in wish list also has a cross button to allow you to delete it from the wish list. We also proud of that we achieved to change the colour of the stars and keep the colour staying till the next time you click it. We also include the restriction that since the restaurant is added to our wish list, it will not be added again to avoid repeat restaurant. Unfortunately, we did not realise the functionality of linking the star-button clicking(where the button becomes grey) to the event that synchronously remove the restaurant from wish list. In terms of back-end, we implemented a simple express frame using javascript to communicate back end with front end.

PNG

As we discussed of the selected figures in CSS section, the PNG photos is modified by Photoshop before the application so that the consistent style of photos is maintained to provide a

comfortable browsing experience. The venues of backgrounds are picked with respect to the theme and tag, such as London street view for European restaurant. Apart from modification, photo is drawn from scratch by GIMP software (Figure1 implemented in head title). To achieve the consistency, various techniques are applied such as opacity, RGB colour selection, pixel adjustment, typography size, spacing, position, colour picker and grid line etc. Especially we use a multi-layered image with Gaussian blurring and shadow features and alpha channel attempt for representing the transparency degree. Although we are not arts student, we have tried our best to maximise the quality of figure with different technique. Our selected photos are specially designed in simple way but representative of the message-behind, i.e. a bowl of rice for Asian restaurant, and match our style of minimalism and user-friendly outline.

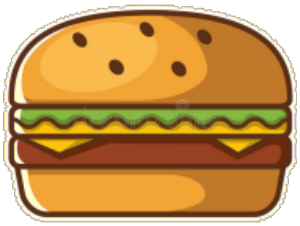

Figure 1 Self-drawn PNG figure example (head title)

SVG

As the same idea of PNG file, the advantages of our style are also contributed by our SVG photos. In order to represent the wide divergence of cuisine choices in Bristol restaurant, a cartoon style burger logo is also self-created from our teammates by GIMP. Personally, in order to balance the user-friendly user interface of GUIMP and the export function of Inkscape, both graphic editing software are used during the process of arts work in this project, which also gains a multiple experience of two common open source raster graphics editor to our teammates. The wide range of editing skills in PNG section also apply in SVG production, such as joining splines and transform etc. (Figure 2 implemented in login button)

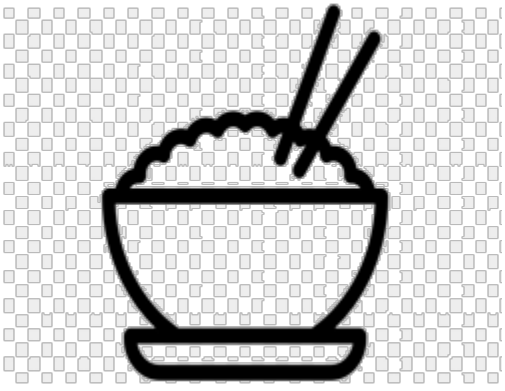

Figure 2 Self-drawn SAV figure example (login button)

Server

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Our server is implemented by node.js. We have used simple express framework to manage and handle the posts, requests and responses, to be more specific, we allow the register-box to submit a request and store the user registrations . GET / POST functions validates all the URLs and transfers data over HTTP files. The passport-local.js is used for usernames and password authentication. For local demonstration, our website is hosted locally with our server and the prepared statement for SQlite to avoid SQL injection by the hackers and secure our website, especially the database. The JASON package modules listed is generated to make our web portable for other users' demonstration. The missing modules can be downloaded by "npm -install". Also,"body-paser" module is used for parsing middle ware.

Database

An embedded database of SQLite3 is selected due to its advantage of open source, lightweight and relatively simple implementation. The structure of table is simple and clear based on generic principles. Our database handles the various user id, email and password for the login and register system. For security reason of the login system, the password is hashed to protect our users' privacy and avoid hackers' account password attack.

Dynamic Pages

The dynamic pages are implemented by the connection between front-end and back-end via using HTML, CSS and the JavaScript client-server-based framework with the connection to our database. We create an interactive wish list of their favourite restaurants selected by different users with respect to different login accounts. Our home page provided two links to go to the different genre of restaurants. The hyperlinks contained in the tabs in the second page can further leads to the third page for individual restaurant information wherein Carousel image exits.

Depth

Our website is not just simply work but we also consider the experience of user. For example, we have mentioned the interactive login system, and wish list etc, to enhance the experience and match our objective of user restaurant guidance assistance. Our design is neat which can highlight the necessary information. We tried Vue.js framework for the front-end and express.js for back-end.

TO Run,

1.npm install,

2.node app.js.

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Appendix (selected figure examples with our unique modification)

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