

The Luzzu

Principles of Web Application Architecture Assignment

CIS 1053

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Brief Description of Tasks

We created a website for a Maltese Restaurant providing users with a wide range of options. This includes pages for Menu, Bookings, Complaints, About us, Online delivery order, complaints and contact details.

Home Page: This page contains the welcome title, and together with the header and footer, allow the user to navigate to any desired page or social media link.

Menu: Users have the option to view all of the dishes on offer, grouped by course. Information such as dish title and brief description is available, as well as dietary concerns and purchase buttons. The purchase button, together with the quantity selector, allow users to add an item to their shopping cart, for online delivery order. Clicking on the food item title will allow the user to view further information regarding the item, such as ingredients and detailed discription.

About Us: This page provides a brief description and overview of the company's background including the general objectives of the restaurant.

Contact Us: This page allows users to get in touch with the restaurant management, and is split into three categories: Complaint, Reservation and Query. The complaint page allows users to submit a complaint online. On submission, the user, aswell as the restaurant management, will receive an email confirming submission of the complaint. The reservation tab allows users to make a reservation online, specifying the number of places to reserve, date, time and contact details. Finally, the query tab will allow users to submit queries online and, once again will result in an email being sent to both the client and the management. Information regarding opening hours and restaurant location is also available on this page.

Shopping Cart: This page lists all the items that the user has added to the shopping cart, including the quantity selected of each item and the total price. The user may then proceed to remove items from the shopping cart or check out and complete their order. A check out button will redirect them to the final stage of their order, where they will be prompted to fill in a form concerning delivery details such as address and time of delivery. On submission, an email will then be sent to the restaurant management as well as the client, informing both of the requested order.

Architecture

The following are a list of pages uploaded on the server to allow users to visit the website:

- About_us.php
- Complaint.php
- Desserts.php
- Footer.html
- Header.html

- Index.php
- Item_Display.php
- Main_Course.php
- Query.php
- Reservation.php
- Shopping_Cart.php
- Shopping_Cart-Drop_Item.php
- Shopping_Form.php
- Starters.php

Website data such as menu items (including name, image, description, price, etc) was stored in a phpMyAdmin database schema names Food_Items, containing a single table 'Menu', with tuples named:

- Course
- Description
- Gluten_free
- Id
- Image
- Ingredients
- Name
- Price
- Reg_date
- Spicy
- Vegetarian

Id served as the auto-increment primary key.

The pages header.php and footer.php were included in each page via the PHP command 'include()', with the main body of each page changing, offering new functionality with the same headers.

The main menu page, split up into the three courses, outputs a list of dishes offered by the restaurant. These dishes are dynamically output via the database table 'Menu'. The database is queried via PHP, whereby a connection to the database server is initiated, and the database is queried through SQL commands. The resulting data is then output on screen through the implementation of a PHP for-loop.

A user may then click on a dish title to view the item in further detail. The title is set up as an html link, directing the user to the www.theluzzu.com domain, following by the /Item_Display.php path. A query parameter is then appended to the end of the URL specifying the id of the item which was selected. PHP code on the Item_Display.php page then tests for GET parameters via the '\$_GET["id"]' command. If a parameter is present an SQL query is generated and the database is queried for further details regarding the specific item.

The contact us page, split into reservation, query and complaint, is based on a PHP form, which submits data via a POST method to the server. The data is then used

to generate two email bodies regarding the matter in hand. The email entered by the user is then used to send the email body to the user via the 'mail()' PHP command. An email informing the management of the reservation, query or complaint is also sent.

Additional Libraries

No additional libraries were used. The phpMailer additional library was not required, as the PHP function 'mail()' was used. Now bootstrap was implemented either, as all CSS code as well as Javascript scripts were manually coded.

The only functionality which was not manually coded was the Javascript to implement Google Maps on the Reservation page, which was acquired through Google Maps.

Challenges encountered

During the course of the project we encountered a number of challenges, which we managed to overcome in various ways.

1. Finding the right programming application for MAC

With some of our group members using a mac for programming we had trouble finding the right application in which to program on since many web programming applications run on Windows. After some time searching and asking around, we opted for Coda.

2. Spreading out workload in our group

A challenge faced by any team is that of splitting up the workload. We had to try and decide whose going to learn which language and how are we going to put everything together in the end. After our first meeting each group member was assigned his/her respective language. Each time we met we would then link everyone's work together.

3. Learning the Web Development languages

Another challenge we faced was that of learning the languages and applying them to our website. The tutorials on W3schools proved to be very helpful in overcoming this challenge. Through constant practice we gained a lot of ground and a lot of improvement was made. We then were able to apply all that we learned to our website.

4. Creating a drop down menu

Creating a drop down menu using html proved challenging. We wanted to create a drop down menu that is both attractive and also functions as supposed to. Through YouTube videos and other tutorials on the internet we managed to create a drop down menu that marked both criteria.

5. PHP mail function

Initial attempts to implement the PHP mail() function proved unsuccessful. Complications were encountered when setting up a mail server, however once official hosting was purchased, this function eventually worked.

