



University of Santo Tomas
College of Information and Computing Sciences
Department of Information Systems



**ICS 2609 - APPLICATIONS DEVELOPMENT AND EMERGING
TECHNOLOGIES 2 (ENTERPRISE BACKEND)**

Requirements Gathering and Analysis Documentation

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1. Introduction

It is evident that small businesses are greatly affected in a bad way because of the global pandemic that is happening up to this day. LeSweet Goodies & Pastries can attest to that since the number of possible orders that they may acquire from their customers will decrease because of the lockdowns being implemented, making it hard for people to place an order and pick it up.

The system will help this start-up baked goods business owned by Leslee De Leon cope with the current situation and automate their business processes in order to gain more orders and, most especially, profit. Their potential customers can browse the system to view their creations and decide on what product they should order. An order form is present, which provides the customers with information about the products that they have to offer as well as collects their exact orders. The customer will be required to enter their details in order to assess what mode of delivery or pick up they would prefer should they agree with the business. The admin of the system, who will be the owner of the business, will receive the orders and track them in the system's database.

1.1 Problem Statement

The business is using a manual process of collecting orders from their customers, which could generate possible errors and affect the operation of the business as well as the experience of their customers based on the service that they offer. Because of their current management style for their business, there is a possibility that their actions might be disorganized, which could cause more problems and inconvenience. These problems could result in dissatisfaction from their customers, which could lead to their sales decreasing.

As a group, we aim to assist the client with their problems regarding their business processes in order to make them more manageable and consistent. The proposed system will serve as a tool for them to reach out to more customers in order for them to receive more orders as well as offer a convenient and automated way of ordering from their business. The businesses will surely benefit from the functions of the system in such a way that it could possibly affect their performance in the market in a good way.

1.2 Objectives of the project

- The objective of the project is to develop an online ordering system for LeSweet Goodies & Pastries in order to enable them to improve and automate their manual and outdated process of accepting orders from their customers.
- Create a system that will showcase the products that the business is offering to the market.
- It will provide a system that will serve as a new platform for customers to place their orders in a more convenient way, especially during this pandemic.

1.3 Purpose of the System

This online ordering system focuses on helping the business acquire more customers and orders by automating its ordering process for their pastry products. It will be a big help for both sides since the customers will be satisfied with their purchase, while the business owner will be able to generate more profit.

1.4 Scope of the System

The proposed system goal is to cope with the current situation because of the global health crisis as well as automate their manual and outdated way of gathering orders from their potential customers. This online ordering system is made only for LeSweet Goodies & Pastries, which means that all the content within the system is related to their business, especially in terms of the products that they are selling. From the perspective of the customers, it will make business operations more convenient, which may result in increased profit and business growth.

1.5 Limitations of the Project

- The system does not support offline process of ordering since it will require internet connection in order to access and browse the system
- Customers are unable to view the internal data sources of the business just by using the system
- The system is exclusive for the purpose of having an online process of ordering of LeSweet Goodies & Pastries and it can't be used for other agenda and businesses.
- The system does not support any form of file uploading especially in the order form and customer details page.

1.6 Project Responsibilities

Name	Position	Responsibilities
Rizele Victoria Dones	Project Manager	<ul style="list-style-type: none">• Responsible for planning, monitoring, and implementing the project.

		<ul style="list-style-type: none"> ● Maintains and tracks the progress of the project. ● Actively informs the team about any changes, if it occurs. ● Lead the team in meeting with the client for gathering system requirements.
Mathew Ellis Montemayor	Frontend Developer	<ul style="list-style-type: none"> ● Optimizing the user experience. ● Using HTML, JavaScript and CSS to bring concepts to life. ● Developing and maintaining the user interface. ● Implementing design on mobile websites. ● Creating tools that improve site interaction regardless of the browser. ● Managing software workflow. ● Following SEO best practices. ● Fixing bugs and testing

		for usability.
Carl Harie Jesus Valencia	Backend Developer	<ul style="list-style-type: none"> ● Building and maintaining web applications ● Assessing the efficiency and speed of current applications ● Writing high-quality code ● Managing hosting environments ● QA testing ● Troubleshooting and debugging ● Keeping on top of new technologies
Joreen Deenin Sarmiento	Database Developer	<ul style="list-style-type: none"> ● Provide guidance and support to Application Developers ● Assist with schema design, code review, SQL query tuning ● Install, tune,

