SOFTWARE DESIGN

Contents

INTRODUCTION
PURPOSE OF DOCUMENT

The software design system document is intended to determine, conceptualize, and create a model of the UB pizzeria system. This system is to be implemented later and in stages. The system will be based on the following:

- How will users perform functions?
- How will the system be deployed?
- How can the system be of convenience to users?
- What are the qualities required for the system?

SCOPE
This section describes the project content.

The following are the **features** of the project:
- Permits registration of new customers.
- Includes a webpage that customers can give feedback and get help from.
- Allows the users (customers) to make pizza orders.
- Allows the administrator to manage the website and generally keep track of the customers and system.
- System can maintain /update itself.

BENEFITS

- Customers can order pizza from anywhere for anyone, the system provides total convenience.
- The ordering process is quick.
- The system is responsive on any device.

LIMITATIONS

- The system cannot operate offline.
- The system does not completely erase the pizza systems available.
- The system

SYSTEM OVERVIEW

CLIENT-ORIENTED VIEW OF THE SYSTEM

This section is intended to depict the characteristics of the system in a high-level manner. This is to basically show the interaction of users and the system. The users of this system are customers, administrators, and pizzeria staff members.

USE CASE SCENARIOS

Customer: A customer could be a guest, returning or new to the pizzeria platform. The intent of the customer is order pizza however they must have an account to order the pizza. It could be a guest account or a normal one. The customer fills out the information and the order form, when all this is submitted, they can await their pizza.
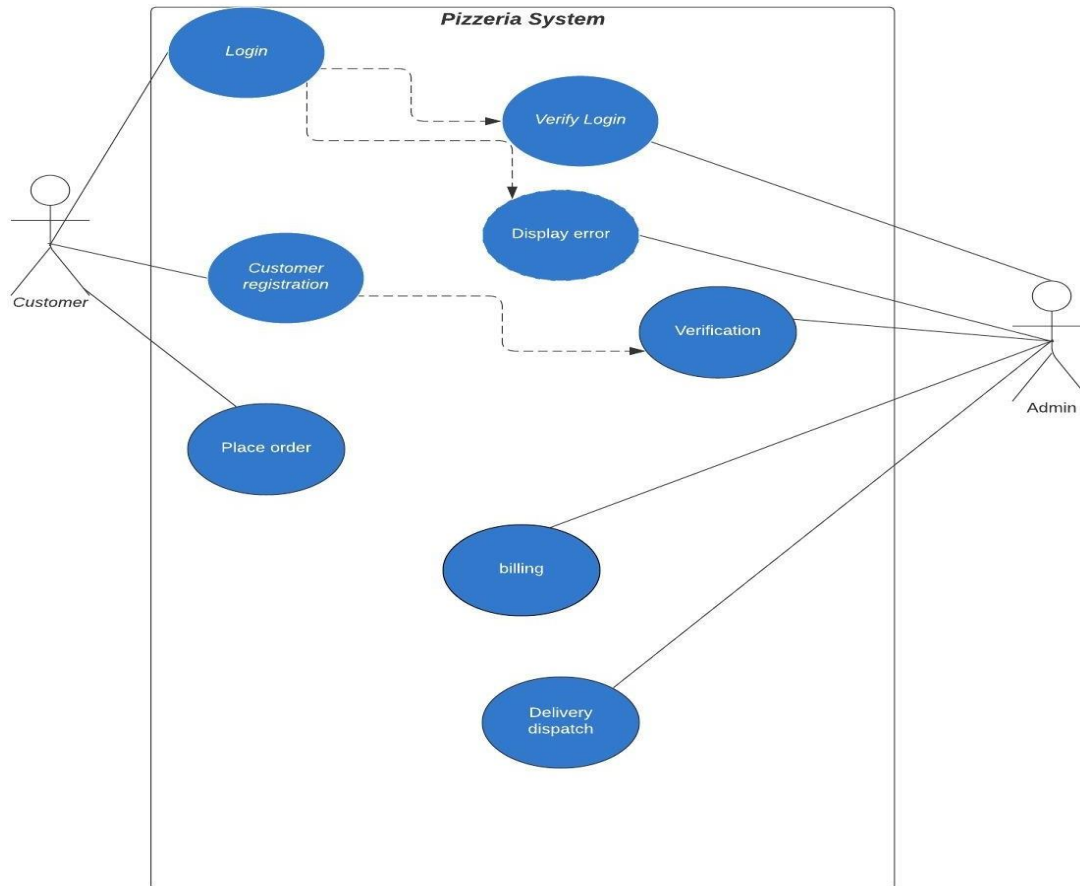
Administrator: An admin verifies the account creation, login and stores the information about the customer. The admin keeps track of the orders and the stock available.

USE CASES

- Login if returning customer.
- Register account if new customer.
- Continue with a guest account if temporary customer.
- Customer fills in personal information.
- Customer fills in order form.
- Customer submits the order form.
- Submit the order form.
- Admin bills the customer's order.
- Customer approves the billing.
- Customer enters payment.
- Admin sends a receipt to customer's email.
- Admin places order in a preparation queue.
- Admin dispatches delivery of the pizza.
- Customer receives pizza.

Use case diagram.plzzeria

Lesego | April 9, 2021

Pizzeria System

- Login
- Verify Login
- Display error
- Customer registration
- Verification
- Place order
- billing
- Delivery dispatch

Customer

Admin

SOFTWARE ARCHITECTURE

This aims to describe the structure and organization of the UB pizzeria based on subsystems, interfaces, and relationships.

