**1. INTRODUCTION**

**1.1 Purpose**

The purpose of this project is to develop a website for a pizza restaurant that provides customers with information about the restaurant, its menu, and allows them to order pizza online easily.

**1.2 Scope**

* Display menu items and ingredients.
* Allow customers to create personal accounts.
* Enable online ordering and payment.
* Offer features such as order tracking and customer reviews.

**1.3 Definitions, Acronyms, and Abbreviations**

* **UI**: User Interface
* **API**: Application Programming Interface
* **DB**: Database

**1.4 References**

* Similar restaurant websites such as Domino's Pizza and Pizza Hut.
* Best practices for designing restaurant user interfaces.

**1.5 Overview**

This document outlines all the requirements necessary to develop a pizza restaurant website, including functional and non-functional features.

**2. GENERAL DESCRIPTION**

**2.1 Product Perspective**

The website will be a modern, user-friendly platform designed to enhance customer experience and connect them to the restaurant's services.

**2.2 Product Functions**

* Browse the menu.
* Select pizza by size and toppings.
* Place orders online.
* Make online payments.
* Track order status.

**2.3 User Characteristics**

* **Customers**: Use the website to browse the menu and place orders.
* **Restaurant staff**: Use the admin panel to manage orders.

**2.4 General Constraints**

* The website must be compatible with smartphones and computers.
* It should support both Arabic and English languages.

**2.5 Assumptions and Dependencies**

* Reliable internet connectivity is available.
* Integration with trusted payment systems such as PayPal or Stripe.

**3. SPECIFIC REQUIREMENTS**

**3.1 External Interface Requirements**

**3.1.1 User Interfaces**

* A simple and attractive design.
* Login and signup pages.
* Pages for browsing the menu and placing orders.

**3.1.2 Hardware Interfaces**

* Scalable servers to support increased user demand.

**3.1.3 Software Interfaces**

* Integration with online payment gateways.

**3.1.4 Communications Interfaces**

* Support for email and SMS notifications to update users on order status.

**3.2 Functional Requirements**

**3.2.1 Menu**

* Display categorized menu items (Pizza, Drinks, Desserts).

**3.2.2 Online Ordering**

* Enable users to customize their pizza and add special instructions.

**3.3 Use Cases**

**3.3.1 Use Case #1: Ordering Pizza**

**Actor**: Customer  
**Steps**:

1. Log in to the website.
2. Select a pizza from the menu.
3. Customize toppings.
4. Complete payment.
5. Receive order confirmation.

**3.3.2 Use Case #2: Managing Orders**

**Actor**: Restaurant Staff  
**Steps**:

1. Log in to the admin panel.
2. View new orders.
3. Update order status (e.g., Preparing/Ready for Delivery).

**3.4 Classes / Objects**

**3.4.1 User**

* Attributes: Username, Email, Address.

**3.4.2 Order**

* Attributes: Order ID, Items Ordered, Status.

**3.5 Non-Functional Requirements**

**3.5.1 Performance**

* Page load time should be less than 2 seconds.

**3.5.2 Reliability**

* Ensure 99.9% system uptime.

**3.5.3 Availability**

* The website should operate 24/7.

**3.5.4 Security**

* Encrypt all personal and payment data using HTTPS.

**3.5.5 Maintainability**

* The system should allow for easy updates to add new features.

**3.5.6 Portability**

* Compatible with all major browsers.

**3.6 Inverse Requirements**

* Login must not be allowed without a valid email address.

**3.7 Design Constraints**

* The website design must adhere to user experience (UX) standards.

**3.8 Logical Database Requirements**

* Tables for users, orders, and menu items.

**3.9 Other Requirements**

* Support real-time notifications for new orders.

**Use Case: Ordering Pizza**

**Actor**: Customer

**Steps**:

1. Log in or sign up on the website.
2. Browse the menu and select a pizza.
3. Customize the pizza (choose size, toppings, and special instructions).
4. Add items to the cart.
5. Proceed to checkout and complete payment online.
6. Receive order confirmation via email or SMS.

**Functional Requirements**:

1. Allow users to register, log in, and log out.
2. Provide a categorized menu with options for customization.
3. Enable adding items to a shopping cart.
4. Support secure online payment processing.
5. Send automated notifications (email/SMS) for order confirmation and updates.

**Non-Functional Requirements**:

1. Ensure payment data encryption using HTTPS.
2. Maintain 99.9% uptime to ensure uninterrupted ordering.
3. Page load time for menu browsing and checkout must be less than 2 seconds.

**Use Case: Managing Orders**

**Actor**: Restaurant Staff

**Steps**:

1. Log in to the admin panel using secure credentials.
2. View new and active orders.
3. Update order status (e.g., Preparing, Ready for Delivery, Delivered).
4. Review order history for analytics and reporting.

**Functional Requirements**:

1. Provide an admin panel accessible to authorized staff.
2. Display a dashboard with a list of new and active orders.
3. Allow staff to update the status of each order in real time.
4. Enable exporting order history for reporting purposes.

**Non-Functional Requirements**:

1. The admin panel should be responsive and work on tablets and desktops.
2. System logs must track all actions taken by staff for security purposes.
3. Notifications of status updates should be sent to customers within 5 seconds.

**User Interface Requirements**

**For Customers**

**Functional Requirements**:

1. Design intuitive login and registration forms.
2. Provide a visually appealing homepage showcasing the menu and deals.
3. Create a detailed pizza customization interface (size, crust, toppings).
4. Display a shopping cart summary with the total price before checkout.
5. Show a real-time order tracking page post-purchase.

**Non-Functional Requirements**:

1. Ensure a responsive design that works seamlessly on mobile and desktop.
2. Maintain consistency in fonts, colors, and button placements for ease of navigation.
3. Validate input fields (e.g., no empty fields, valid email formats).

**For Admin Panel**

**Functional Requirements**:

1. Develop a login page with two-factor authentication for enhanced security.
2. Display orders in a tabular format with filters for status (e.g., New, Preparing).
3. Include buttons to update order statuses quickly.

**Non-Functional Requirements**:

1. The interface should load new orders within 1 second after submission by customers.
2. Provide a dark mode option for staff working during late hours.