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Bit Restaurnt

Student's :

Loay Dmaid , Hussien Jabali

Supervisor :Dr.Muhannad Al-Jabi

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Disclaimer statement

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Abstract

Due to the availability of a large number of restaurants in the West Bank according to the different types of food provided, the customer's inability to reach these restaurants and the congestion of communication lines most of the time to order meals and his lack of knowledge about them. Meals provided by each restaurant and its address, where the idea came from the emergence of these problems, so choose the "BitRestaurant" system that you will rely on. To mediate between the customer and the restaurant, by creating a web application through which the customer determines the meal orders from his favorite restaurant, where he can determine the type of food or the quantity he wants and the time to receive the food by specifying the place and time he wants and he can know the quality restaurants and reach them, so that Store essential information for restaurants and customers in the system to provide the best service for both.

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Chapter 1

Introduction

1.1 problem

People find it difficult to contact the restaurant because they are busy or because they do not know about the meals it offers Every restaurant and the price of the meals, since people are bored of eating in the same place and the same food,As well as the inability of people with a diet or certain diseases to reach meals suitable for them which takes a long time from them to inquire about new meals so that they can try them without knowing people's opinion of the restaurant and the services it provides when trying new restaurants, and people find it difficult to know the names Restaurants in the surrounding area, especially if they are in a new area, on a distant trip, a new place of work, or for its distance from the workplace, and sometimes the demand for meals increases and people order meals from restaurants as well.

1.2 Objectives

A team aims to solve the problems that people face through food ordering processes and also provide assistance to people by creating a "BitRestaurant" web application, which aims to facilitate the process of ordering the food they prefer and in the quantity they want to reach in the shortest possible time and knowing the address's restaurants,only By visiting the site and registering in it, this site will be a way to market new restaurants, introduce people to what they offer, and give customers the ability to rating restaurants,submit reviews and get healthy meals served by the restaurant add, the restaurants

they want to their list of favorites, Deploy a recommendation system based on the customer log and customer access to the latest meals provided by the restaurant.

1.3 Scope

The project provides users with displaying restaurant information in the system, menus and meals that they provide, and ensures easy access for the user to the address of the restaurant and make comments and rating on the restaurants and can add restaurants to the favorites list, and provides restaurant managers with the ability to add menus and modify their meals and manage orders.

1.4 Importance

The importance of using the web application comes from several reasons, which are beneficial to all site users due to the importance of using technology in our current days and the speed of its spread

- restaurant manager:- Restaurant owners want to keep pace with technology, and thus the site will achieve great benefit for restaurant owners, which is to inform people about their restaurants and lead to an increase in the number of customers as the site is considered a marketing tool and also reduces the errors common resulting from ordering food in the traditional way and thus improving the services that they provide to customers and provide Effort and time.
- Users (customers): - The site makes it easy for customers to choose the right restaurant for them easy way and know the types of menus, know the types of meals that they offer and their specifications, which saves them time and effort to make the choice, and they can know restaurants they did not know or new restaurants and know their address.

1.5 Organization

- The second chapter will discuss the constraints and difficulties encountered in creating the system. Also, it will indicate the courses needed to help create the system.
- The third chapter (Literature Review) will explain some of the previous projects in the same field and what is the difference between them and this project.
- chapter 4 (Methodology) will explain how the work is done, and what techniques are used in building the system.
- chapter 5 chapter will explain results and discussion.
- The final chapter will discuss the conclusion, recommendations and future work.

Chapter 2

Constraints, standards and earlier work

2.1 Constraints

Before starting and during the implementation of the project, we faced difficulties and challenges that made our task in implementing the project more difficult

1. Corona pandemic: due to the large increase in injuries in Palestine, especially in Nablus, which led to our inability to go to university, this caused many restrictions, and since it was for everyone, we considered them additional challenges The main ones are:
 - Difficulty meeting team members to divide work among themselves and help each other.
 - Difficulty obtaining experience with supervisor, meeting them and taking advice from them. The problem was global and long-term and we had to adapt to the circumstances surrounding us, so we spent a lot of time in the online meeting between the team members in order to be able to complete the project in the appropriate manner and time, and the team communicated with the supervisor in the same way to benefit from their experiences.
 - As well as the inability to reach restaurants and know what they offer of healthy meals and the standards followed.

2. Time constraints: The project that we want to design needs a lot of time to implement, and we encountered this when we started learning the new development tools that we need to do a wonderful project. We started from the first day of the semester, where we tried to learn the things that give us the best results. The other reason that led to the lack of time is that the method of teaching in this chapter differed from the previous chapters, because the study turned to electronic study due to the Corona pandemic, and this takes more time in the study because of the difference in the educational system because we needed time to adapt to the method of e-learning and the nature of the exams and duties.
3. Use new tools: In the project we learned new tools, which we had not studied before at university. And the Learning and using it takes time and effort And we're using laravel on back-end And the We used the vue js frameworks on front-end and encountered this by getting tips, resources and references from supervisor, and taking some online training courses to gain experience in dealing with these tools.

2.2 Standards

We have taken many online courses related to within laravel and vue js frameworks.

2.3 Earlier work

We have taken many courses university related to object oriented programming , database , software engineering and web programming.

Chapter 3

Literature Review

In this chapter, some of the previous systems on restaurant ordering service will be presented:-

- Eat Palestine (Eat, n.d.)
It is a system for restaurants to display restaurants, while it is used to search for a restaurant by city and type of cooking, and it can display menu meals and rating in addition to the address. It is a web application.



Figure 3.1: Eat Palestine

- Yummy Palestine (Yummy, n.d.)
It is a web application that contains features through which it can search for restaurants by region and type of food, the order depends on the customer's address, delivery time and quantity for each meal and gives the customer the ability to rating restaurants with a review .



Figure 3.2: Yummy Palestine

Chapter 4

Methodology

4.1 Technical

4.1.1 Front-end

- Vue.js

Vue is an open source framework by progressive framework technique for building user interfaces in web applications.

The core library is focused on the view layer only, Vue is also perfectly capable of powering sophisticated Single-Page Applications when used in combination with modern tooling and supporting libraries (Vue, n.d.).

We use Vue for it Vue is an open source framework which is used with JavaScript and component library based on HTML, CSS and JS makes it simple to get started and the essential features like routing and data management are covered by official libraries and support fast rendering ensured by virtual DOM and minimal load time so uses to build web application (Lewis, n.d.).

4.1.2 Back-end

- Laravel

Laravel is a framework is an open source framework based on php for a web application and contains the advantage that it is easy to interact and facilitate the development process and to perform the common tasks that most web projects use, such as authentication, routing, sessions and caching (Laravel, n.d.).

We use Laravel because it aims to make the development process easy for developers without crashing the system. That makes developers do their best work and write the best they can to achieve their goal.they tried to combine the best they've seen in other web frameworks, including those implemented in other languages (Laravel, n.d.).

Laravel facilitates by saving time and helps reduce thinking and planning to build the entire web application from scratch (w3schools, n.d.).

4.1.3 Database

MySQL is a open source relational Database management system,very fast, reliable, scalable, and easy to use.

MySQL Server was originally use to handle large databases much faster than existing solutions.

Software is a client/server system that consists of a multithreaded SQL server that supports different back ends, MySQL Server as an embedded multithreaded library that you can link into your application to get a smaller, faster, easier-to-manage standalone product (MySQL, n.d.-b).

A major reason for using MySQL

- Executes very fast joins using an optimized nested-loop join.
- Implements in-memory hash tables, which are used as temporary tables.
- Implements SQL functions using a highly optimized class library that should be as fast as possible (MySQL, n.d.-a).

4.2 Methods

Methods for account rules :-

4.2.1 Guest

- Registration process: If the guest does not have an account, he can create a new account using this process by adding his personal information (full name, email address, password) required for registration if he wants to register as a user or as a restaurant manager, but if he registers as a restaurant manager, he needs to add Data for the new restaurant (restaurant name, logo, phone number, delivery fees, type of food, complete restaurant address), so that he cannot register and there is an empty field where he must add all the data and there are other requirements, for example: It must contain the word Passwords of at least 8 passwords must match, and validate the email.

- Browse restaurants, show logo restaurants,category,delivery fees,service and So that all registered restaurants activated in the system are dis-

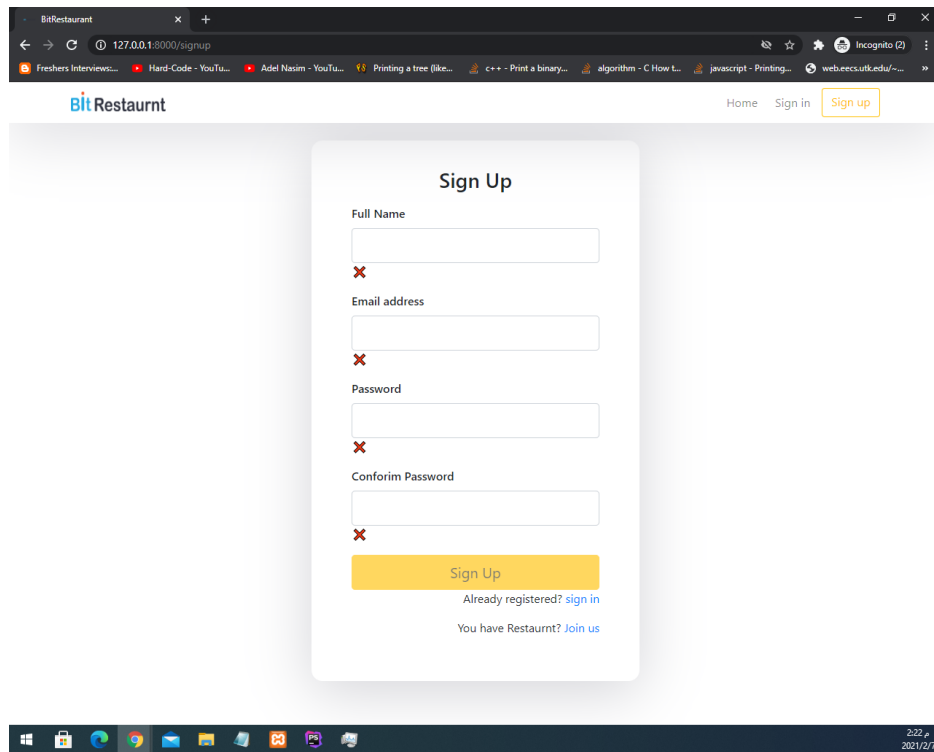


Figure 4.1: Sign Up User

played, They appear according to the latest so that he can browse and filter them according to the city and type of food, as well as the name of the restaurant he wants, In addition to viewing the rating of each restaurant.