SUBSYSTEMS OF UB PIZZERIA

Database subsystem: this subsystem will store the details of the customers / admin / salesperson /orders, such as order no and payments details.

Authentication subsystem: this subsystem will check to see if the user who is logging into the system can access the system and will check whether that user is an administrator or customer.

Ordering subsystem: this subsystem will allow the user of the system to place an order and customize their orders.

Tracking subsystem: this subsystem will allow the user of the system to check if their order has been processed yet or not.

Cart Subsystem: this subsystem allows the user to view all the items in case he or she would want to buy many items at a go.

Administrator subsystem: this subsystem allows for the admin managing the accounts of the regular users of the system that is, adding a user, remover a user, editing a user's account and changing a user's password and updating order status adding products to the system and the stock.

Google Maps subsystem: this subsystem allows the user to view all he or she is to the UB Pizzeria and get his location with relation to UB Pizzeria.

Payment Subsystem: this subsystem allows the user to pay online if he or she does not want cash on delivery (COD).

Chabot subsystem: this subsystem allows the user to ask questions and get feedback instantly if all the salespersons are occupied.

Registration subsystem: this subsystem allows the users to create their accounts and register unto the system to use it.
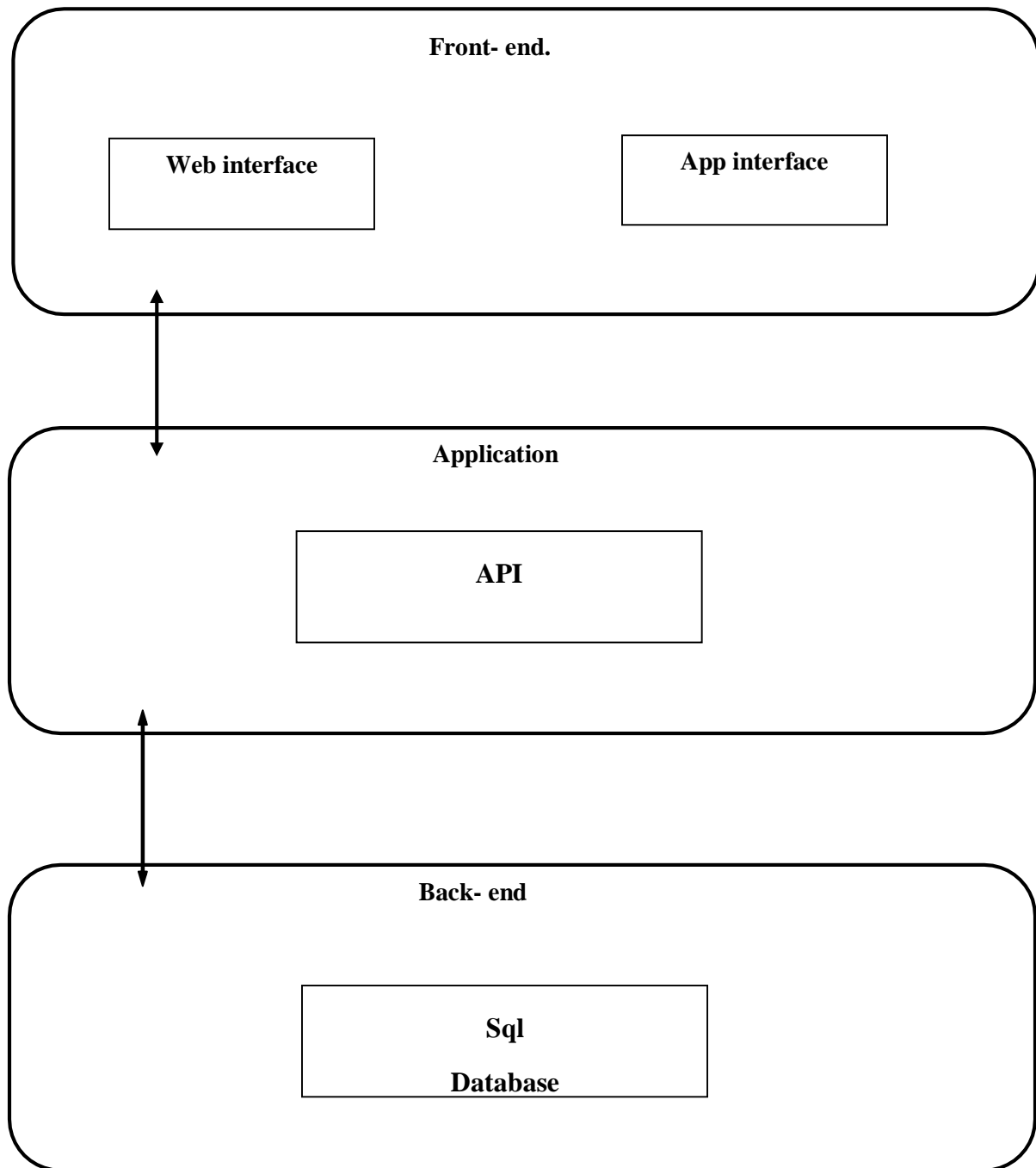
BASIC ELEMENTS OF THE SYSTEM

Processing elements – Transforms inputs to outputs.

Data elements -Structures consisting of information to and from processing elements.

Connecting elements – Subsystems holding the whole system together.

ARCHITECTURAL DESCRIPTION

Front- end.