6. Purchasing web hosting

Purchasing and setting up of the web hosting service proved to be a challenging experience, from which we have learned a lot from. Misconceptions on the type of hosting required lead to the purchasing of a wrong subscription, which we were unable to use. However, we eventually managed to purchase the correct subscription and domain.

7. Grasping interleaving of PHP and HTML

Initial attempts to construct forms resulting in complicated interleaving of code. However, following further online tutorials and trial and error, the code was cleaned up and organised.

8. Attempts to make the site dynamic

Initial attempt at making the site dynamic resulted in problems when submitting forms. This was due to the complex attempt of setting the body portion of the page to alter at on page load. However following guidance from the lecturer and restructuring of the site, this problem was overcome.

Screenshots

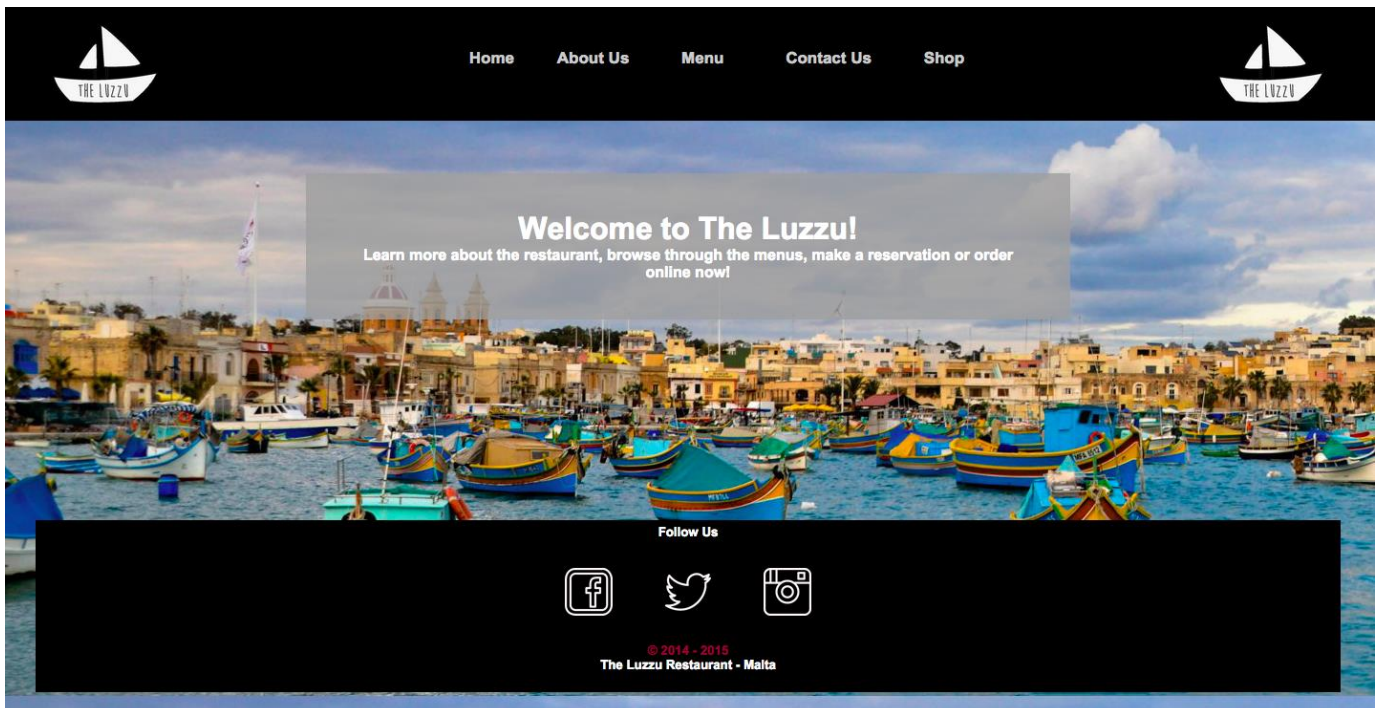


Figure 1 – Homepage

The Luzzu Restaurant website homepage.