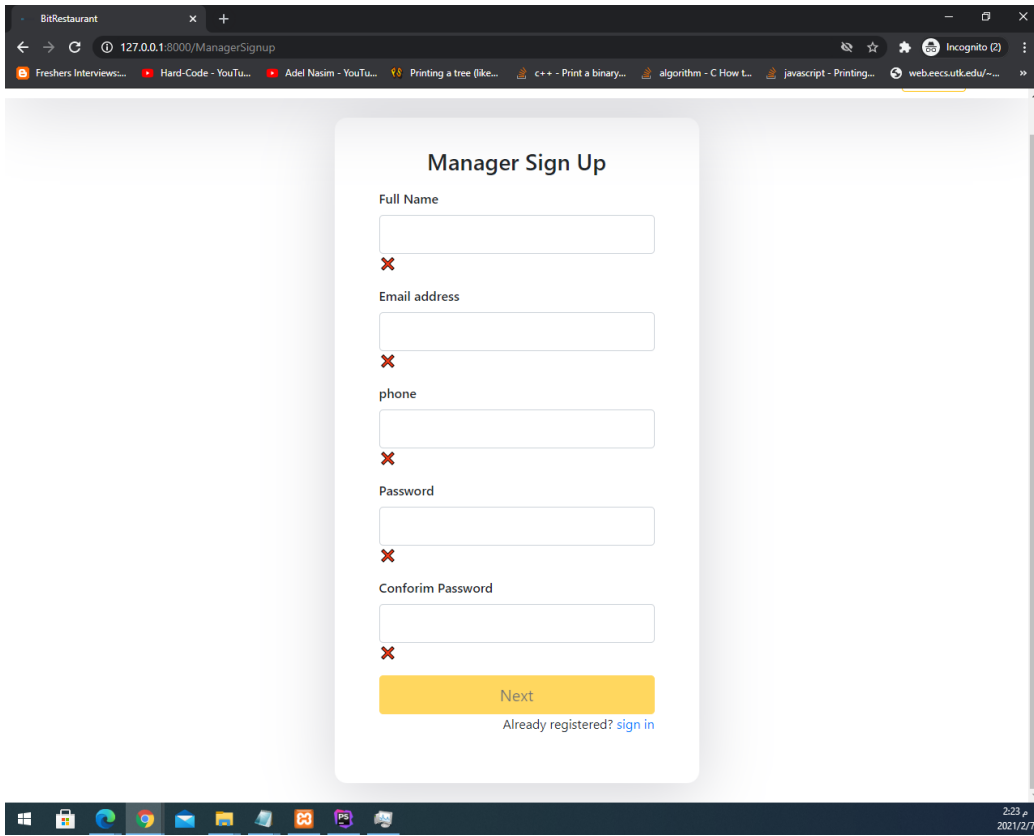


Figure 4.2: Sign Up Manager

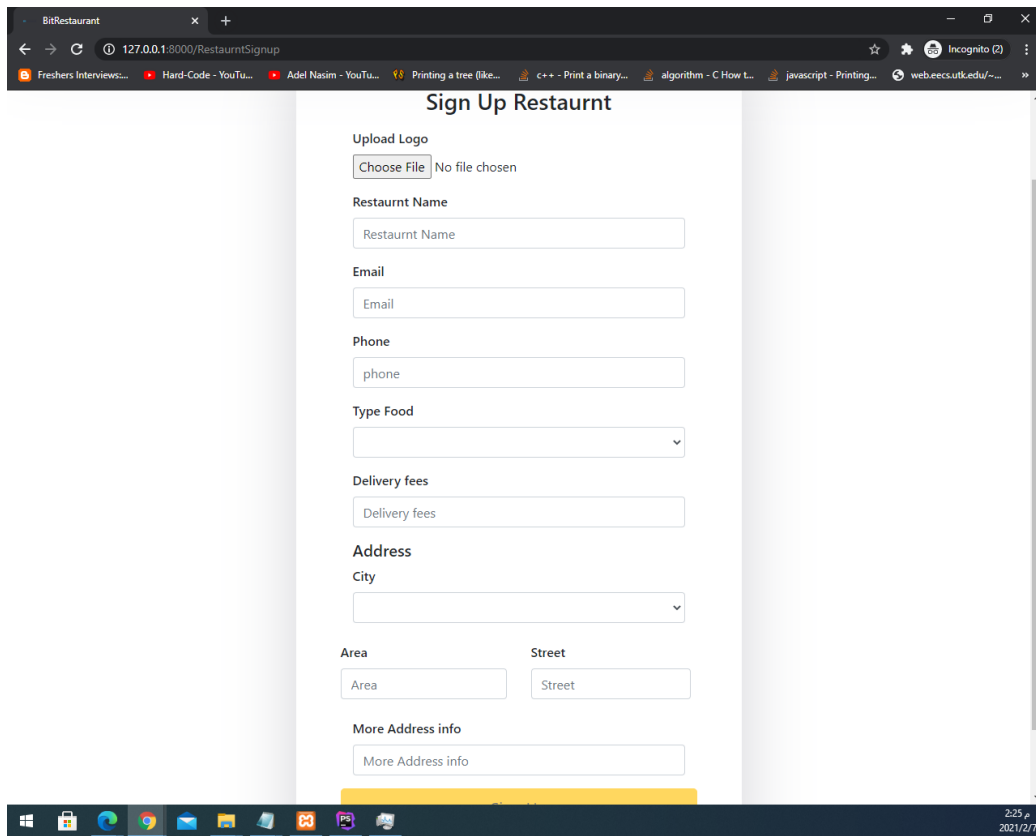


Figure 4.3: Sign Up Restaurant

- Browse menus and meals, Show the menus and meals offered by the specific restaurant. They appear according to the latest contain Meals image and name, description and filter them according to the menu, as well as the name of the meal in addition to filtering a healthy meal based on the fats, salts and calories it contains when choosing any restaurant.