Web interface

App interface

Application

API

Back- end

Sql

Database

1. Front-end- This layer is responsible for interaction of the system with the user. The webpages of UB pizzeria are displayed This layer is also used process user input and output through the graphical user interface.
2. Application -This is the link between front-end and back-end. This layer is responsible for receiving information from the front-end, transforming the information and sending it to the back end for an output.
3. Back end – this layer receive data from the application layer and to give the required response.

FAMILY ARCHITECTURE OF UB PIZZERIA

Looking at the above defined system structure, an appropriate system is to be established to achieve the goals and as such the system falls under the **client-server architecture.**

 The client-server architecture is the operates on the fact that clients request and receive service from a centralized server or database. This architecture is suitable for the pizzeria system because there is interdependency between the two counterparts for functionality to occur. The system has services offered by the database to the client.

The main benefits of client-server architecture:

- Centralized system with all data in a single place.
- Cost efficient requires less maintenance cost and data recovery is possible.
- The capacity of the Client and Servers can be changed separately.

Although this system is mainly client-server it has components and aspects of our architectures like the object-oriented architecture.

DATA DESIGN
DATA DICTIONARY

MySQL is the data dictionary that will be used to hold the database information in the UB pizzeria system. This system will use and manipulate information about users, admin, categories offered. A depiction to the relational tables that are in the database for example, sign in table.

1. SIGN UP DETAILS TABLE

    - User ID: a user's id no.
    -Username: user's account name.
    -Email: user's email.
    -Password: the user's account password.

Field	Type	Length/ Value
User_ID	VARCHAR	100
Username	VARCHAR	100
Email	VARCHAR	100
Password	VARCHAR	100

ADMIN DETAILS TABLE

User ID: the admin's id.

Username: admin's account name.

FullName: admin's name and surname.

Password: admin's account password.

Field	Type	Length/ Value
User_ID	VARCHAR	100
Username	VARCHAR	100
FullName	TEXT	100
Password	VARCHAR	100

ITEM DETAILS TABLE

- Id: number used to identify the item.
- Title: the category the item falls under.
- Description: what the item id about.
- ImageName: the name of the presented picture.
- Featured: Shows what else is available with a specific item.
- Active: shows user activity.
- Price: the amount the item costs.
- Category: the section the item falls under.
- Quantity: the number of items to be ordered.

- Pcode: item barcode.

Field	Type	Length/ Value
ID	INT	10
Title	VARCHAR	
Description	TEXT	100
ImageName	VARCHAR	255
Featured	VARCHAR	10
Active	VARCHAR	10
Price	DECIMAL	10,2
Category	INT	10
Quantity	INT	1
Pcode	INT	11

CATEGORY

-Id: identifies the category.

-Title: the name of a specific category.

-ImageName: the name of the category picture.

Field	Type	Length/ Value
ID	INT	10
Title	VARCHAR	100
ImageName	VARCHAR	255
Featured	VARCHAR	10
Active	VARCHAR	10

ORDER

-Id: identifies the feedback form sent.

-Food: Type of food ordered.

-Price: The total order amount.

-Quantity: the amount of food ordered.

-Total – the total amount of food and total amount.

-Date: the date the food was ordered.

-Status: the order `status (Is it delivered, in progress or cancelled).

-DeliveryType: pick up or delivery.

-CustomerName: the name of the person who ordered.

-CustomerContact: contact details.

-CustomerAddress: specifies of where the customer lives.

-AmountPaid: the amount paid by the customer.

-Item: The item written.

-Topping: the name of topping.

-Herb: the names of the herbs used.

-Shape: The shape of the pizza.

-Crest: the crest of the pizza.

-Size: the size of the pizza ordered (small, medium, large).

Field	Type	Length/ Value
ID	INT	10
Food	VARCHAR	150
Price	DECIMAL	10,2
QTY	INT	11
Total	INT	11
Date	DATETIME	
Status	VARCHAR	50
DeliveryType	VARCHAR	50
CustomerName	VARCHAR	150
CustomerContact	VARCHAR	150
CustomerAddress	VARCHAR	150
Pmode	VARCHAR	50
AmountPaid	VARCHAR	100
Username	VARCHAR	10
Item	VARCHAR	255
Topping	VARCHAR	255
Herb	VARCHAR	255

