BỘ GIÁO DỤC VÀ ĐÀO TẠO

TRƯỜNG ĐẠI HỌC SƯ PHẠM KỸ THUẬT TP.HCM

KHOA ĐÀO TẠO QUỐC TẾ

----------



PROJECT REPORT

SUBJECT: OBJECT-ORIENTED SOFTWARE ENGINEERING

***TOPIC: BUILDING A FOOD SERVICE WEBSITE***

*Lecturer:* Nguyễn Trần Thi Văn

|  |  |  |  |
| --- | --- | --- | --- |
| No | *Members:* | ID | *Participation* |
| 1 | Nguyễn Thanh Tịnh (leader) | 21110804 | 100% |
| 2 | Nguyễn Ngọc Mạnh | 21110781 | 100% |
| 3 | Đỗ Huỳnh Bảo Đăng | 21110764 | 100% |
| 4 | Nguyễn Duy Mạnh | 21110780 | 100% |

HCM, 2024

**INSTRUCTOR'S COMMENTS**

Mark………………………

# **PROLOGUE**

Firstly, we would like to express our gratitude to PhD. Nguyễn Trần Thi Văn for his whole-hearted instructions that helped us finish our final project for the Object-Oriented Software Engineering course. Thanks to the knowledge the professor has provided us, we were able to firmly grasp the basic knowledge and foundation for building project using Nodejs and ReactJs. And through this project, our group would like to present the topic: Building a food service website. During the process of executing this project, it will be hard to avoid mistakes. Because of that, we would love to get the professor’s suggestion on improving our work so it would be more functional and complete. We wish you good health and the best of luck pursuing the path of teaching.

Finally, we would like to thank all the teachers and classmates who studied with us on this course and offered us support while we carried out our final project.

# **CHAPTER 1. INVESTIGATE THE CURRENT BUSINESS STATUS**

## **Current status:**

In the current era, food is becoming an important part of urban life, and finding good places to eat is becoming increasingly difficult in the city because there are so many choices. We were aware of this need, so we had the idea of a special service website that offers online food shopping.

Our service not only saves consumers time and effort when they do not need to travel long distances despite the weather (sunshine, rain, ...) to find restaurants, but also benefits those who do business in the culinary industry. For users, the experience of ordering food through our website is convenient and fast, making it easy for them to discover and choose their favorite dishes from a variety of restaurants.

At the same time, for restaurants and stores that join our network, they not only expand their reach to a larger customer base, but also have the opportunity to increase sales. This not only increases their income but also creates an opportunity for them to promote their brand and attract new customers.

Describe:

The web includes:

- Order, buy and sell food from registered shops

- Offer cafeteria locations

- Recomment trending food

## **1.2 Request:**

-      Archive

* User information (customers, restaurants)
* Information about the eatery (address, name, food, price, reviews)
* Order information (buying and selling orders)

-      Lookup:

* Cafeteria: (name of restaurant, name of food, address)
* Price level (cheap, high, expensive)

-      Calculate:

* Total customer bill
* Total bill of the diner
* (Money Shipper)

-      Rendering:

* Eatery in 1 location (Specifically, the closest)
* Type of food
* According to reviews
* (Discount)

# **CHAPTER 2. LISTS OF REQUIREMENTS FOR THE SOFTWARE**

## **2.1. Functional business requirements**

Division: **Admin Management**

| No. | Function | Type | Constraint/ Formula code | Form code | Note |
| --- | --- | --- | --- | --- | --- |
| 1 | User Management | Storage |  |  | View, edit, delete user accounts |
| 2 | Manage payments | Storage |  |  | See |
| 3 | Shipper Management | Storage |  |  | Add, edit, delete shipper information |

**Division: User and Seller Management**

| No. | Function | Type | Constraint/ Formula code | Form code | Note |
| --- | --- | --- | --- | --- | --- |
| 1 | Search | Searching |  |  | Search and view information about places, restaurants, dishes |
| 2 | Product Purchases | Storage |  |  |  |
| 3 | Product listings | Storage |  |  | Add, edit, and remove products for sale |
| 4 | Order Management | Storage |  |  | View, confirm, process orders |
| 5 | Reviews and Comments | Storage |  |  | Post and view reviews and comments |
| 6 | Manage payments | Storage |  |  | Select a form of payment (user)  View billing information (both) |
| 7 | Order Tracking | View |  |  | View order details |

**Division: Shipper Management**

| No. | Function | Type | Constraint/ Formula code | Form code | Note |
| --- | --- | --- | --- | --- | --- |
| 1 | Get Your Order | Storage |  |  | Order confirmation and processing |
| 2 | Order Tracking | View |  |  | View order details |
| 3 | Delivery Status Updates | Storage |  |  | Ongoing delivery status updates |

## **2.2 Functional system requirements**

|  |  |  |  |
| --- | --- | --- | --- |
| No | Content | Description | Note |
| 1 | **User permissions** | -Project managers can use all functions of the system  -Finely assigned permissions to each user group  -Access management |  |
| 2 | Account Management | - Account registration/login.  - Update account information.  - Password management.  - Forgot password.  - Account verification (email, OTP).  - Support login by social networks.  - Store login information securely. |  |
| 3 | Address management | - Add, edit, delete shipping address.  - Store multiple shipping addresses.  - Select the default shipping address.  - Automatically locate addresses. |  |
| 4 | Search for food | - Search by name of dish, restaurant, region.  - Filter by type of dish, price, rating.  - Sort by popularity, price, delivery time.  - Smart search suggestions. |  |
| 5 | View food details | - Food images.  - Describe the dish.  - Ingredients.  - Price.  - Customer reviews. |  |
| 6 | Add items to cart | - Select the number of dishes.  - Notes for dishes.  - See the total price.  - Save the cart to place later.  - Suggest suitable combos/promotions. |  |
| 7 | Abate | - Online payment (bank cards, e-wallets).  - Pay on delivery (COD).  - Issue electronic invoices.  - Integrate many reputable payment gateways.  - Confidentiality of payment information. |  |
| 8 | Order tracking | - Order status (processing, delivering, delivered).  - View order history.  - Delivery location tracking (real-time).  - Support to contact shipper/restaurant. |  |
| 9 | Food reviews | - Evaluate the quality of food.  - Evaluation of delivery service.  - Write a comment/review. |  |
| 10 | Restaurant management | - Update restaurant information.  - Manage food menus.  - Order management.  - View reporting statistics |  |

## **2.3. Non-functional requirements**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Criteria | Content | Description | Note |
| 1 | Efficiency | Response time and load capacity | - The website needs to load quickly, up to within 3 seconds.  -User operations need to be responded to quickly, no more than 2 seconds.  The website needs to be able to handle multiple user visits simultaneously.  -The system needs to be scalable to meet future growth needs. |  |
| 2 | Security | Information security  Payment security | -Personal information of users should be kept safe.  -The system needs to have safeguards against network attacks and unauthorized access.  -Online payment transactions need to be secure.  -The system needs to use reputable and secure payment methods. |  |
| 3 | Evolution | Scalability requirements | -The system needs to be scalable to meet future growth needs.  -Need to be able to add new functions and features easily.  The system needs to be able to integrate with other systems. |  |
| 4 | Compatibility | Compatibility requirements | -The system needs to be compatible with many different web browsers and devices.  -The web interface needs to display well on mobile devices. |  |
| 5 | Maintainability | Maintainability requirements | -The system needs to be easy to maintain and update.  -Complete maintenance and up-to-date documentation is required.  The system needs to be able to log to monitor and troubleshoot. |  |