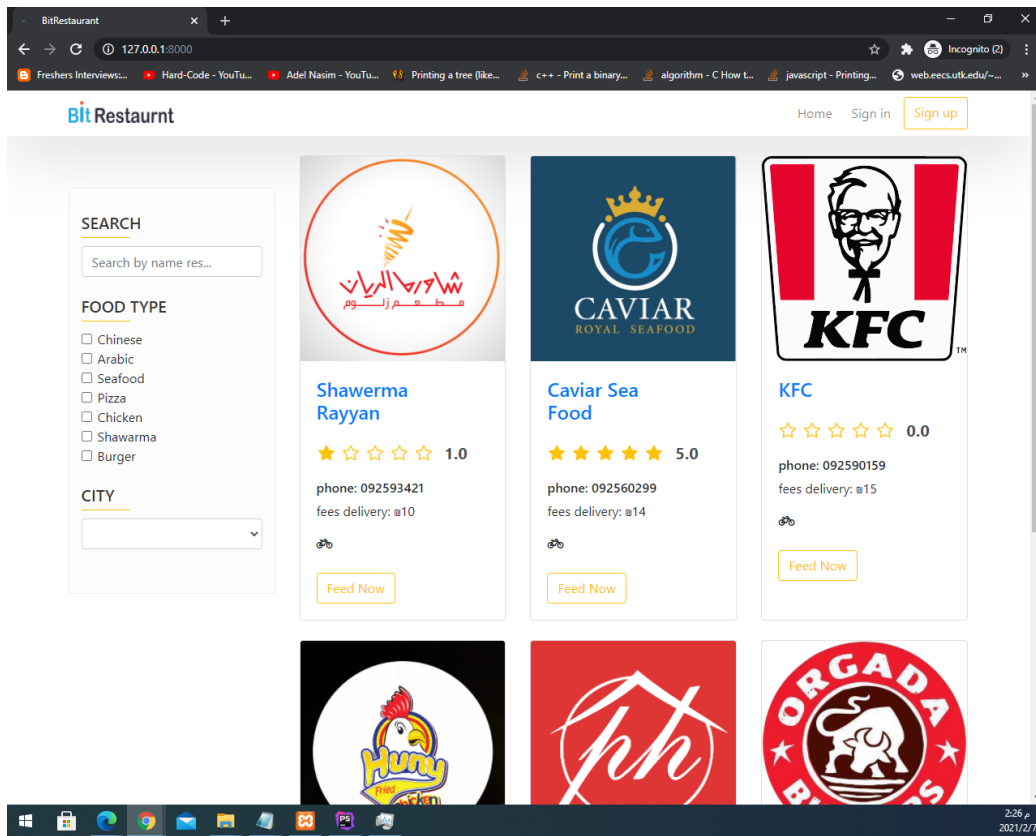


Figure 4.4: Home Page

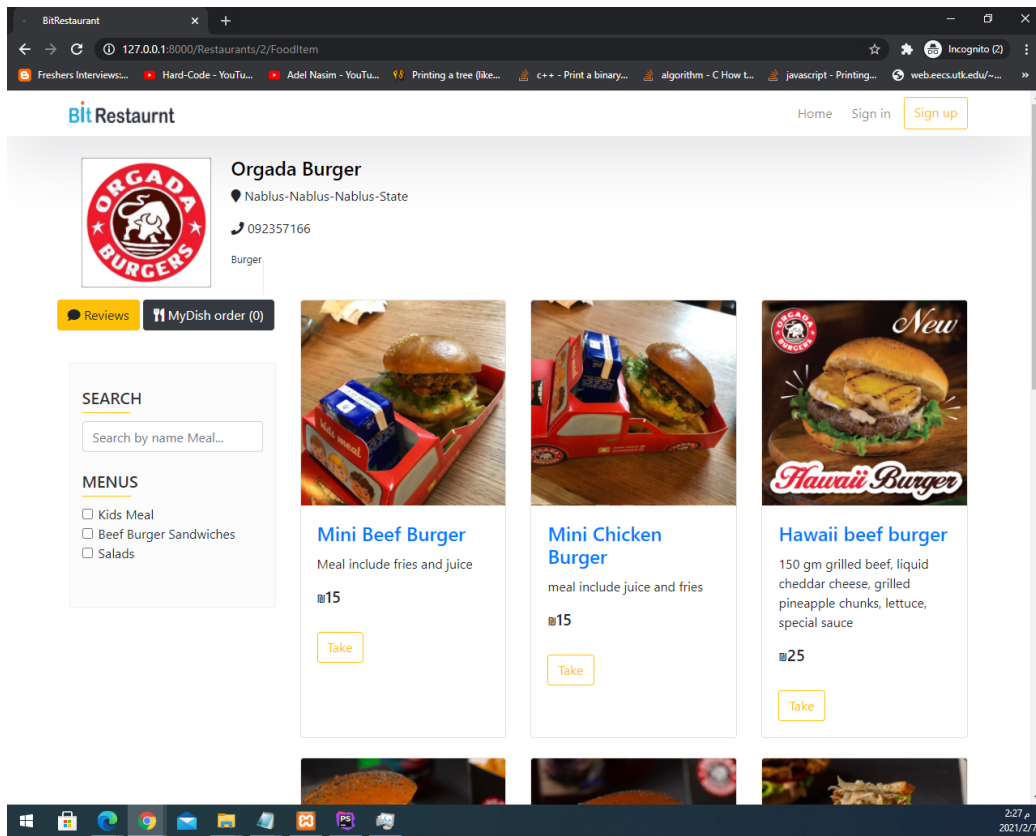


Figure 4.5: Restaurant Page

- show ratings and reviews for specific restaurant.

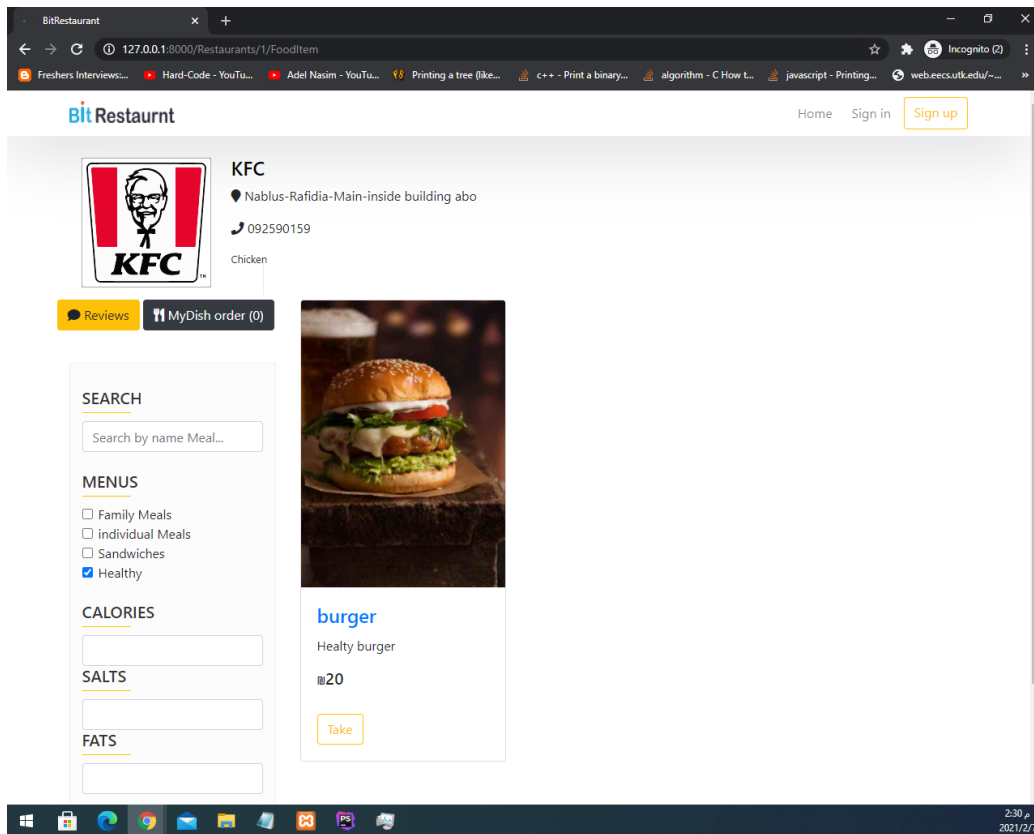


Figure 4.6: Healthy Meals

4.2.2 User

- login process: The user can log in using his e-mail address and password for the site he previously registered, and for security the password is encoded using bcrypt hash before sending it to the server, on the server side the hashed password is stored as it is in the database during this process, determine the type of user and forward him to the specific page.