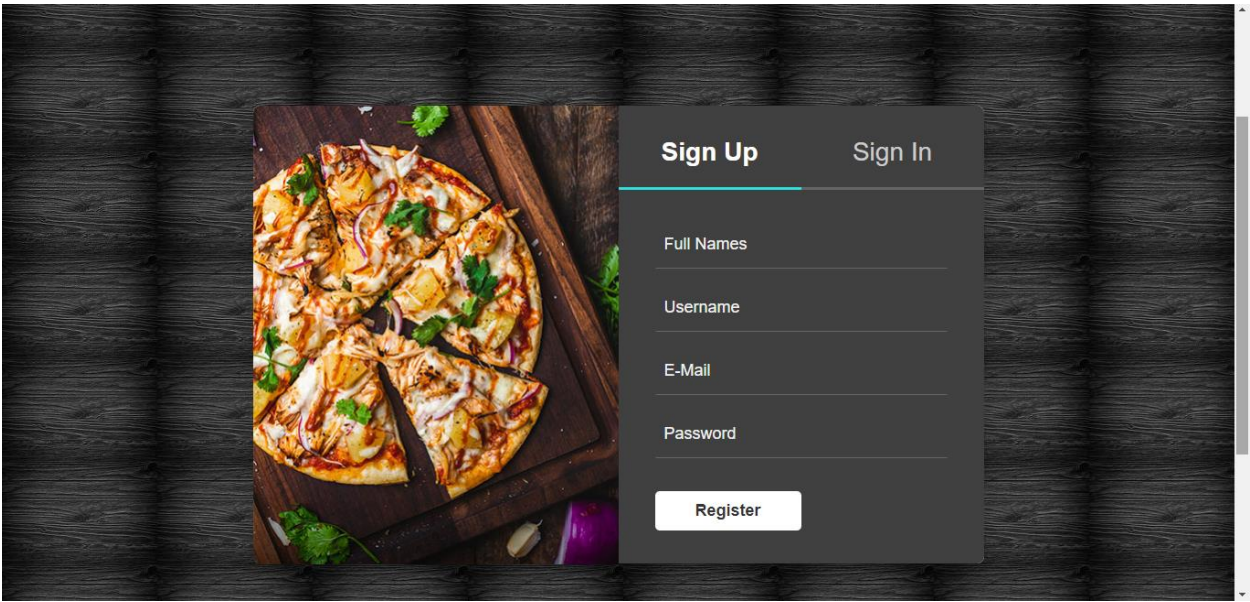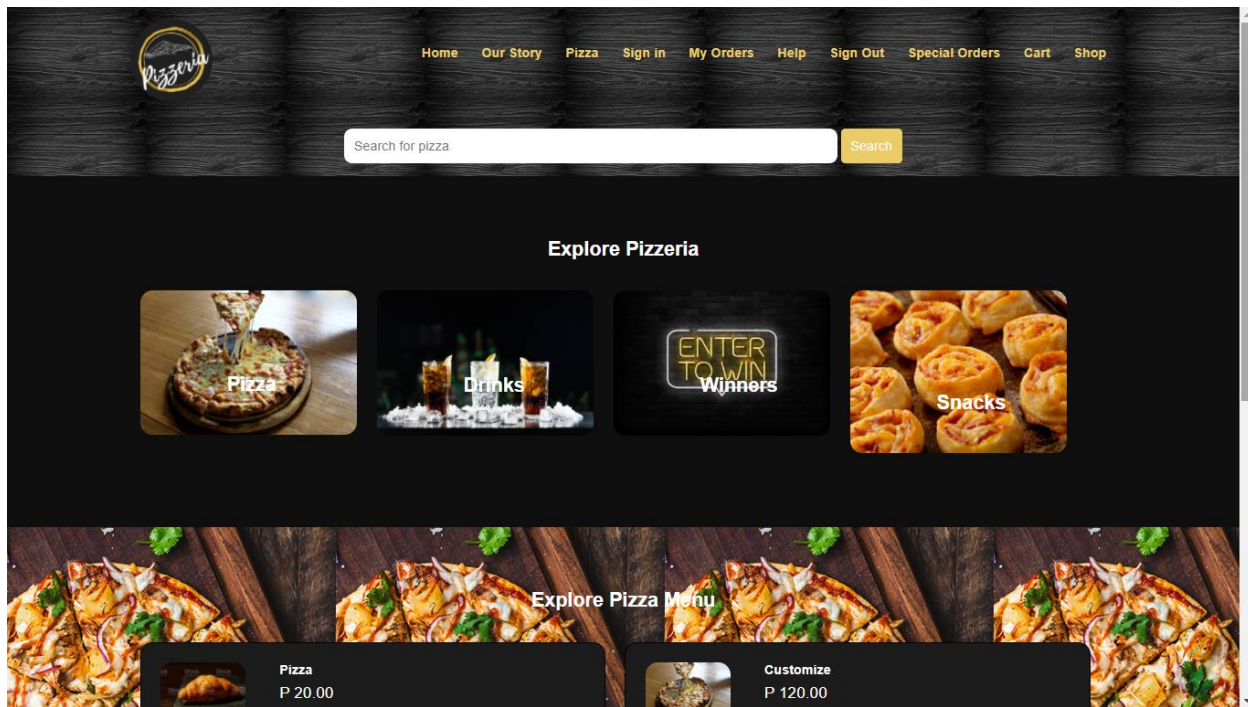| Shape	VARCHAR	255
Crest	VARCHAR	255
Size	VARCHAR	255