		<p>implement and upgrade DBMS installations</p> <ul style="list-style-type: none"> • Write and deploy SQL patches • Upgrade and improve application schema and data upgrades • Process work accurately and in a timely manner • Pay attention to detail at all times • Proactively and regularly make recommendations for system improvements • Collate, prepare and present statistical information for internal and external use
Charles Vincent Aguinaldo	Requirements Analyst	<ul style="list-style-type: none"> • Analyze requirements for a project • Gathering and analyzing data • Interpreting gathered

		<p>data</p> <ul style="list-style-type: none"> ● Finding patterns and trends in the analyzed data ● Helping the management and other teams draw business goals and needs. ● Acting as a liaison between managers, stakeholders, and software development teams ● Reconcile conflicting interests ● Determine how to translate the designer's vision into a plan that can be implemented by developers
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2. Proposed System

2.1 Overview

The next sections of this document introduce the detailed specifications for the online ordering system for LeSweet Goodies & Pastries. The objective of this proposed system is to provide and introduce businesses with an automated way of accepting orders from their customers, especially during the time that we are still facing a global pandemic. It will make the management of the business more elevated and organized. There are two actors that will be able to access the system: the owner of the business and their customers, who will browse their products and might be interested in placing an order.

2.2 Functional Requirements

Admins:

1. Admins of the system can manage and monitor the orders being received by the system.
2. Admins of the system shall have access to the database connected to the online ordering system.

Customers:

1. Customers shall be able to access all the tabs presented in the system, especially the creations tab where they can see the products that the business is offering.
2. They shall be able to access the order form inside the system in order to specify the product/s that they are going to buy from the business.
3. Customers shall also be able to input their information and select their preferred options in the customer information area in order to make the transaction successful.

2.3 Non-functional requirements

2.3.1 Usability

The system should be easy to learn and understand. The user should be able to easily navigate and determine what to do and how to do it just by being able to look at their screen.

2.3.2 Reliability

The system needs to meet the expectations of the client as well as the team, and should be able to perform with no downtime or bugs.

2.3.4 Portability

The user should be able to open the application using their browser from their own device.

2.3.5 Security

The system should not be vulnerable to data breaches and be able to minimize the risk of having data stolen by third-party personnel.

2.4 Technologies / Tools

2.4.1 Front-end

HTML

It's the industry-standard text formatting language for building and displaying Web pages. It is also the Internet's primary language. Tags and attributes are used to construct and specify a specific web document.

CSS

CSS may be used to determine the padding around images and other objects, as well as the style, thickness, and color of a table's border. CSS allows Web developers more precise control over the appearance of Web pages than HTML does.

Bootstrap

Bootstrap is a front-end programming framework for building websites and online apps that is free and open source. The Bootstrap framework uses HTML, CSS, and JavaScript (JS) to make creating responsive, mobile sites and apps easier.