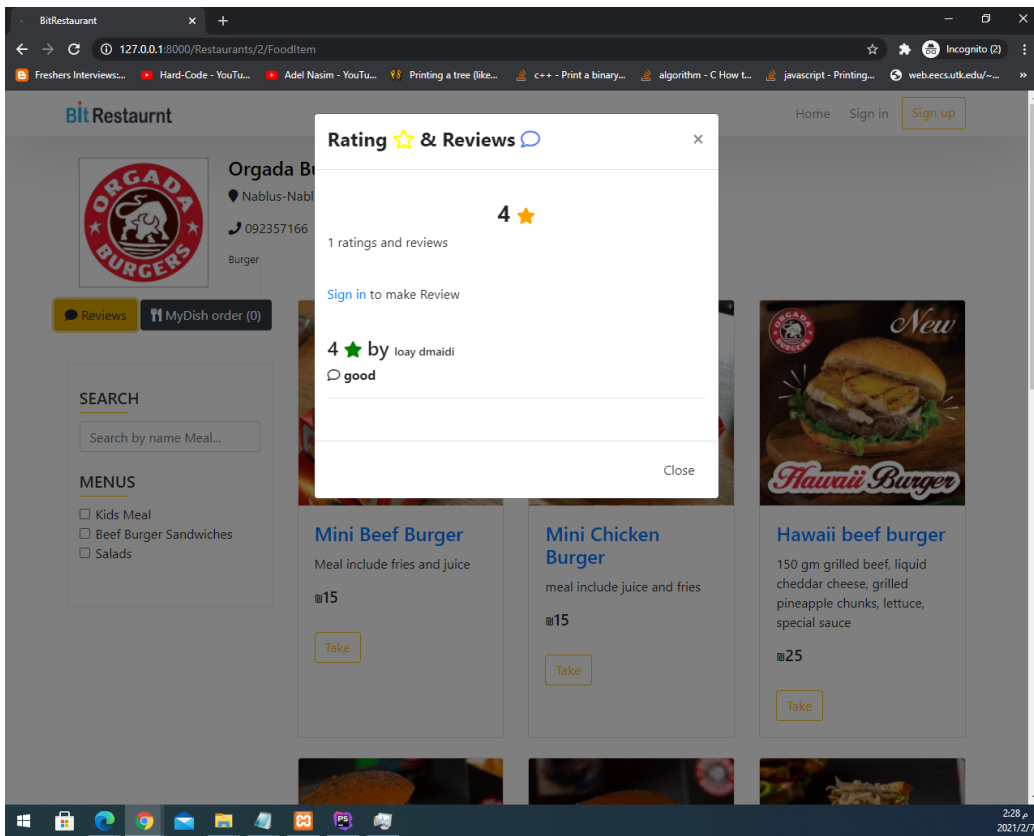


Figure 4.7: Reviews and Rating

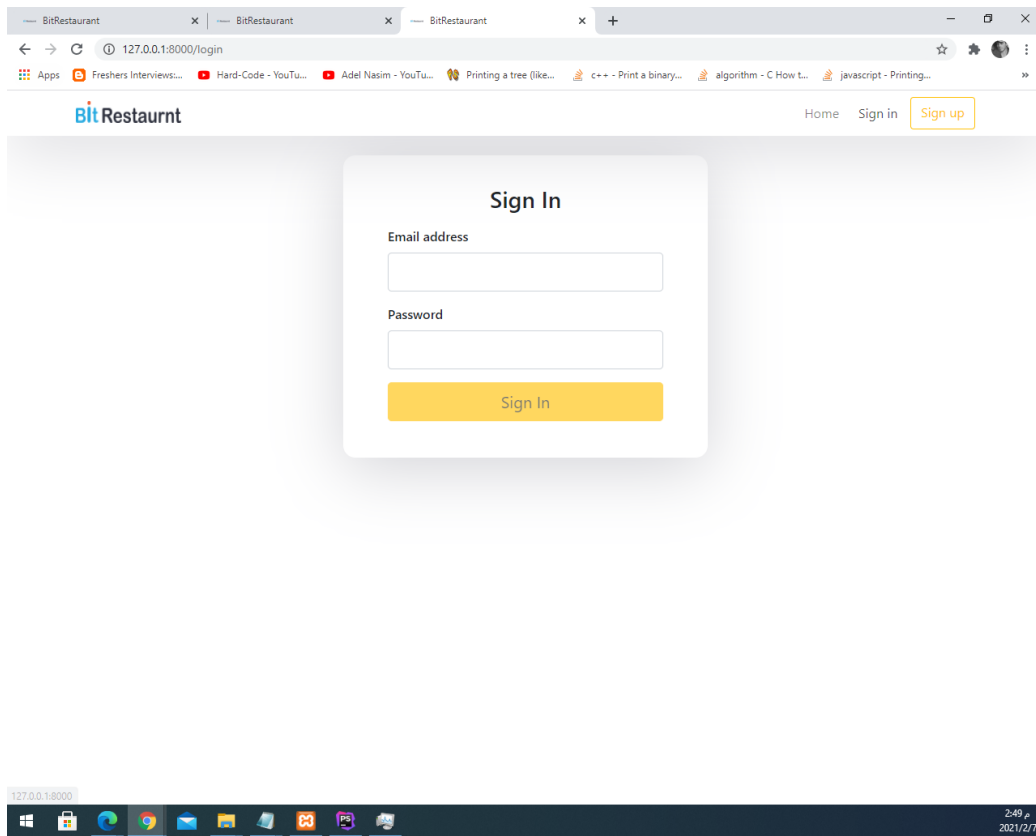


Figure 4.8: Sign In User

- choosing a meals items process: can choosing specific meals and quantity.

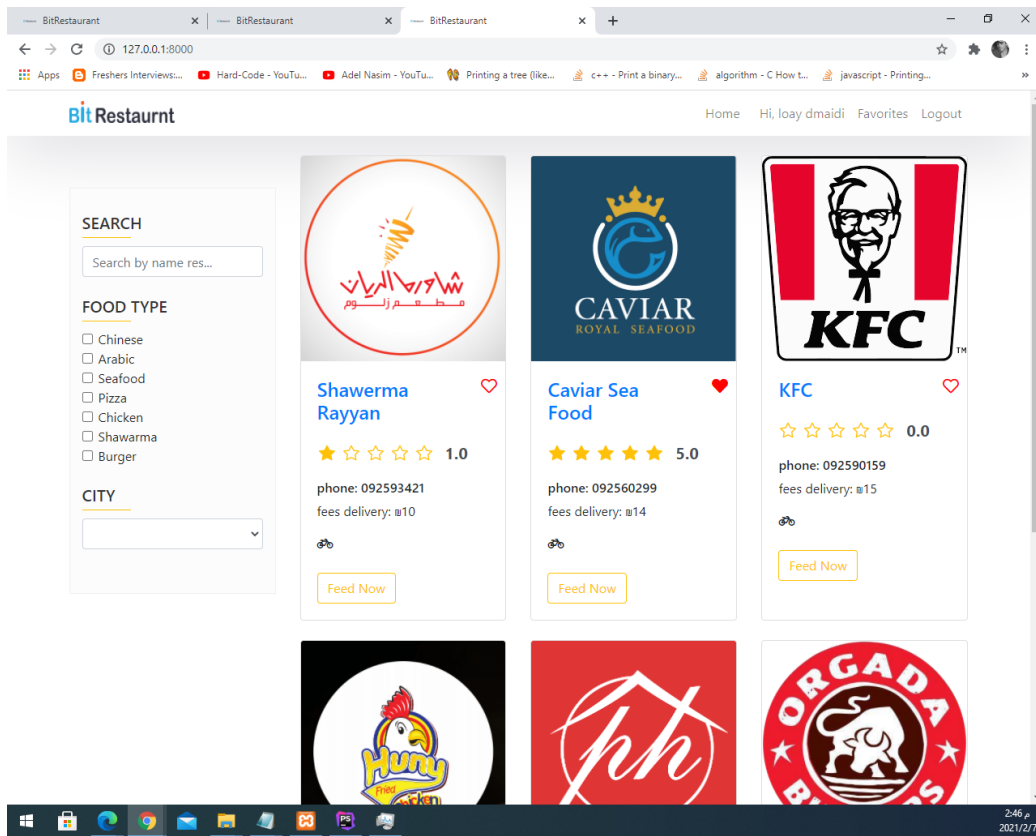


Figure 4.9: Home Page

- Delete a meal item from order or edit quantity for specific order.

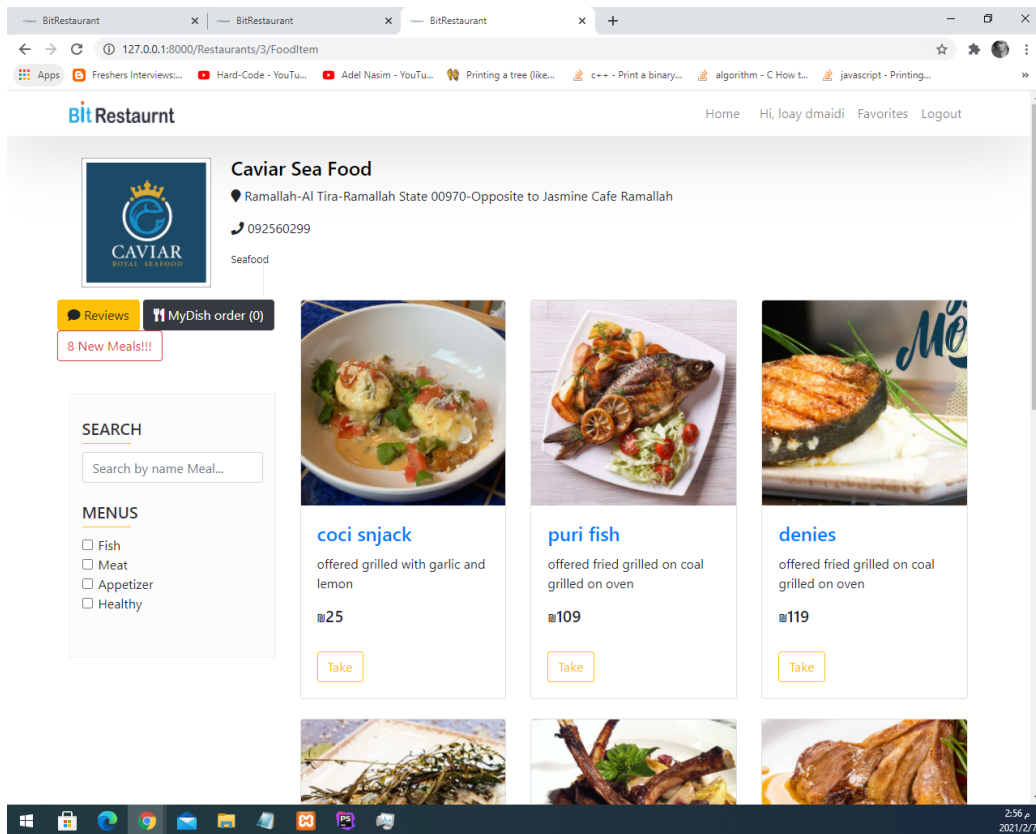


Figure 4.10: Meals Page

- buy Order process: Before confirming the order that contains all the meals that have been selected from the restaurant, the customer must add information such as: address, phone number and delivery time, so that the restaurant can deliver meals to him in the appropriate place and time.

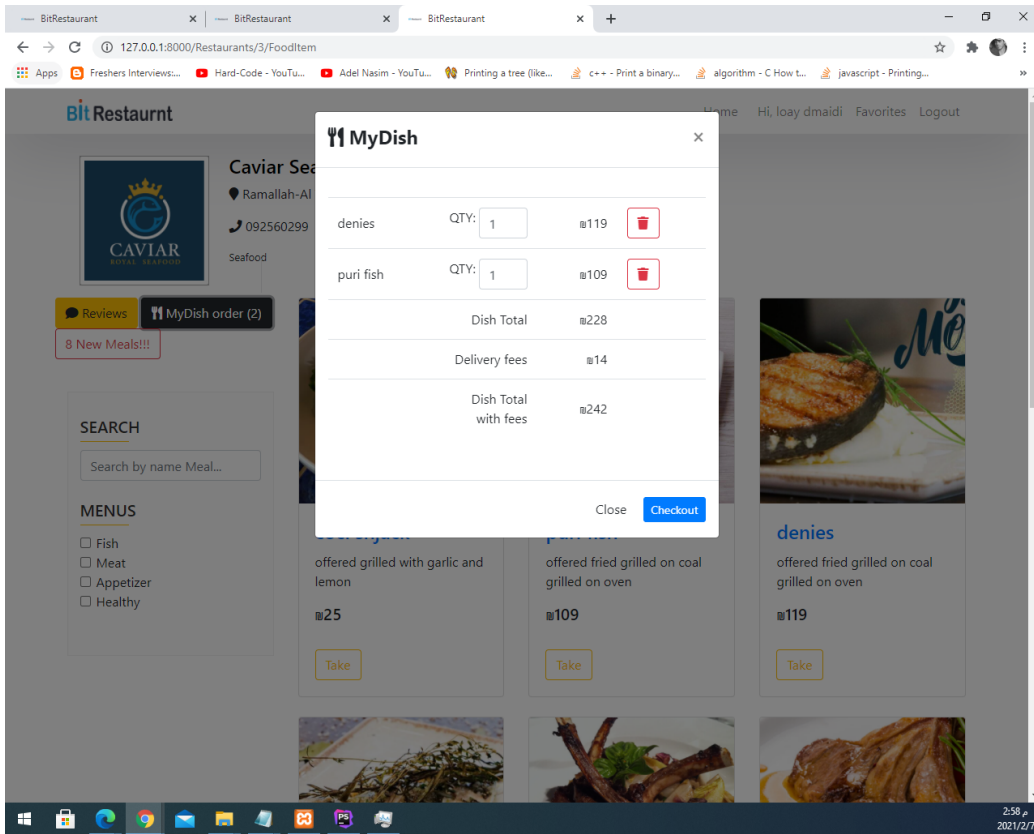


Figure 4.11: Dish

- Rating and review : User can rate the restaurant and reviews by add a comment.