INTERFACE DESIGN

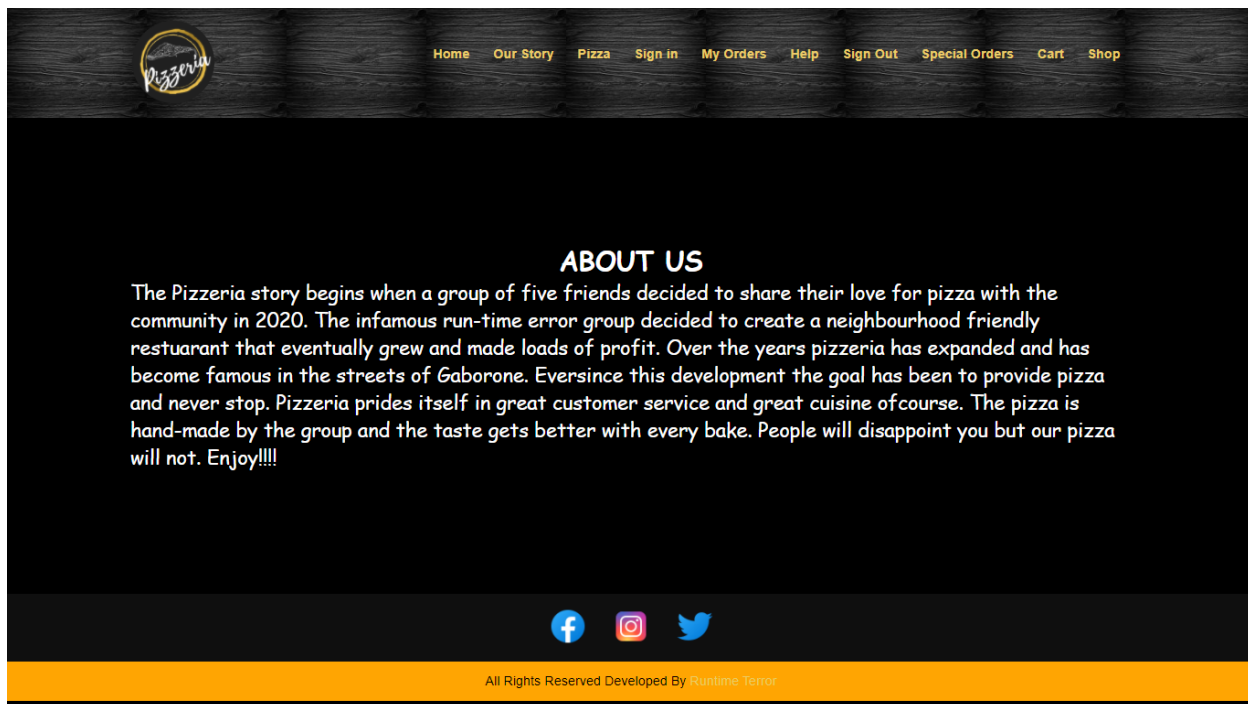Figure 1: Sign-up page for customers

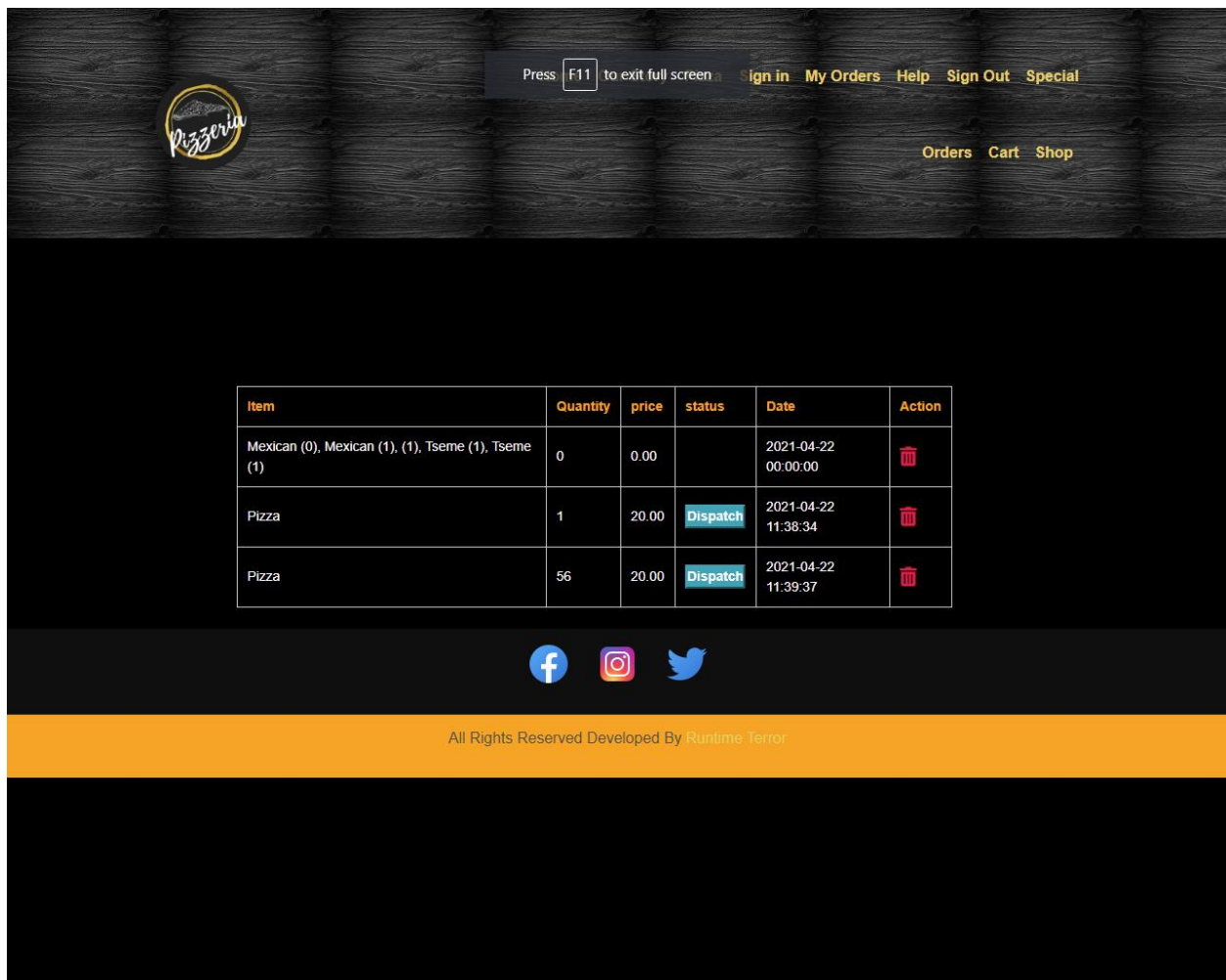Figure 2: UB Pizzeria homepage

Figure 3: About us page