2.4.2 Back-end

Javascript

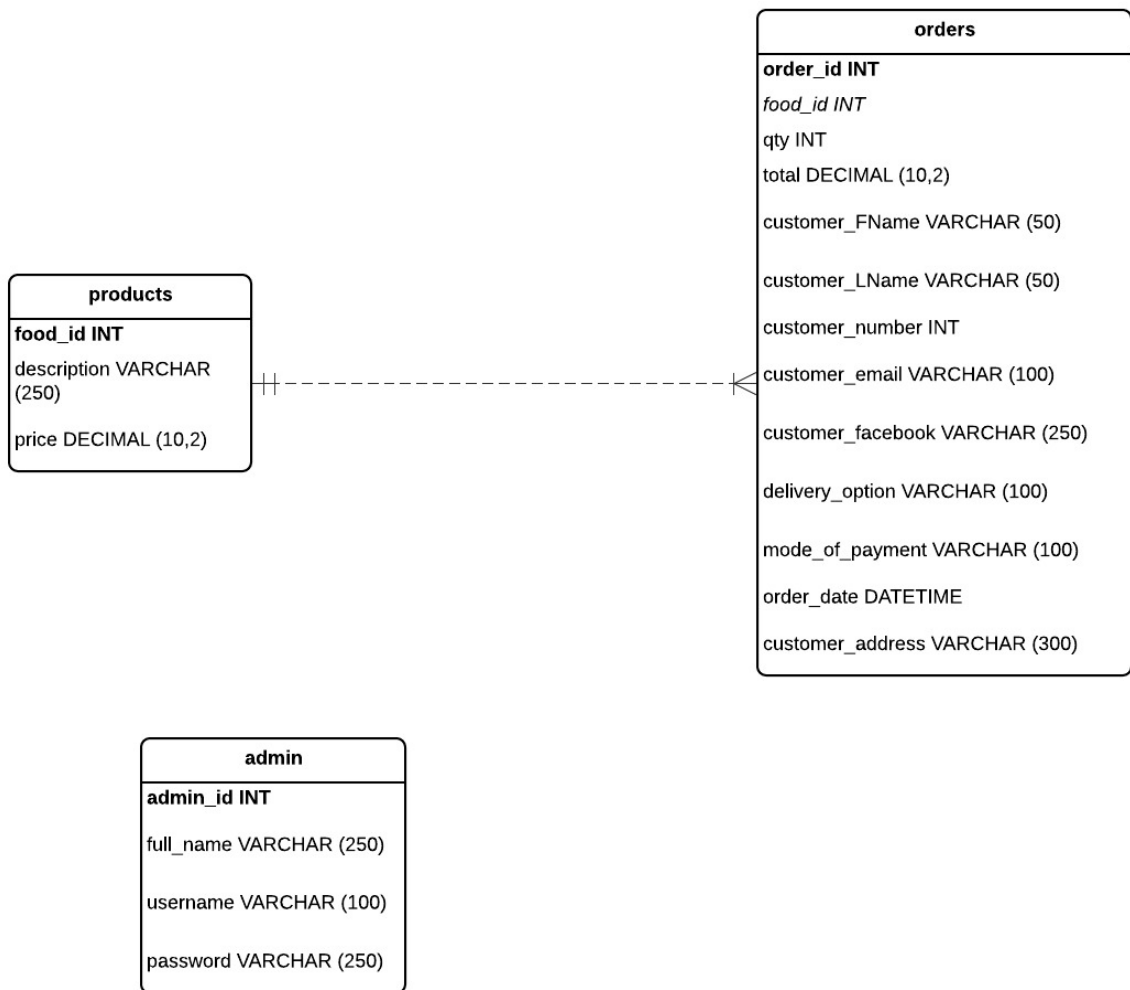
Javascript is a text-based programming language that allows you to construct interactive web pages on both the client and server sides. Whereas HTML and CSS provide structure and aesthetic to web pages, JavaScript adds interactive components that keep users engaged.

MySQL

MySQL is a SQL-based relational database management system. SQL stands for Structured Query Language. Data warehousing, e-commerce, and logging applications are just a few of the uses for the application.