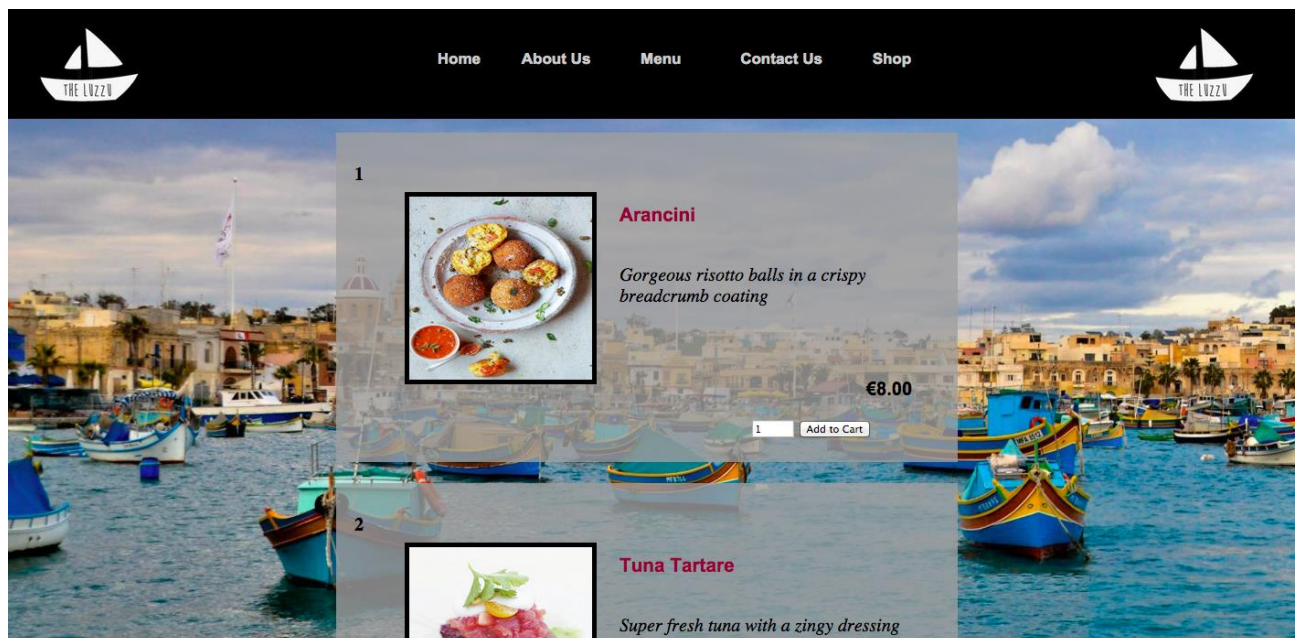


Figure 2 – Menu - Testing

The 'Menu' tab was selected and on the drop down menu the user selected that he/she would like to place an order for 1 Arancini dish. Once selected, the user clicked on Add to Cart.

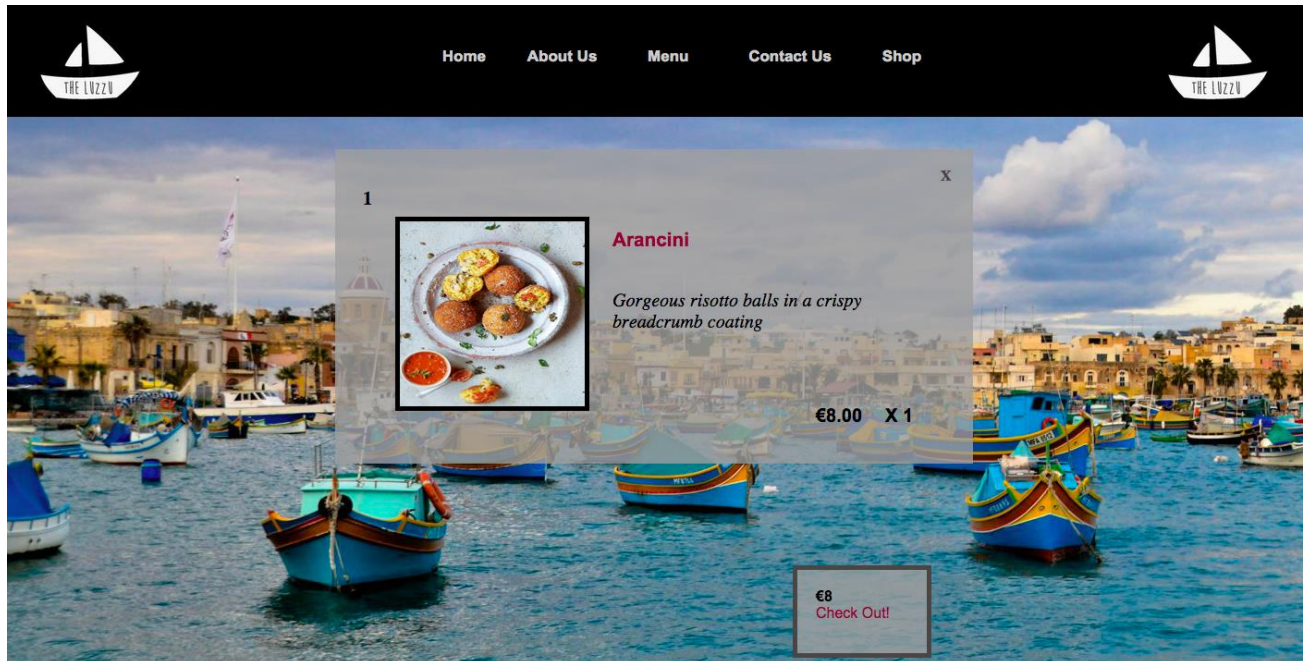


Figure 3 – Shopping Cart – Testing

To check if the selected 'Arancini' Dish went into the shop cart, the shop tab was selected. The above was displayed. This confirms that the user has ordered 1 dish of Arancini. The user then proceeded to click 'Check Out!'.