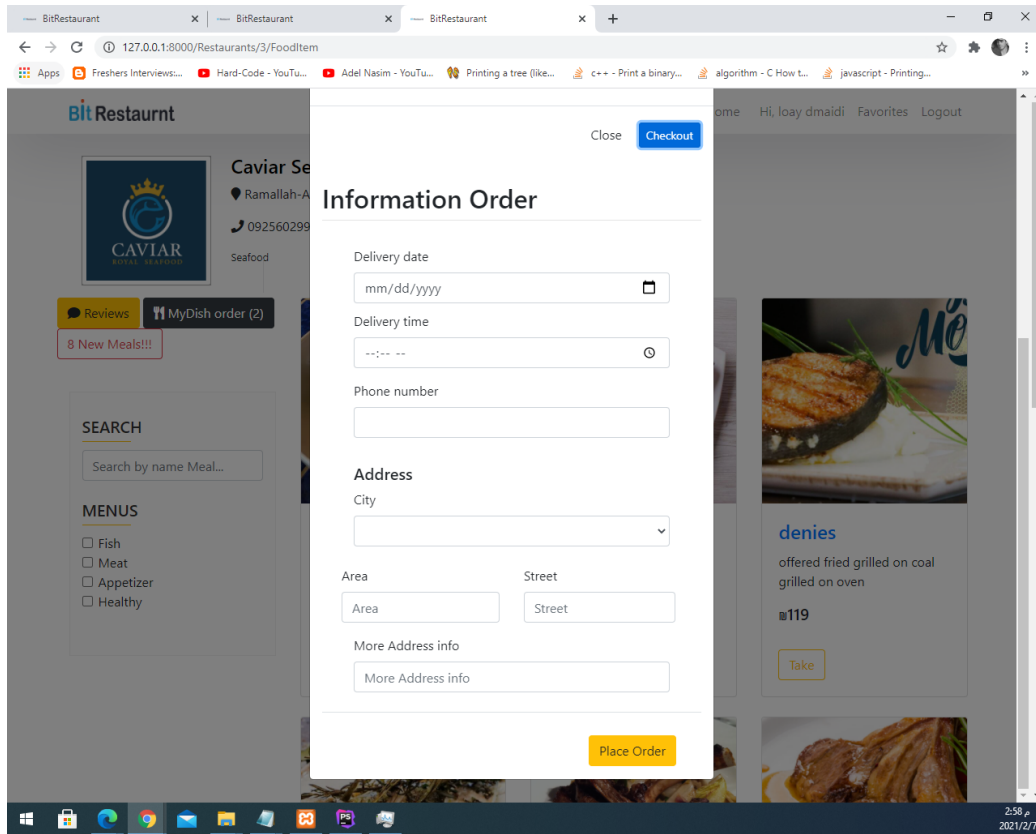


Figure 4.12: Order Information

- Favorite Restaurants list : Each user has his own list. He can add the restaurants he wants to to facilitate access to his favorite restaurants without searching for them among other restaurants, where he can add any restaurant with the ability to unfavorite it from the list when the user wants.

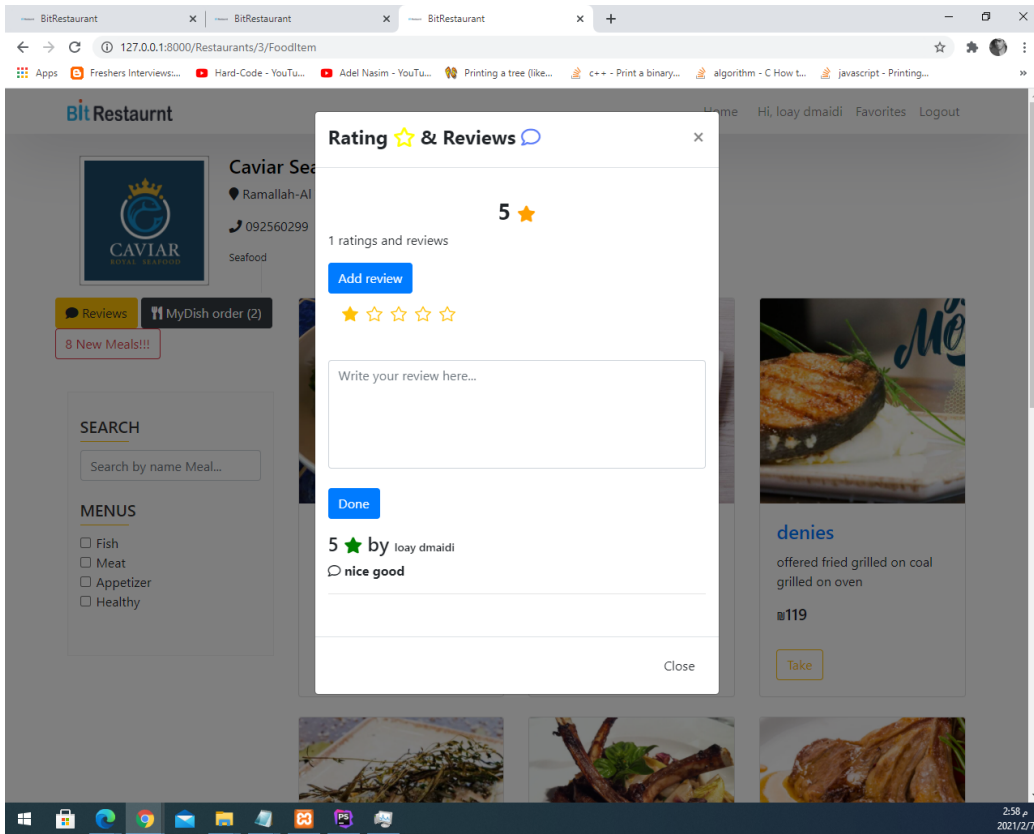


Figure 4.13: Review and Rating

- New meals, while he can get the latest meals added within seven days by restaurants as a notice as soon as he enters the restaurant and knows their number.

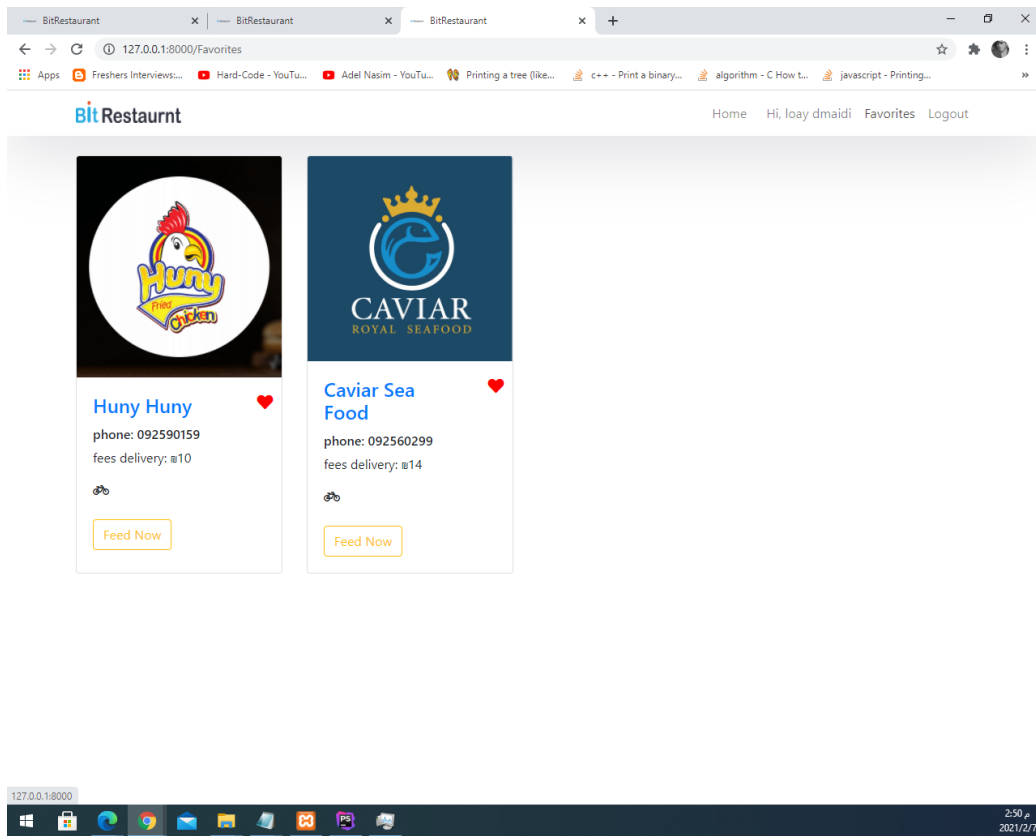


Figure 4.14: Favorites

Recommendation process

To Recommendation restaurant meals that suit the user based on the user's behavior in the system so that the nature of the meal offer varies from customer to customer so that the nature of the offer changes dynamically according to the orders made by the customer So that the menu of the meal is obtained through the orders of the restaurant and the meals that are within the same menus are displayed in a serial order appearance, To top the meals in menus of the highest orders at the beginning.