3. System Models

3.1 Entity Relationship Diagram (ERD)



3.2 Screen Mockups

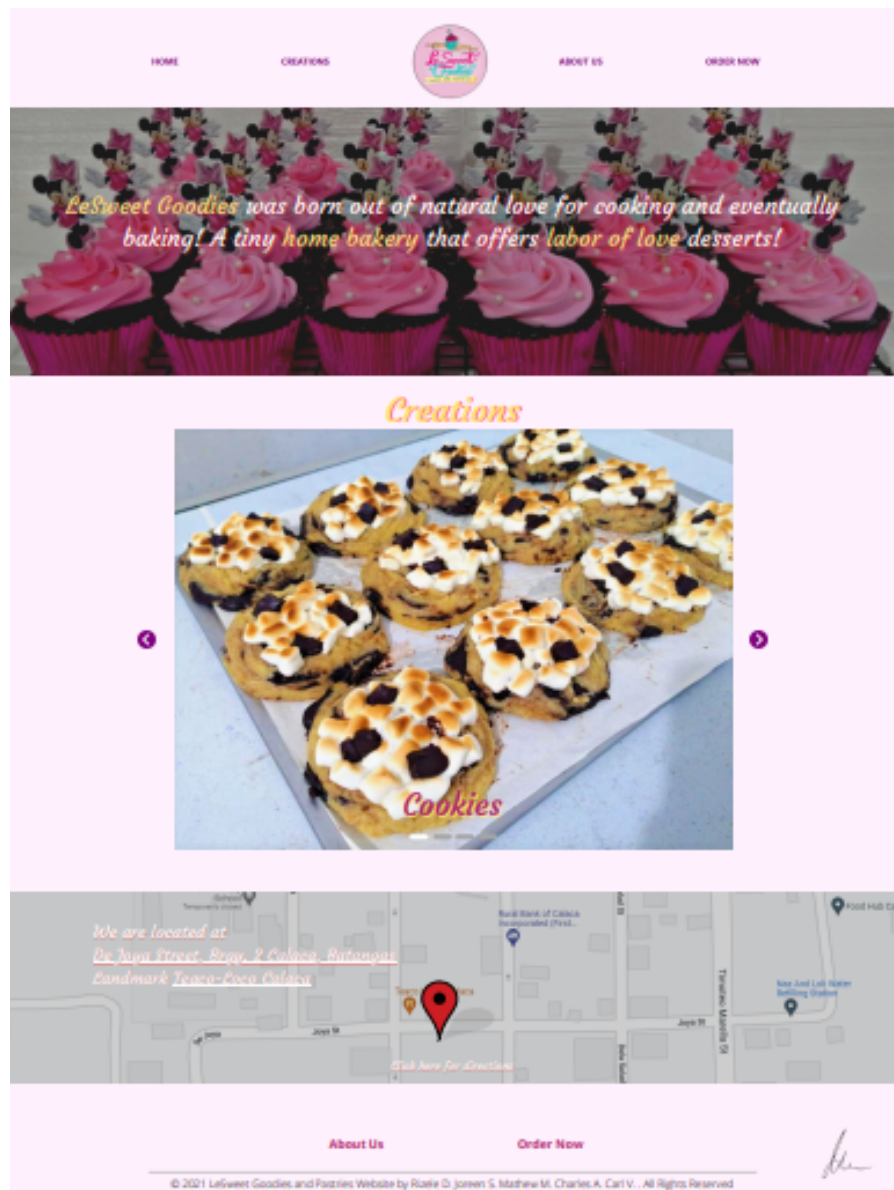


Figure 3.2.1 LeSweet Goodies & Pastries - Home Page

Figure 3.2.1 depicts the LeSweet Goodies & Pastries Home Page. On this page, they highlighted the products that they are marketing to the public, which are different kinds of pastries such as cakes and cookies. They may also see the exact location of their business in the system, illustrated by a map.