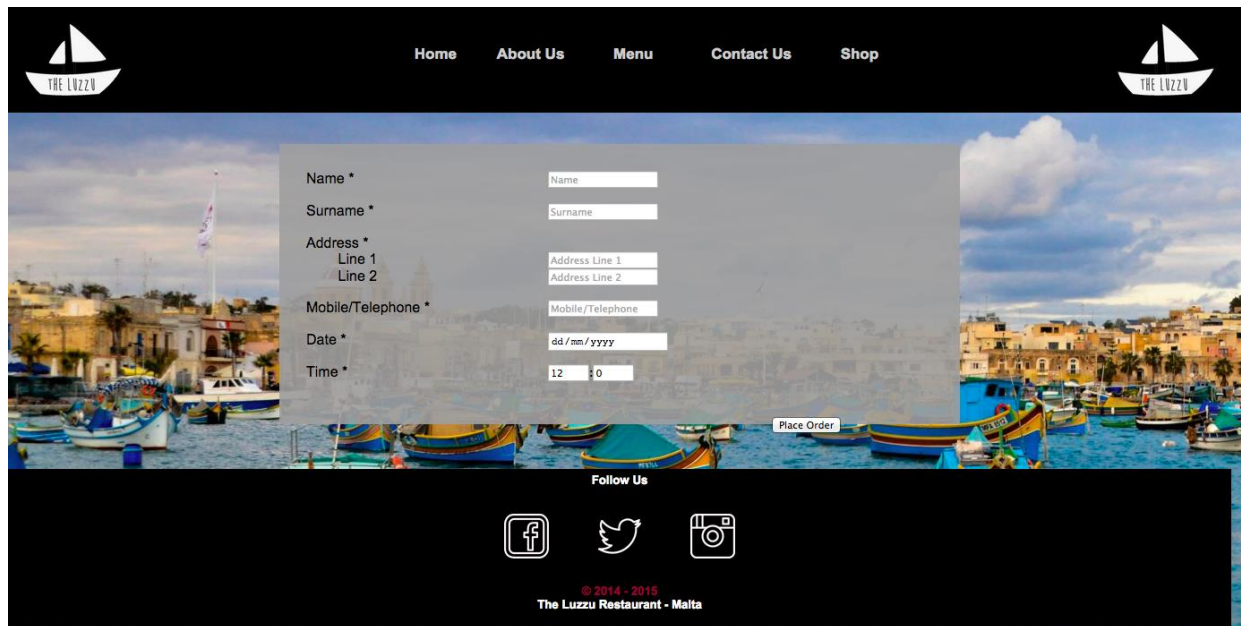


Figure 4 – Shopping Cart Check Out- Testing

Once the user clicked the Button 'Check Out!', a form came up asking to enter his/her details.

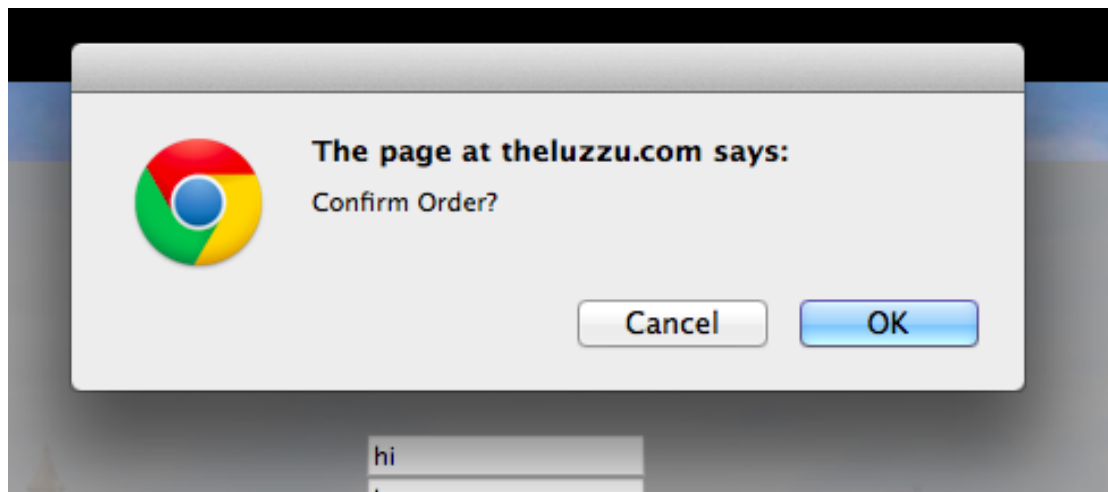


Figure 5 – Shopping Cart Check Out – Testing

Once the user clicks on 'Place Order' with all the details in the form filled in, a confirmation window pops up, asking the user if he/she would like to confirm the final order. The user then proceeded and clicked ok.