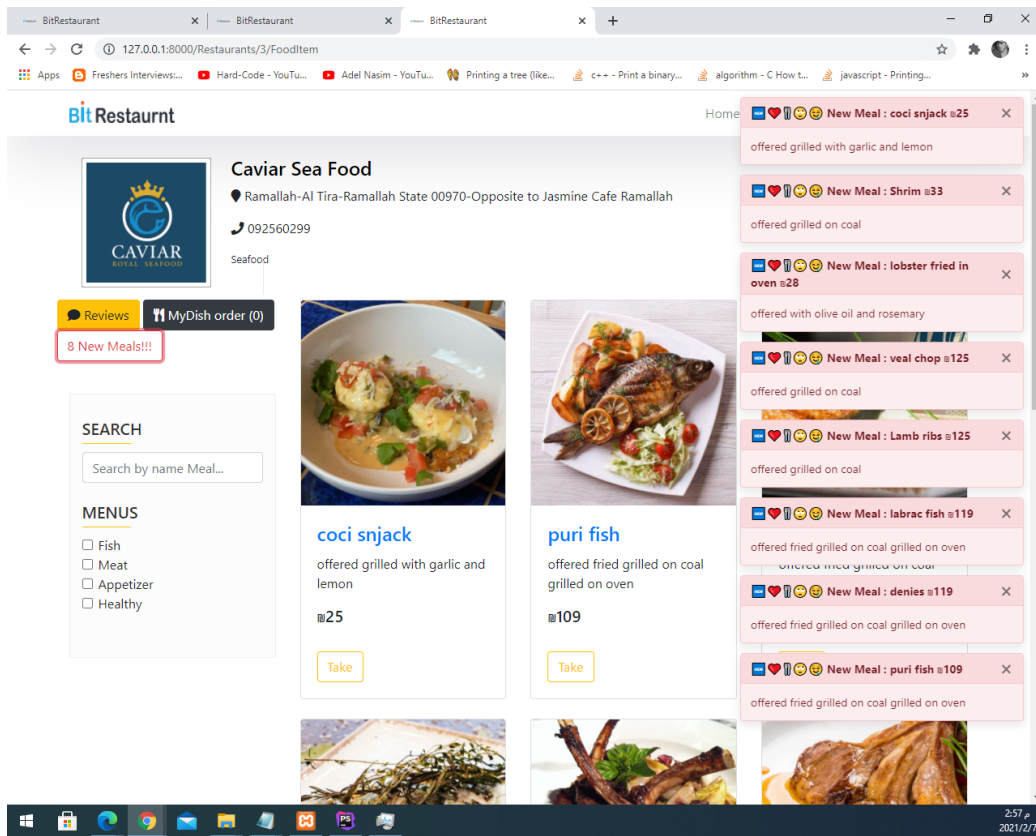


Figure 4.15: Latest Meal

4.2.3 Manager

- A new menu can be added to which meals can be added, and the menu can also be edited and deleted. When adding a menu, the name and description for it must be filled and show all Restaurant menus by order latest.