Figure 4: Pizza page

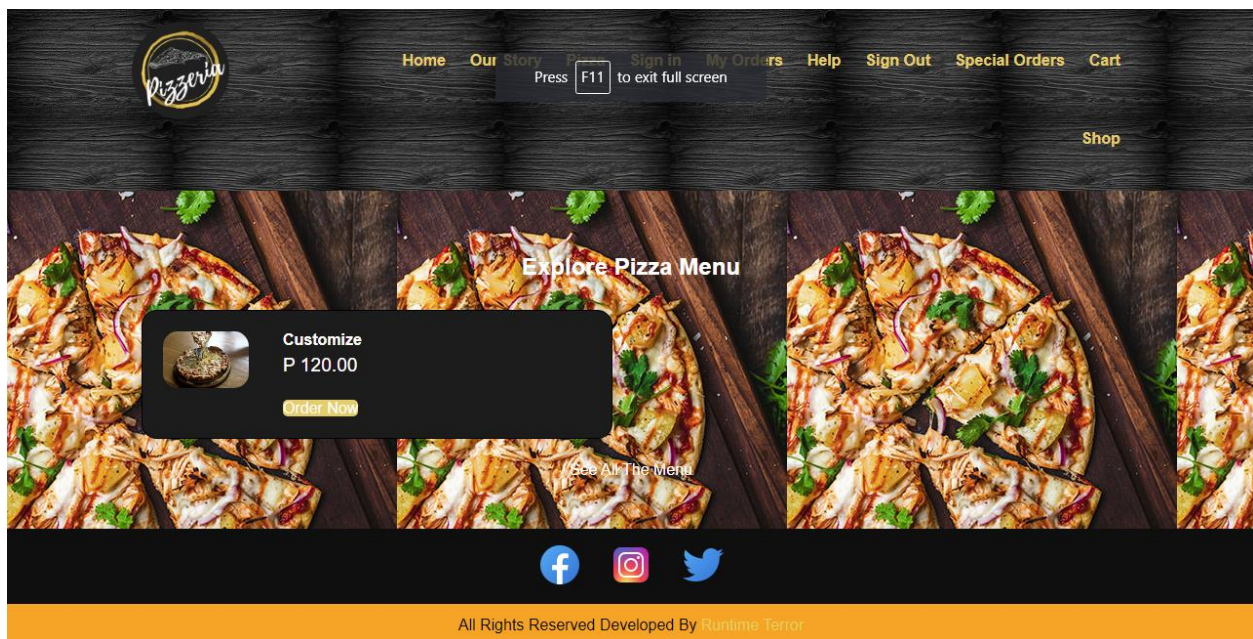| Item	Quantity	price	status	Date	Action
Mexican (0), Mexican (1), (1), Tseme (1), Tseme (1)	0	0.00		2021-04-22 00:00:00	🗑