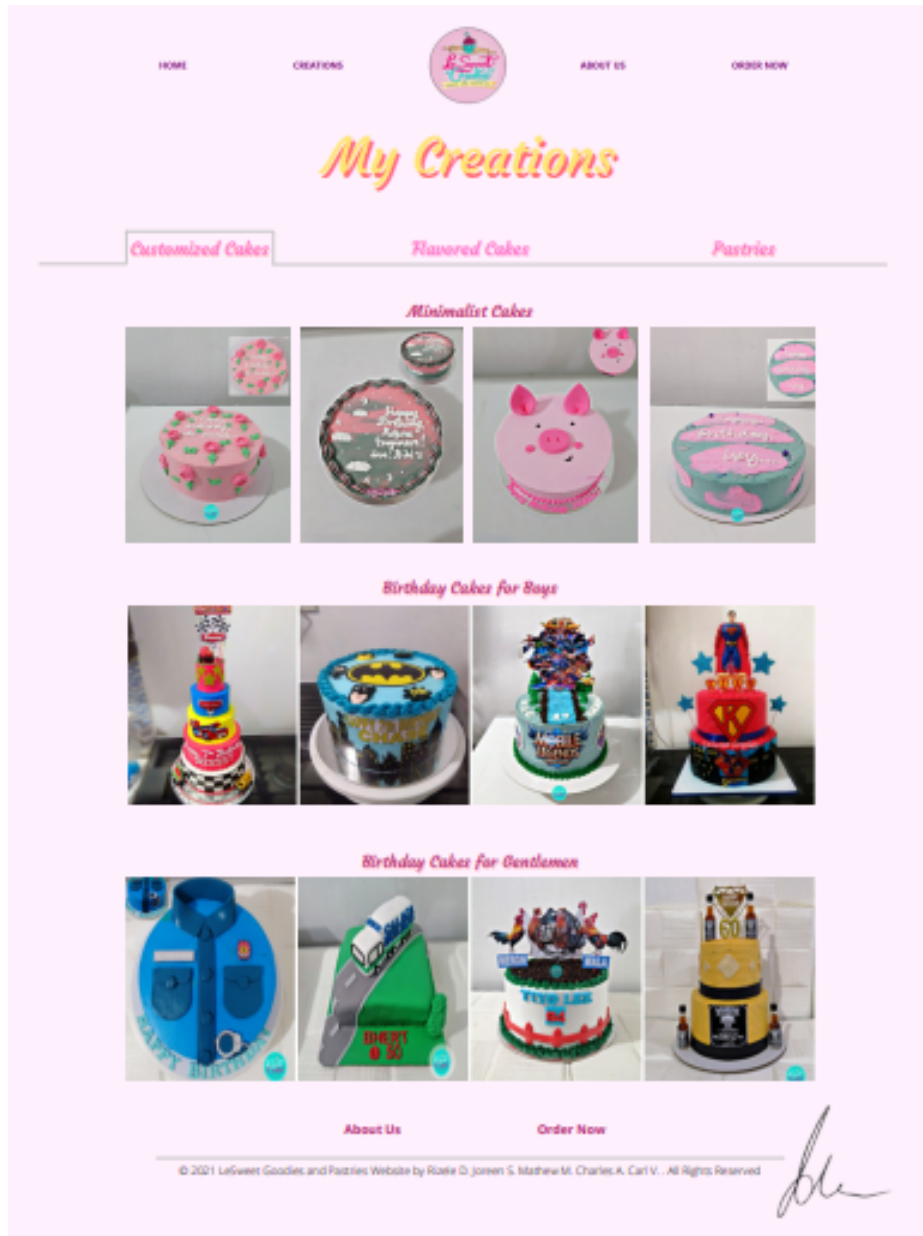


Figure 3.2.2 Creations Page for Customized Cakes

Figure 3.2.2 shows the Creations Page for Customized Cakes that LeSweet Goodies & Pastries offers to their customers. This page shows different types of cakes, such as minimalist cakes and cakes for different kinds of occasions and people.