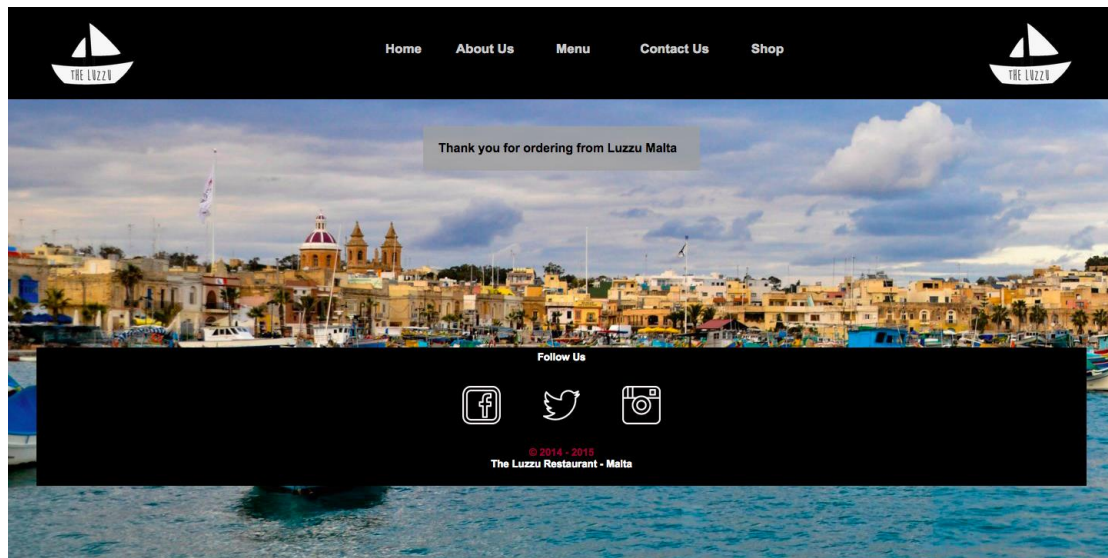


Figure 6 – Shopping Cart Check Out – Testing

Once the user has gone through the process of the shopping cart, the website displays a ‘Thank You’ message to the customer.

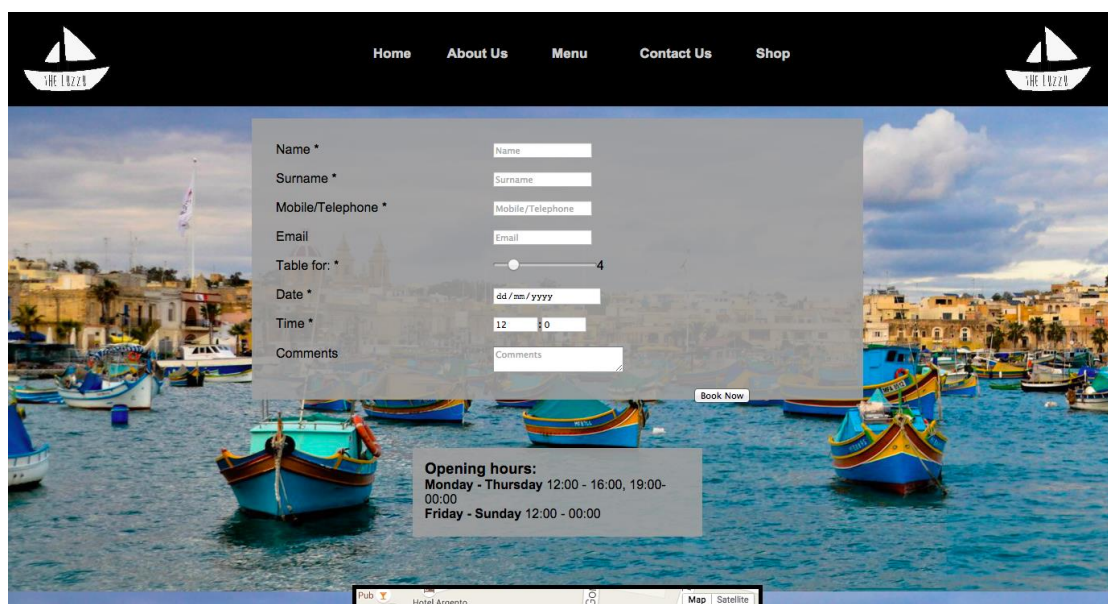


Figure 7- Contact Us (Reservation) – Testing

When the user clicks on the Contact Us, a drop down menu is displayed. Once clicking the ‘reservation’ tab, this form appears asking the user for his/her details for the reservation.

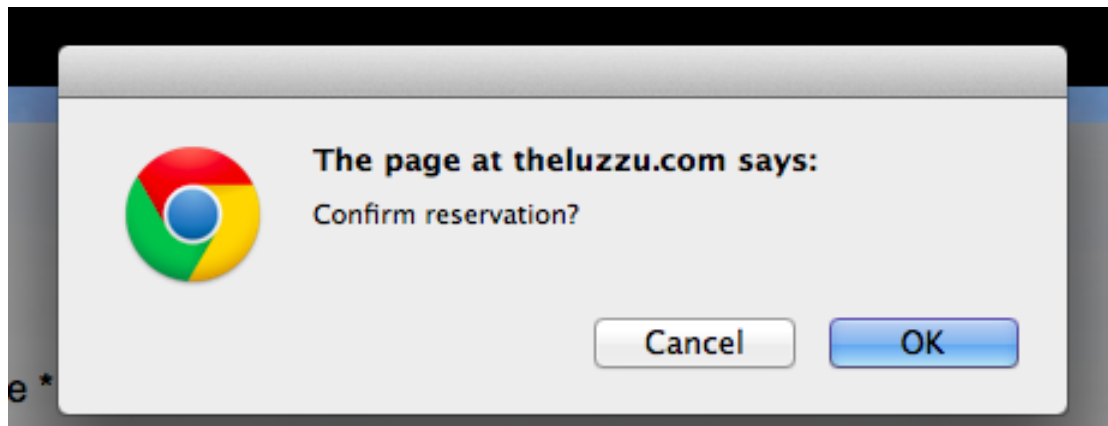


Figure 8 – Contact Us (Reservation) – Testing

Once all details of the user have been filled in and the user proceeds to clicking 'Book Now', the website generates a window asking the user to confirm that all above details are correct and would like to confirm the reservation.