Pizza	1	20.00	Dispatch	2021-04-22 11:38:34	🗑
Pizza	56	20.00	Dispatch	2021-04-22 11:39:37	🗑
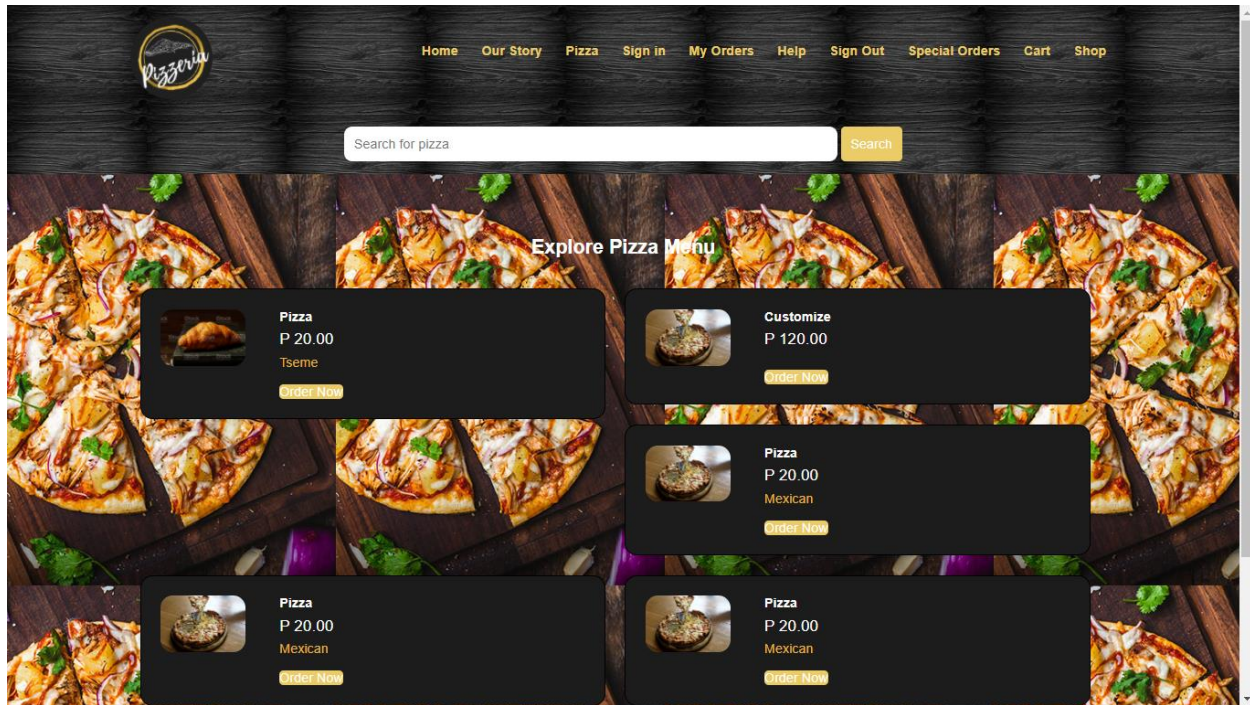
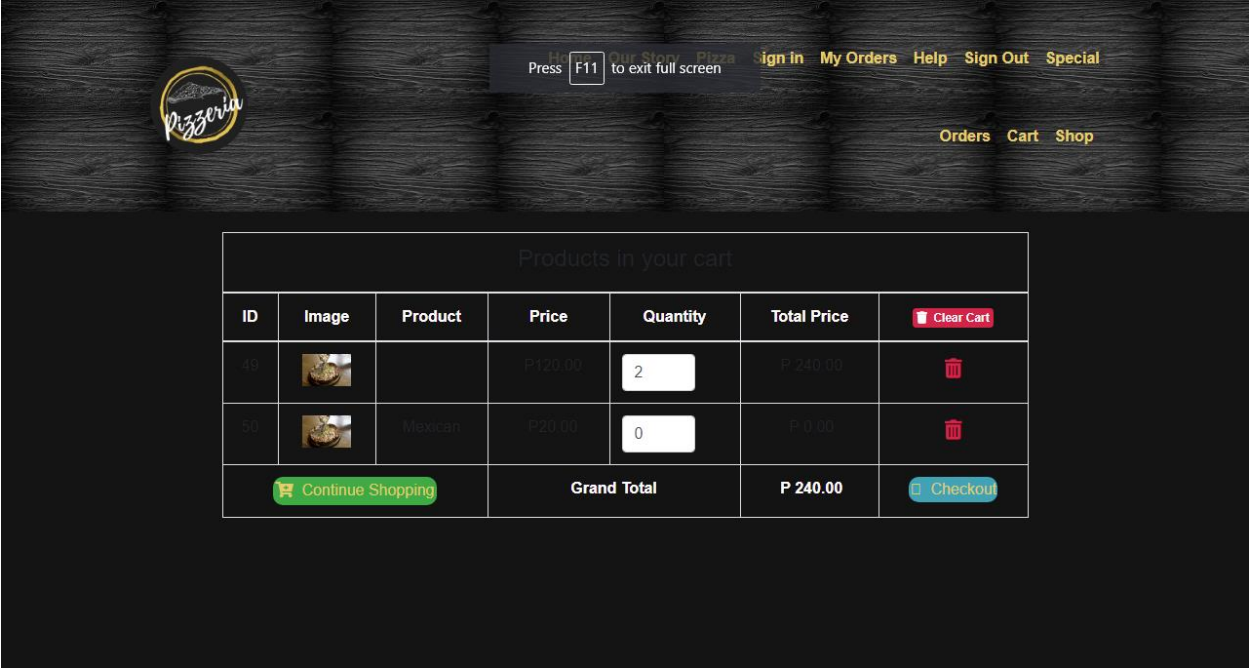Figure 5: My Orders page