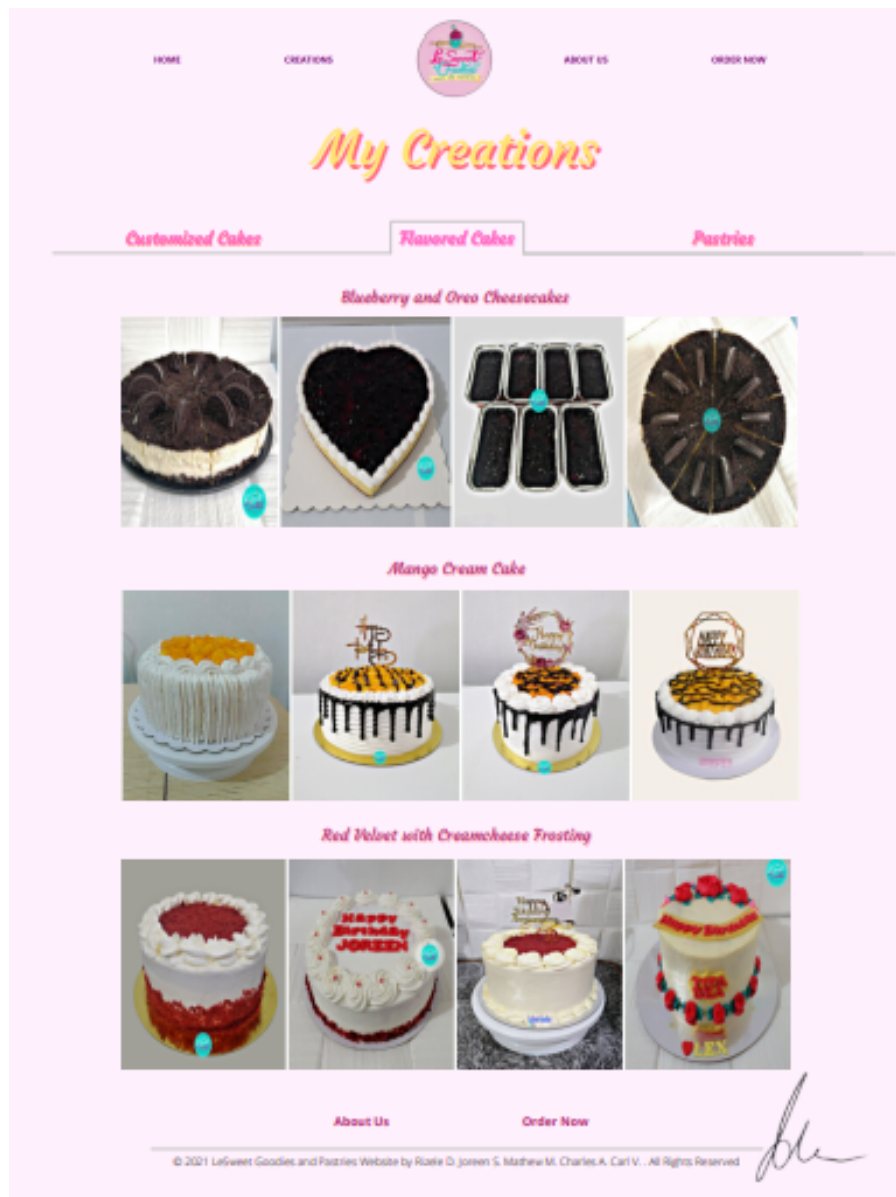


Figure 3.2.3 Creations Page for Flavored Cakes

Figure 3.2.3 depicts the Creations Page for Flavored Cakes that LeSweet Goodies & Pastries offers to their customers. This page showcases flavors like Red Velvet, Mango Cream, Blueberry, and Oreo.