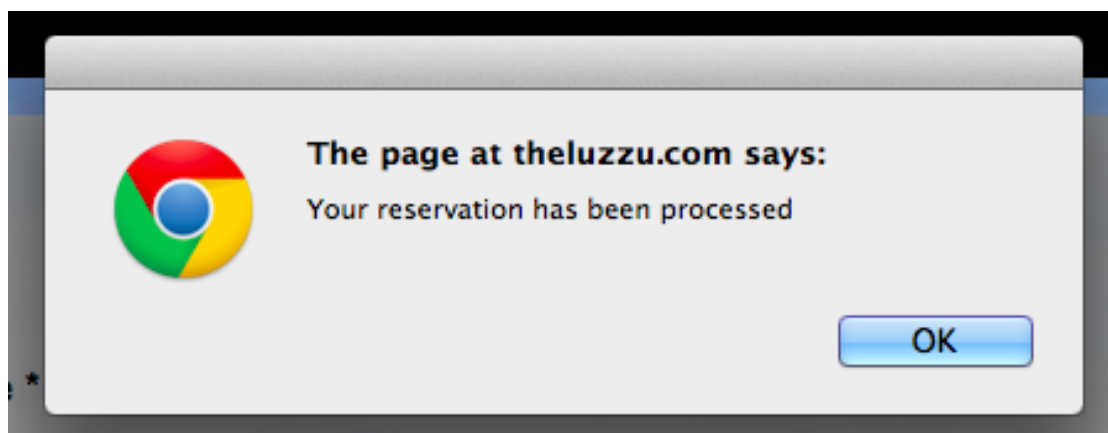


Figure 9 – Contact Us (Reservations) – Testing

Once the reservation has been placed, the website generates a window confirming that the user's reservations has been processed.

Figure 10 – Contact Us (Complaint) – Testing

If the user would like to make a complaint, he/she is to fill up the above form. If the user leaves the above details blank, he/she would not be able to process the complaint and the website will generate a message asking the user to fill in the above left out fields.

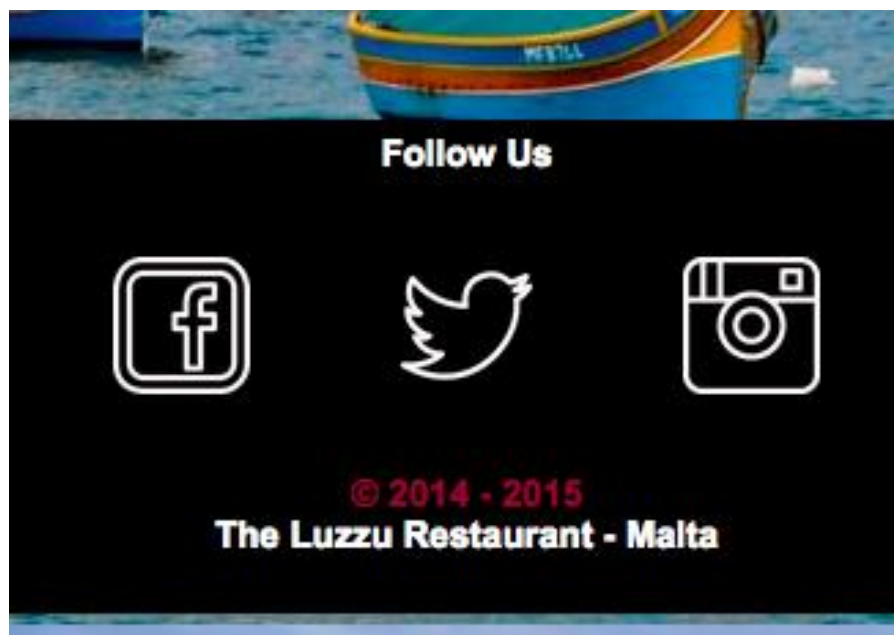


Figure 11 – Social Media Buttons

The below buttons which are found in every footer on every page, lead you to the social media page of the restaurant when clicked on.