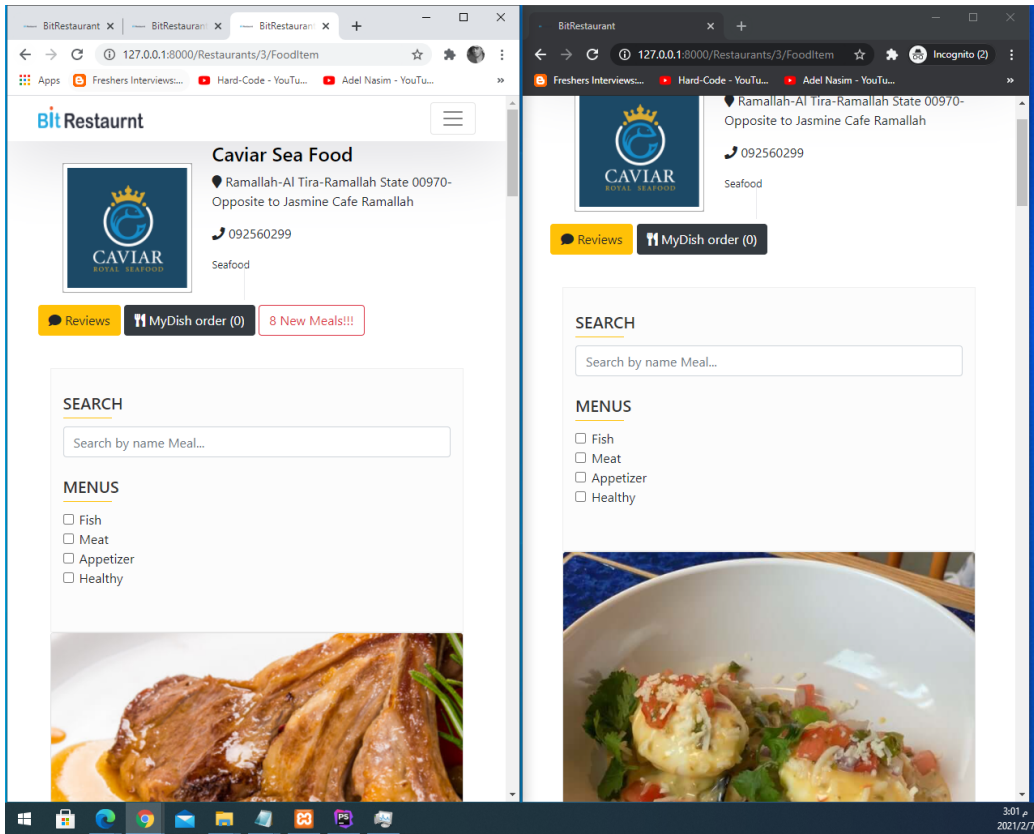


Figure 4.16: Recommendation Meals

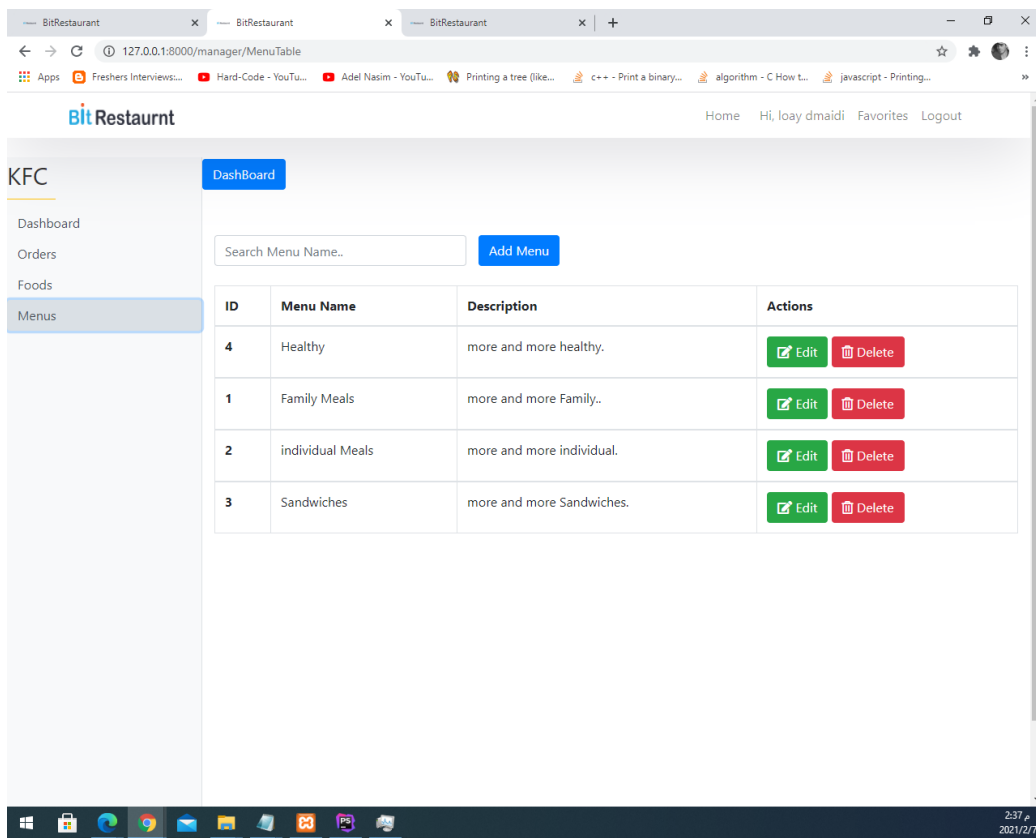


Figure 4.17: Menus

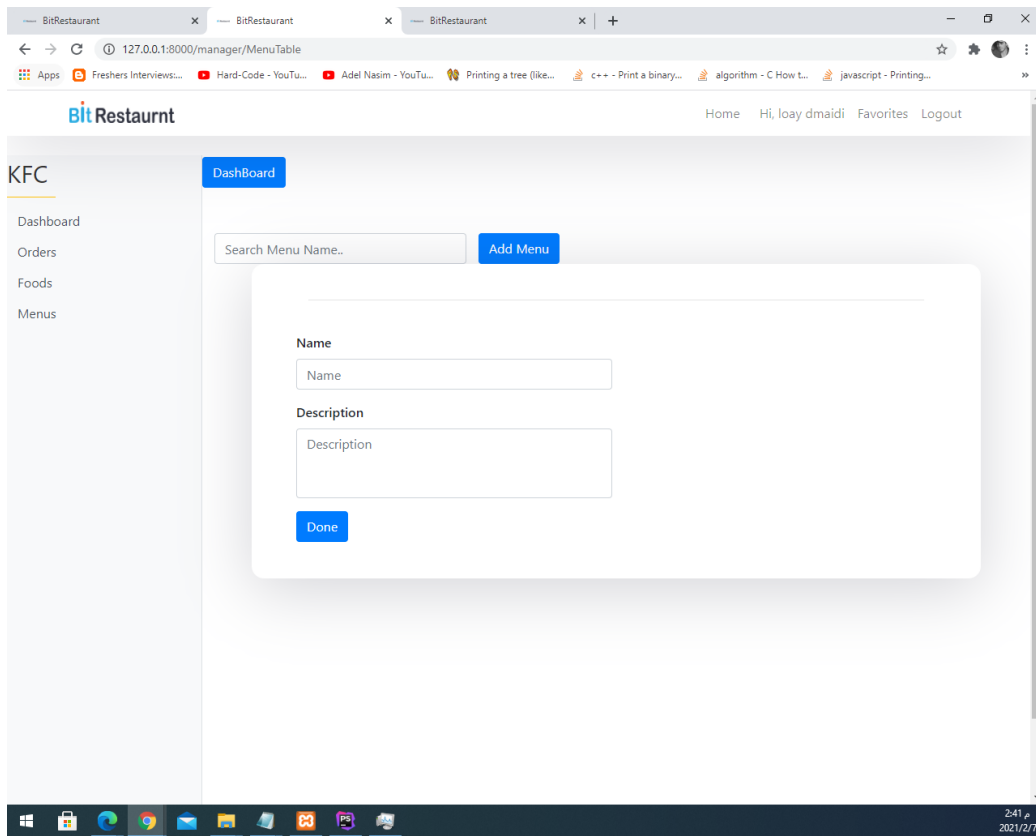


Figure 4.18: Add Menu

- When adding the meal, information about the meal must be added (name, image, price, description), If the meal is added to a healthy menu, the calories, fats and salts will be filled, and the meal information can be modified and the meal can be deleted completely and show all Restaurant meals by order latest .

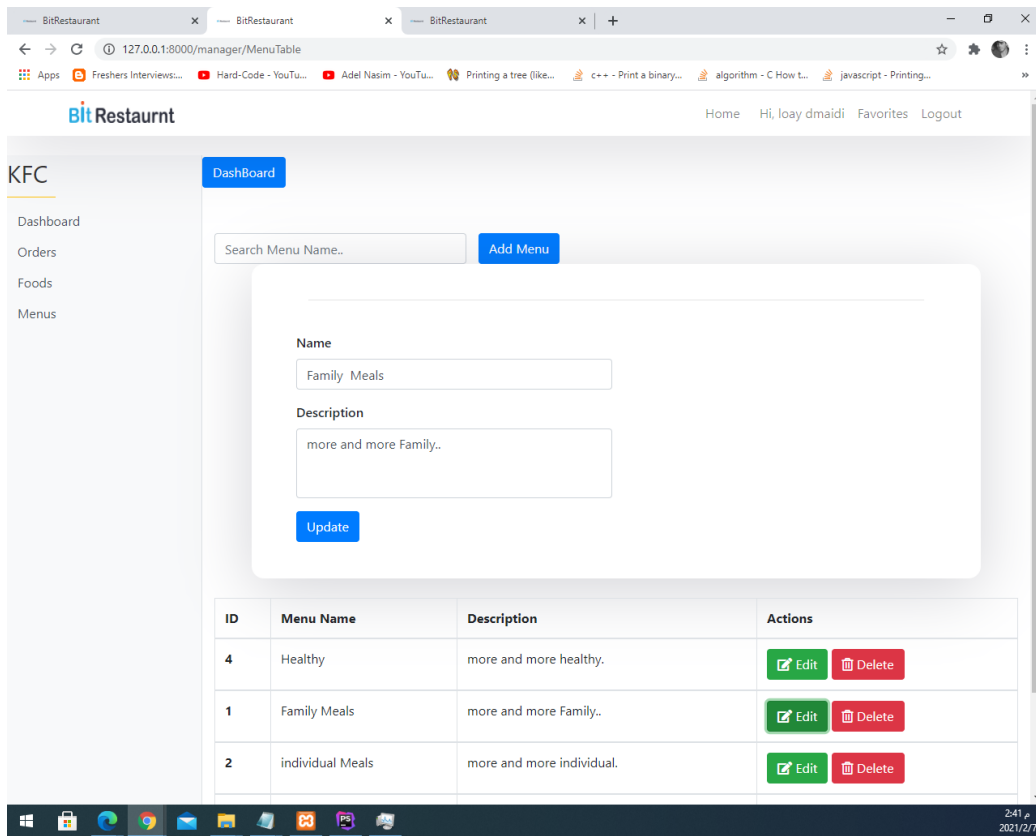







Figure 4.19: Edit Menu

BitRestaurnt Home Hi, loay dmaidl Favorites Logout

KFC DashBoard

Dashboard
Orders
Foods
Menus

Search Meal Name.. Add Meal

ID	Food Image	Food Name	Price	Food Menu	Actions
60		burger	20	Healthy	Edit Delete
7		Colnel Meals	28	individual Meals	Edit Delete
8		Classic Sandwiche	33	Sandwiches	Edit Delete
9		Colnel Feleh	25	Sandwiches	Edit Delete
10		Box Mastar	28	Sandwiches	Edit Delete

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Figure 4.20: Meals

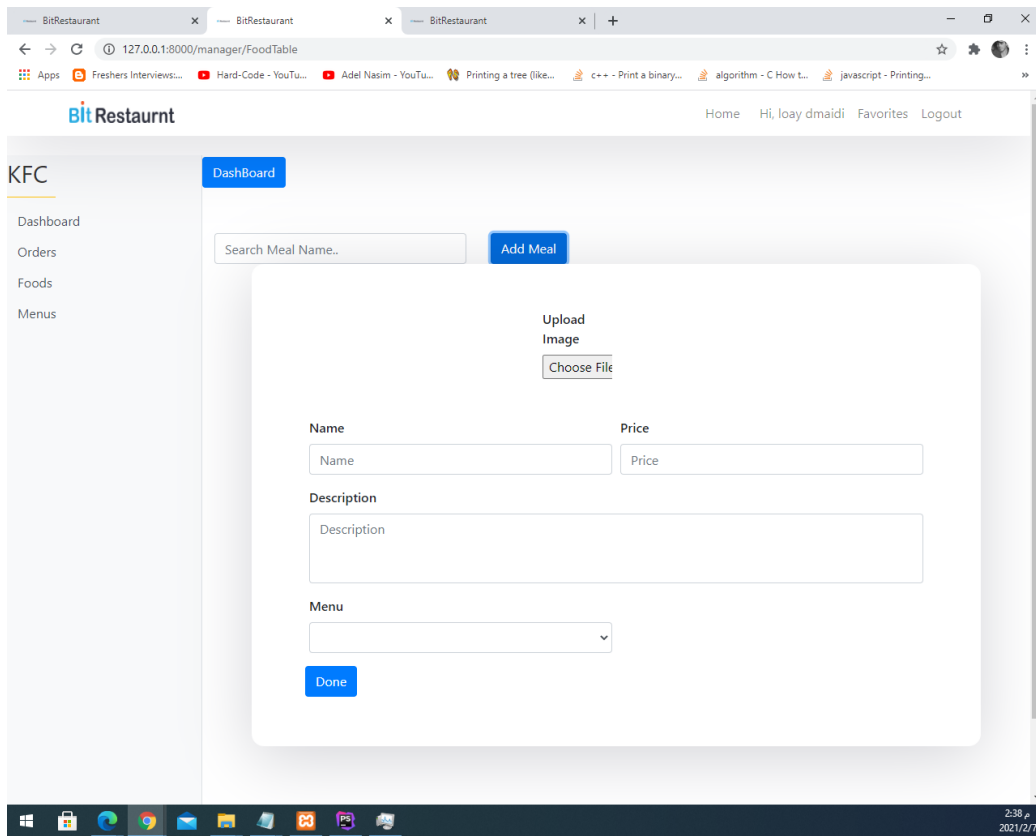


Figure 4.21: Add Meal

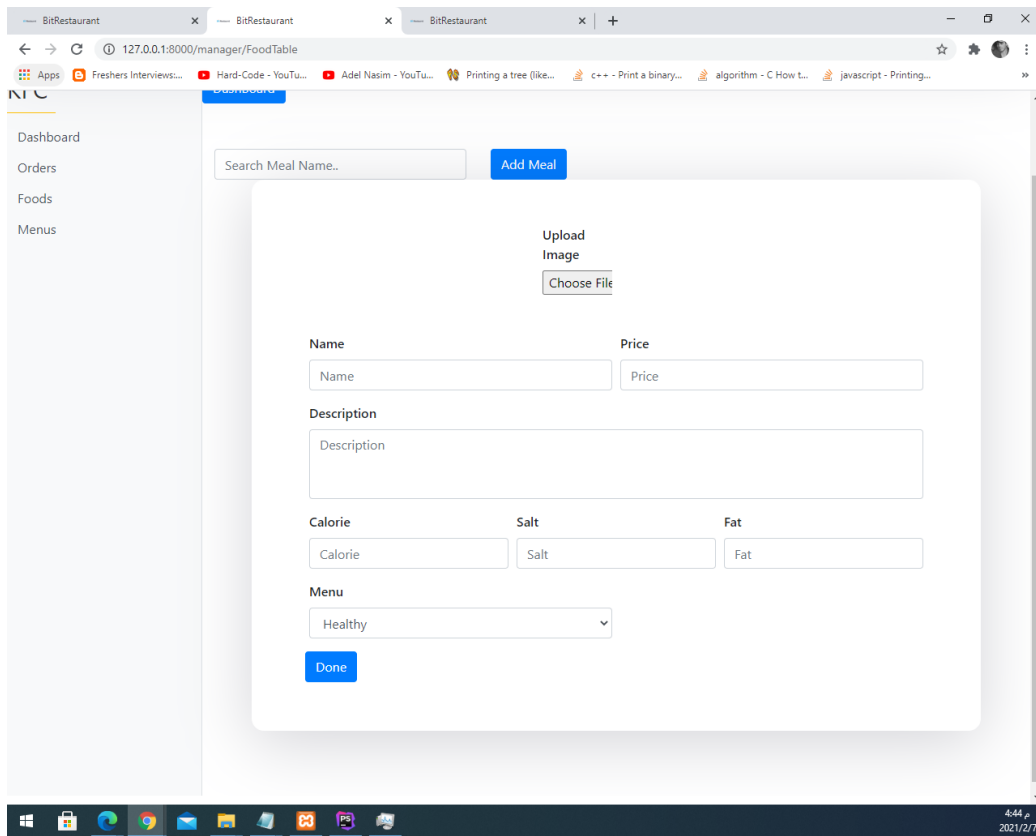


Figure 4.22: Add Healthy Meal

- Acceptance of the order Upon the arrival of the order by the customer, the manager displays order information, confirms their validity and make status delivered and displays all the restaurants' orders with the most recent and not delivered.