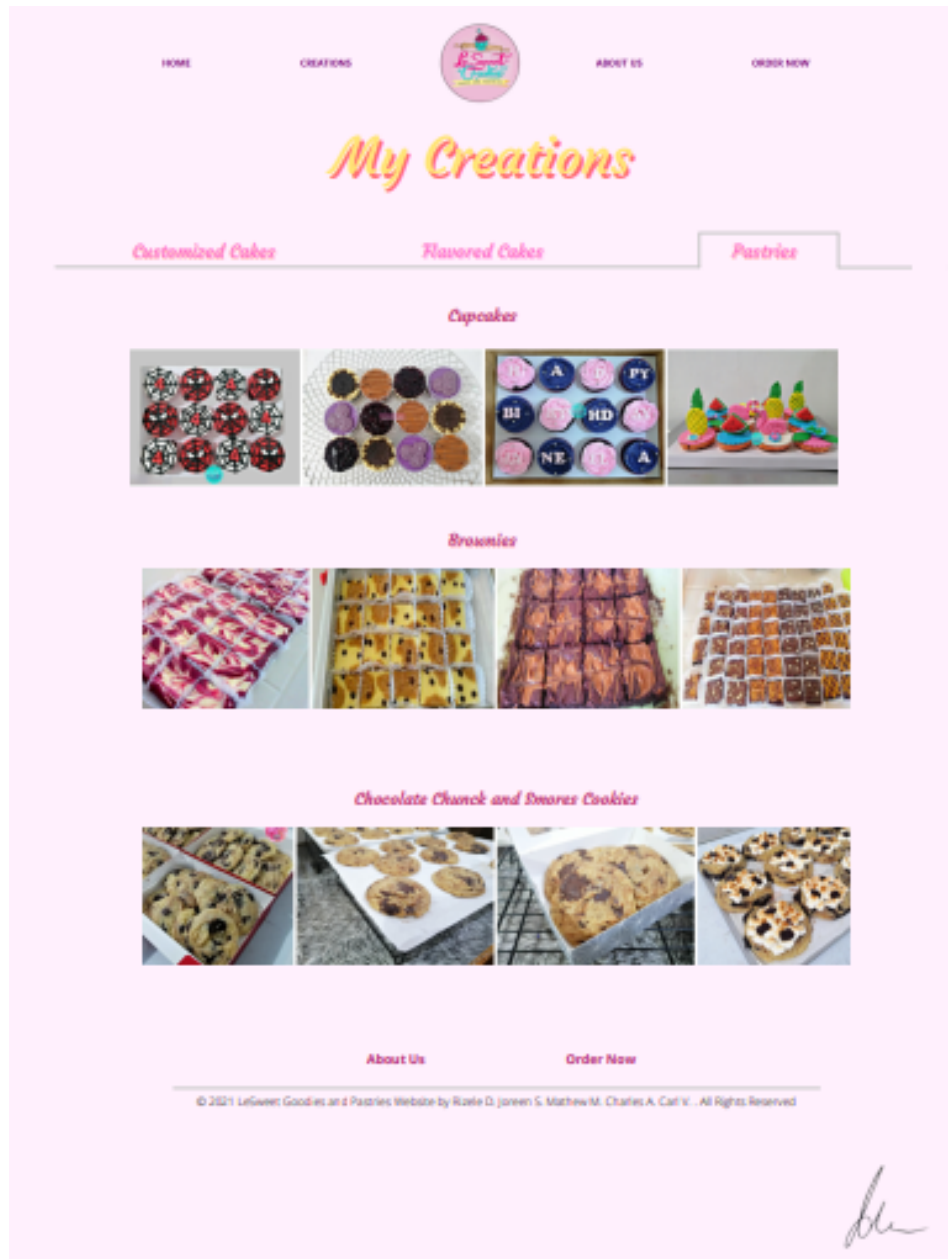


Figure 3.2.4 Creations Page for Pastries

Figure 3.2.4 shows the Creations Page for Pastries that LeSweet Goodies & Pastries offers to their customers. This page shows that the business also sells pastries like brownies, cookies, s'more cookies, chocolate chunks, and many more.