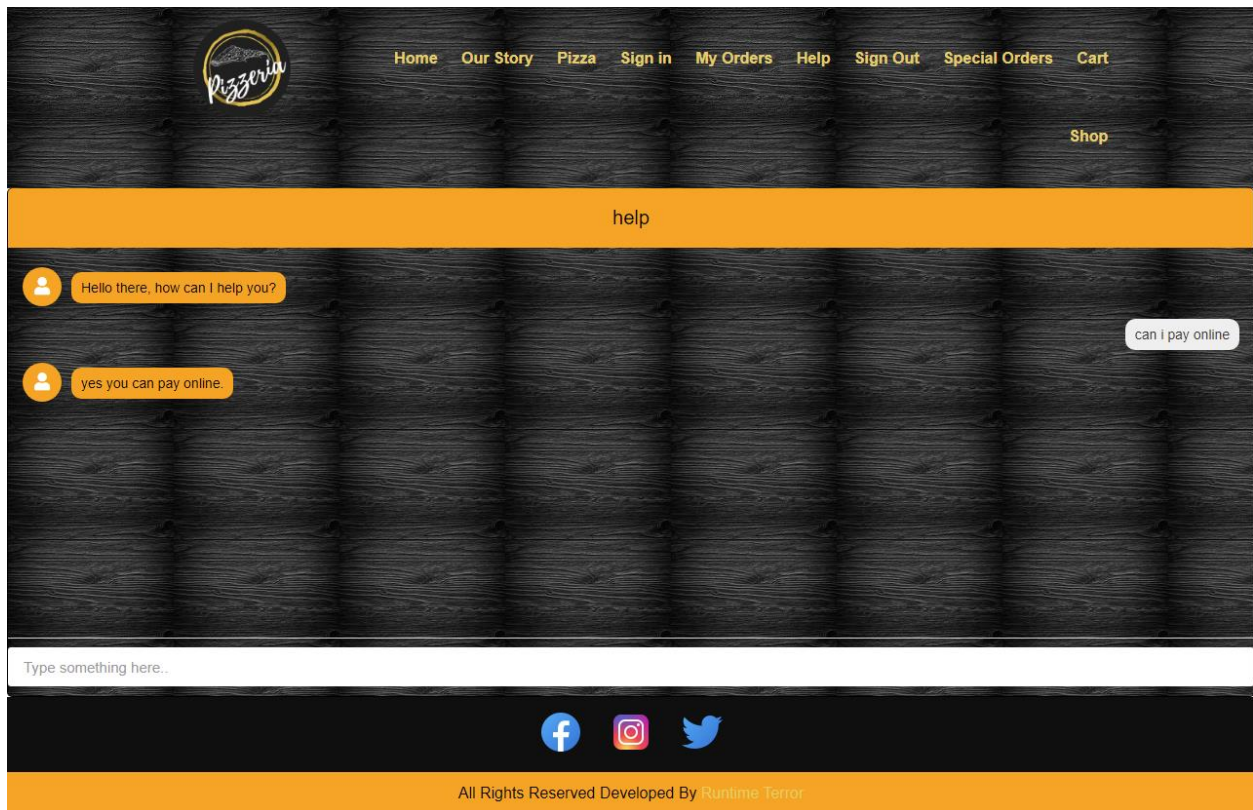
Figure 6: help page
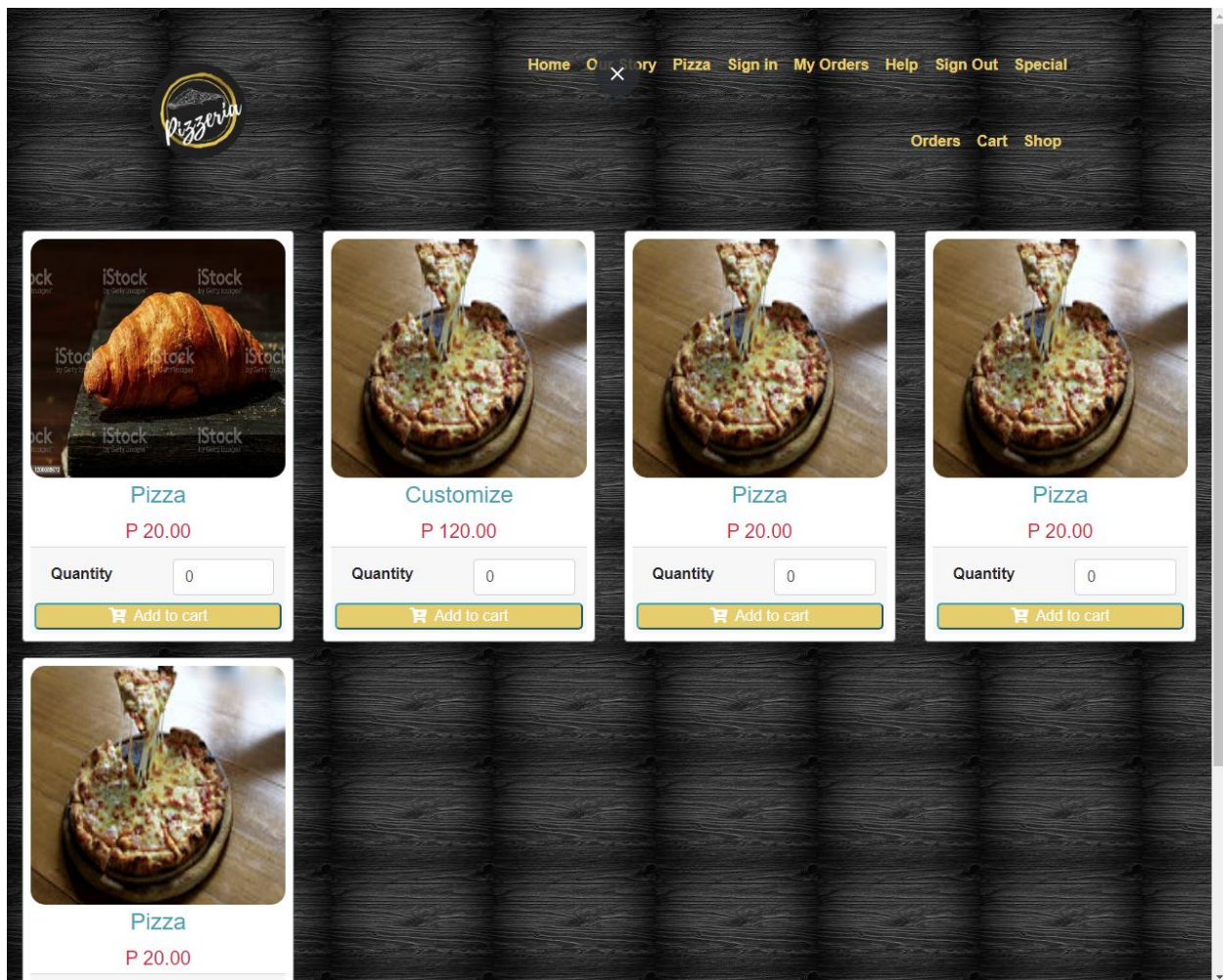

Figure 7: Special Orders page

Figure 8: Shopping cart

Figure 9: shop page