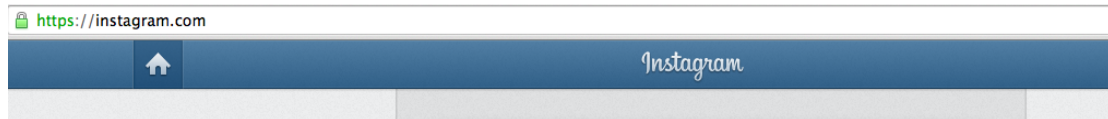


Figure 12 – Social Media Buttons (Instagram) – Testing

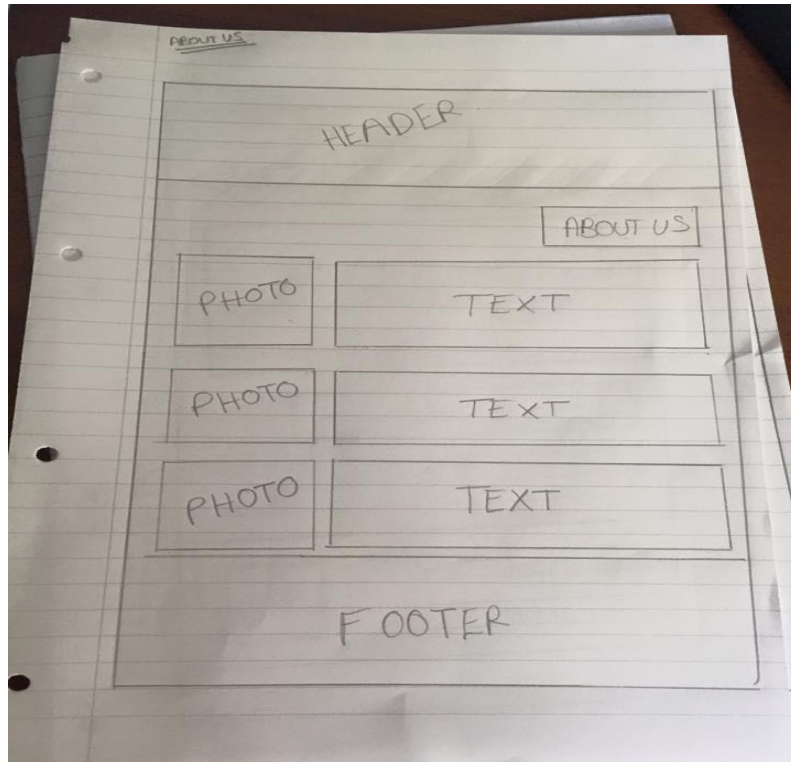
For example if the 'Instagram' Social media button is clicked, the website will redirect the user to the Instagram page of the website, where one can view all the different photos the restaurant posts.

 A hand-drawn design on lined paper for a 'CONTACT US' page. The design is enclosed in a large rectangle. At the top, the title 'CONTACT US' is written. Below it is a 'HEADER' section. The main content area is divided into three columns: 'Reservation', 'COMPLAINT', and 'QUERY'. Each column contains a list of input fields: 'NAME *', 'SURNAME *', 'TELEPHONE *', 'EMAIL *', 'SUBJECT *', and 'COMPLAINT *'. The 'Reservation' column also includes a 'TABLE FOR' field. At the bottom of each column is a 'SUBMIT' button. A 'FOOTER' section is at the very bottom.

Reservation	COMPLAINT	QUERY
NAME *	NAME *	NAME *
SURNAME *	SURNAME *	SURNAME *
TELEPHONE *	TELEPHONE *	EMAIL *
TABLE FOR <input type="checkbox"/>	EMAIL *	TELEPHONE *
EMAIL *	SUBJECT *	SUBJECT *
TIME	DATE	QUERY
DATE	COMPLAINT *	
COMMENTS		
<u>SUBMIT</u>	<u>SUBMIT</u>	<u>SUBMIT</u>