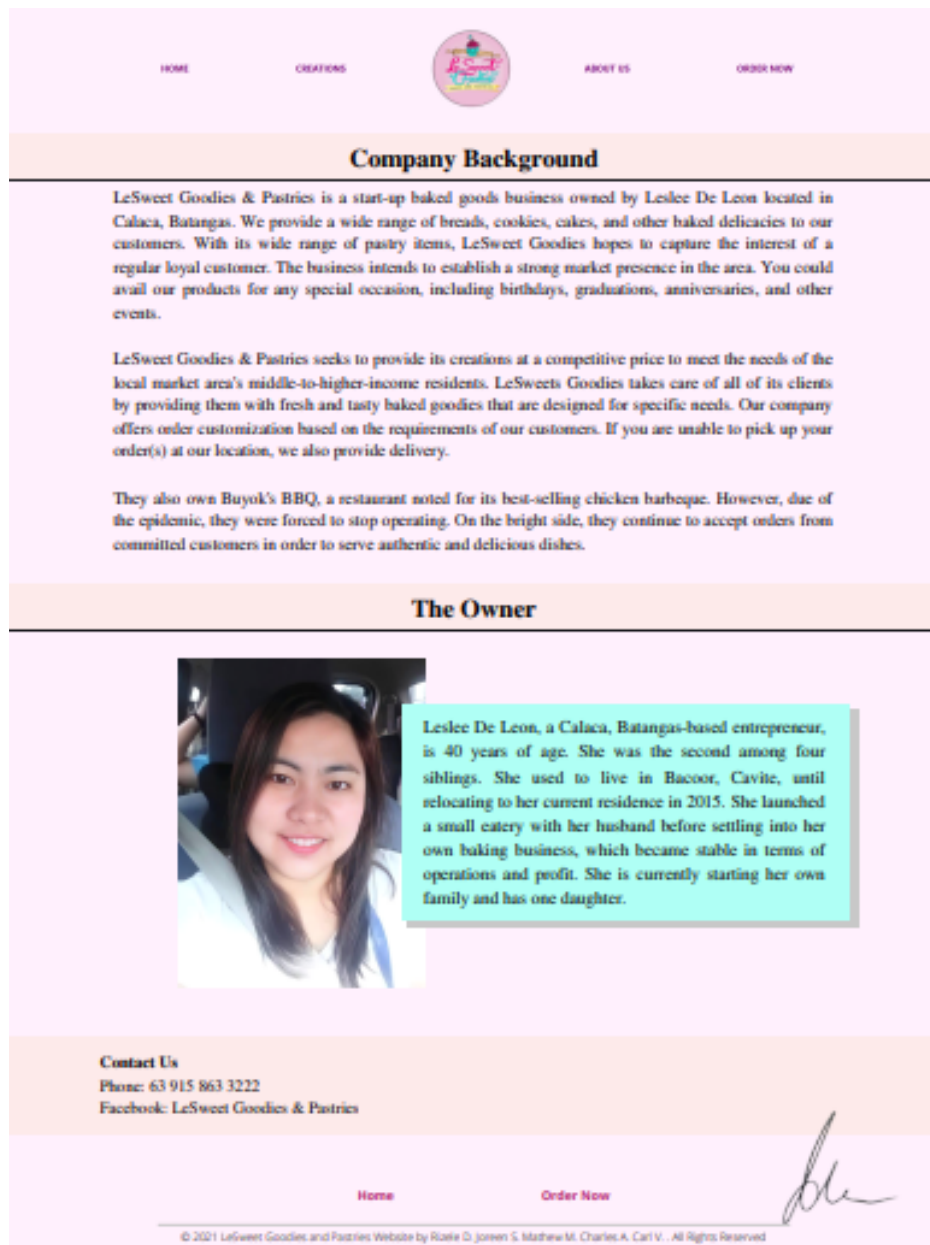


Figure 3.2.5 About Us Page

Figure 3.2.5 depicts the part of the system where LeSweet Goodies & Pastries' background is stated as well as the basic information about the owner, together with the contact information that their customers might need for further inquiries.

HOME

CREATIONS

ABOUT US

ORDER NOW

Order Details

Best Sellers

Recommended by the baker

PASTRIES

Cookies

☐ Palm Size Smores Cookies
☐ Chewy Chocolate Chunk Cookies (8pcs)

Brownies

☐ Red Velvet with Creamcheese Brownies
☐ Chocolate Brownies
☐ Caramel Brownies

Cupcakes (6 pcs per order)

☐ Red Velvet with Creamcheese Cupcake
☐ Chocolate Cupcake

Price

65.00
285.00
160.00
150.00
150.00
360.00
320.00

Quantity

0
0
0
0
0
0
0

CAKES

☐ Red Velvet with Creamcheese Frosting
☐ Choco moist Cake
☐ Ube Moist Cake with Homemade Ube Jam
☐ Mango Cream Cake

Select Size

Select Size

Select Size

Select Size

0
0
0
0

CHEESE CAKES

☐ Blueberry Cheesecake
☐ Oreo Cheesecake

Select Size

Select Size

0
0

Customer Details

Name:

First Name

Last Name

Contact Number:

0911506678

Email Address:

customer@gmail.com

Figure 3.2.6 Order Now Page

Figure 3.2.7 shows the Order Now tab of the system where customers can place their order. The order form has a list of their products containing its prices and the user may decide the quantity of their orders by filling up the quantity textbox. They may also select the size of cakes and cheesecakes by clicking the dropdown option in the form. This also shows the customer details section, where the customers will be asked for their delivery details in order to make the transaction successful.

4. Glossary

World Wide Web - is a collection of webpages found on this network of computers. Your web browser uses the internet to access the web.

Online Shopping - the term is conceptually used in this work to refer to the action or activity of buying goods or services via the Internet. Operationally, it refers to making shopping easier by using internet access anytime, anywhere without any hassle.

Website - it is a collection of web pages and related content that is identified by a common domain name and published on at least one web server.

E-commerce - it is a transaction of buying or selling online. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection. Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle although it may also use other technologies such as e-mail.

Pastry - it is a type of dough made with flour, water and shortening. Baked pastry dough can be sweet or savory, and consumed alone or with fillings.

Business - it is defined as an organization or enterprising entity engaged in commercial, industrial, or professional activities. Businesses can be for-profit entities or non-profit organizations.

Interface - is a device or a system that unrelated entities use to interact.

Browser - is an application program that provides a way to look at and interact with all the information on the World Wide Web.

Web application - is a computer program that utilizes web browsers and web technology to perform tasks over the Internet.

Code - refers to the set of instructions, or a system of rules, written in a particular programming language.

Hosting environments - is a stand alone hosting cluster of servers which are able to handle multiple websites for Web Hosting.

Web hosting - is a service that allows organizations and individuals to post a website or web page onto the Internet.

QA testing - is the process of ensuring that your product is of the highest possible quality for your customers.

Troubleshooting - is a systematic approach to problem-solving, specifically for issues concerned with sudden equipment breakdown and system or software bugs.

Software Bugs - is an error, flaw, or fault in an application.

Debugging - is the routine process of locating and removing computer program bugs, errors or abnormalities, which is methodically handled by software programmers via debugging tools.

SQL query tuning - encompasses a set of processes and procedures designed to optimize relational database queries, so they can run as efficiently as possible.

Schema design

Liaison - is a person who acts to arrange and assist interaction between parties.