Figure 13 – Design on Paper

This was our initial design on paper of our Contact Us page



Figure

14 –

Design on Paper

This was our initial design on paper of our About Us page

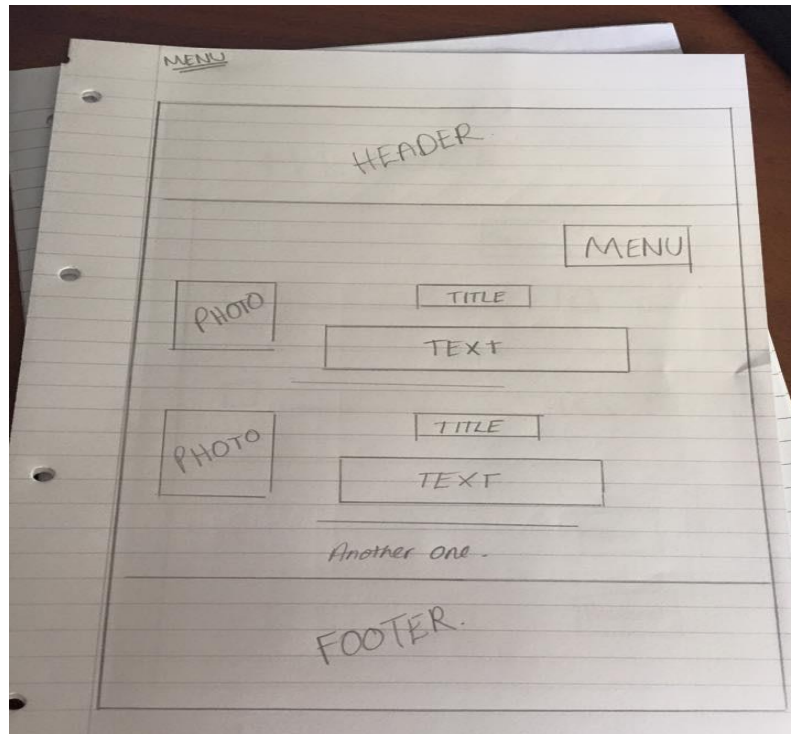
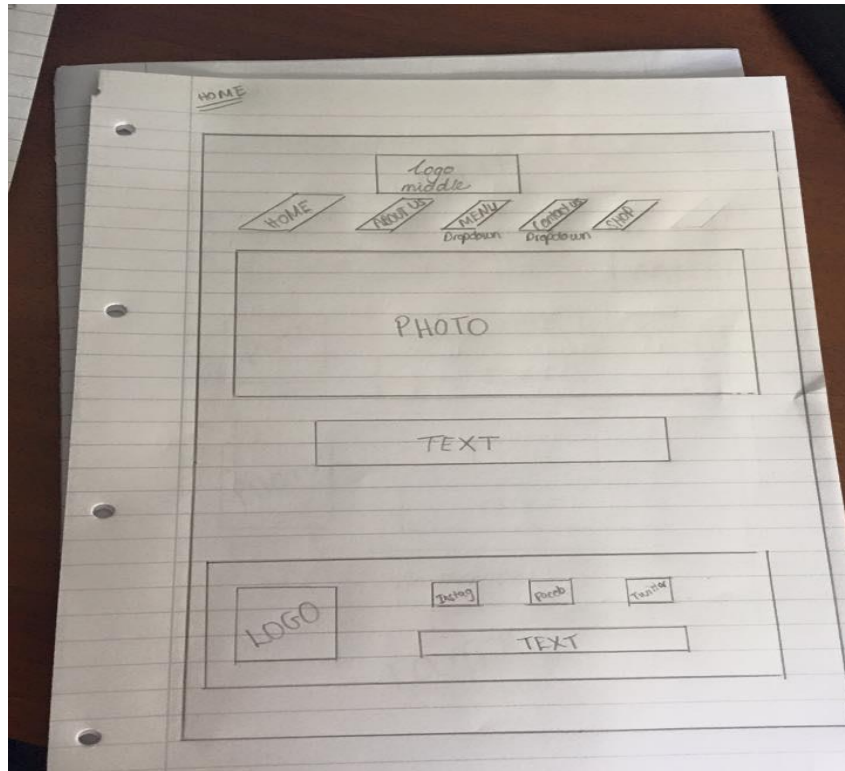


Figure 15 – Design on Paper

This
out
design
paper of
MENU



was
initial
on
our
page

Figure 16 – Design on Paper

This was our initial design on paper of our Home page

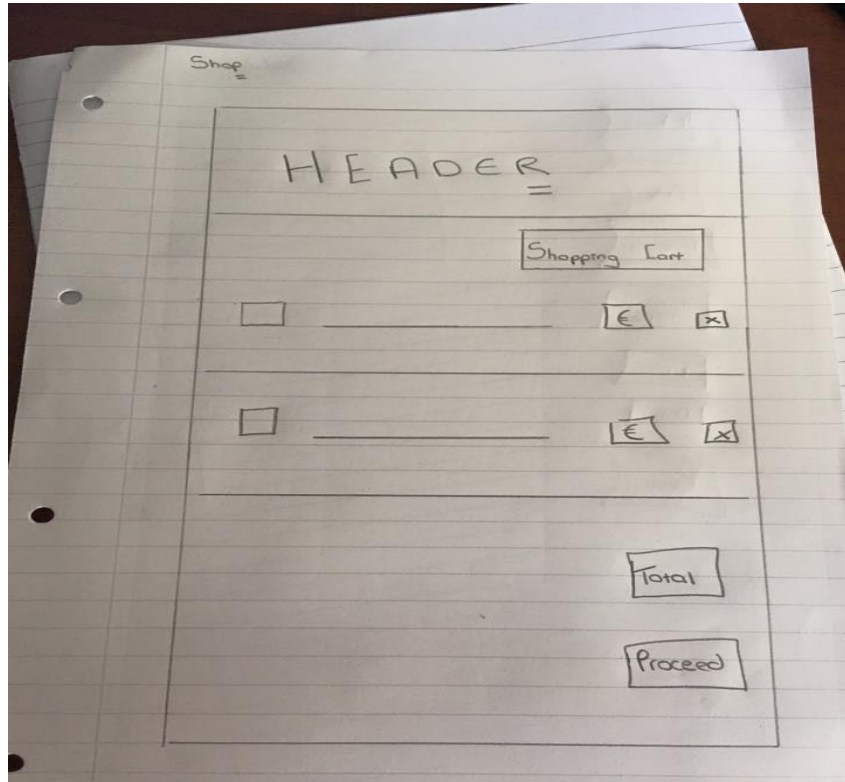


Figure 17 – Design on Paper

This was our initial design on paper of our Shop page