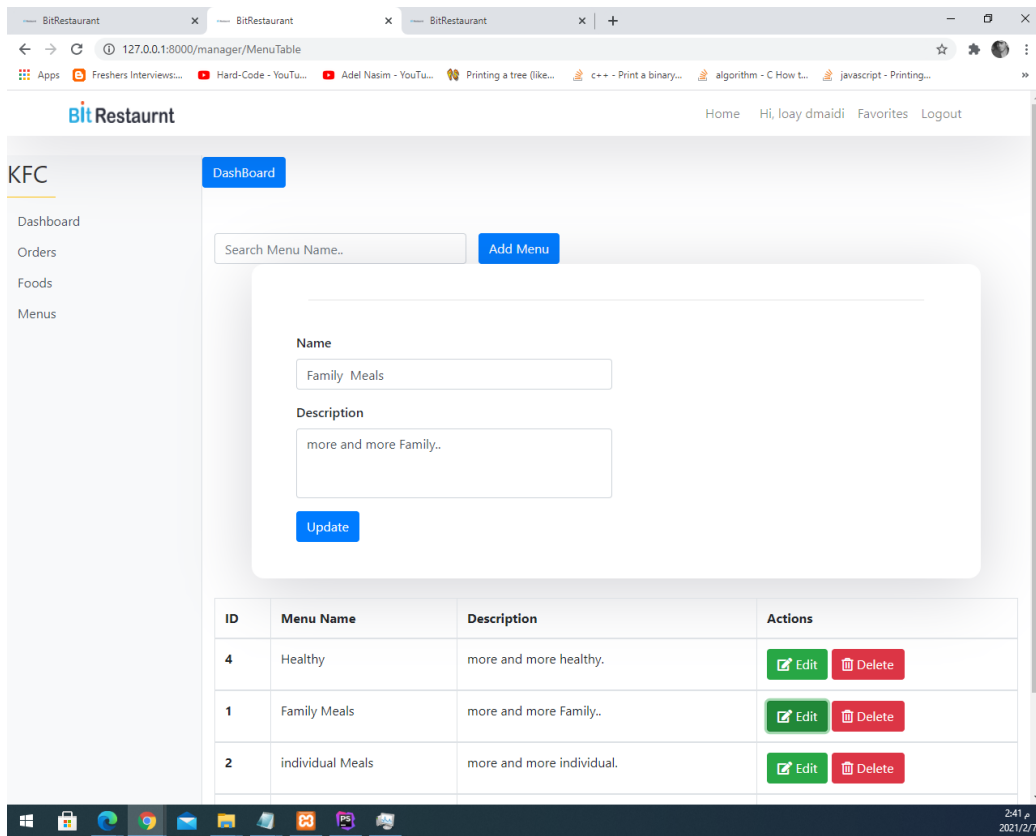


Figure 4.23: Edit Meal

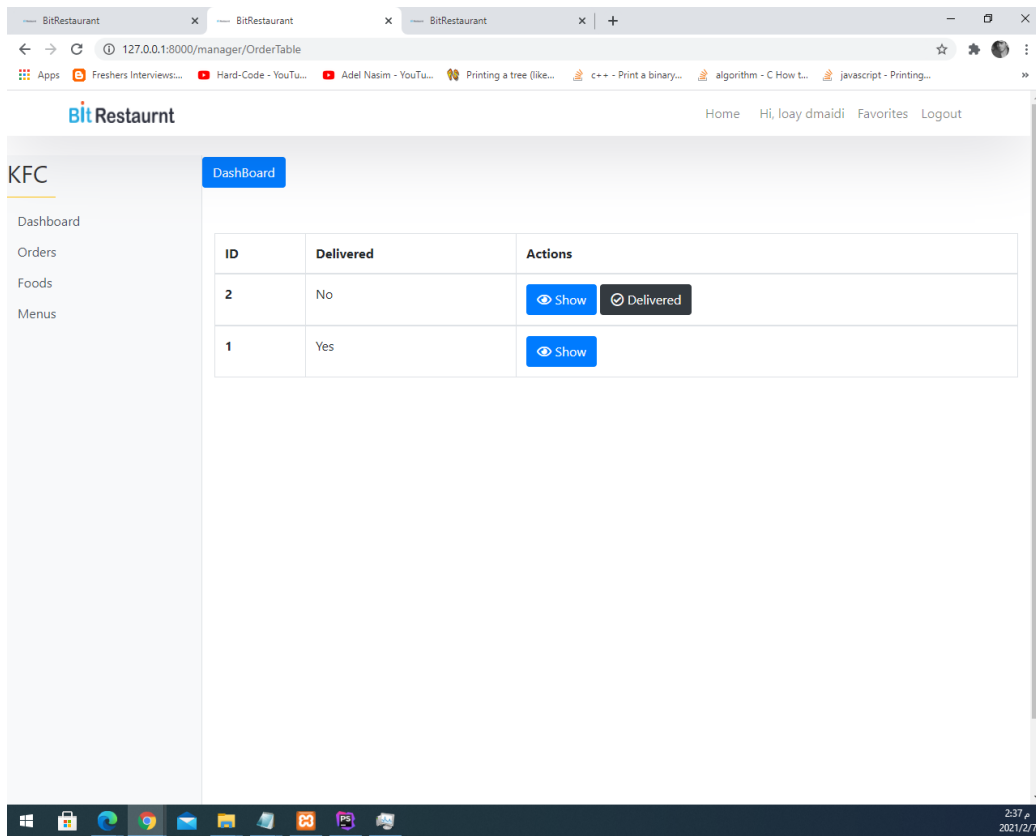


Figure 4.24: Orders Restaurant

4.2.4 Administration

- Activatation the restaurant ,show restaurant information ,Delete restaurant show all Restaurants by latest and it did not activated.

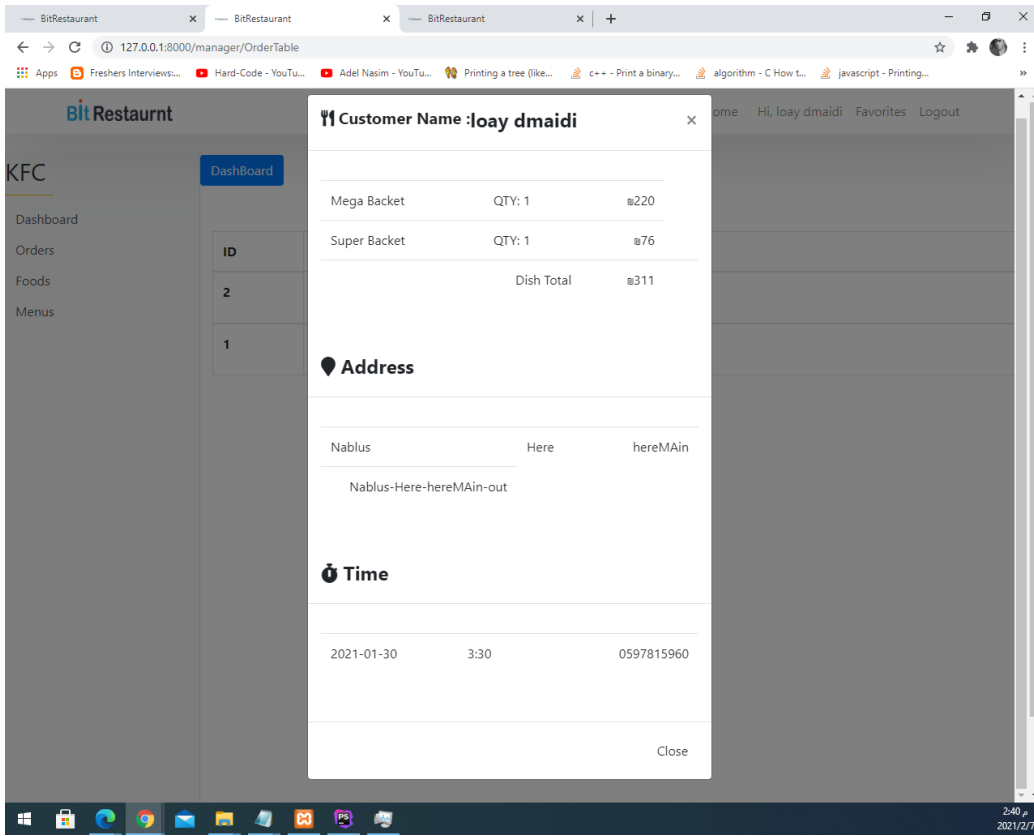


Figure 4.25: Order Details

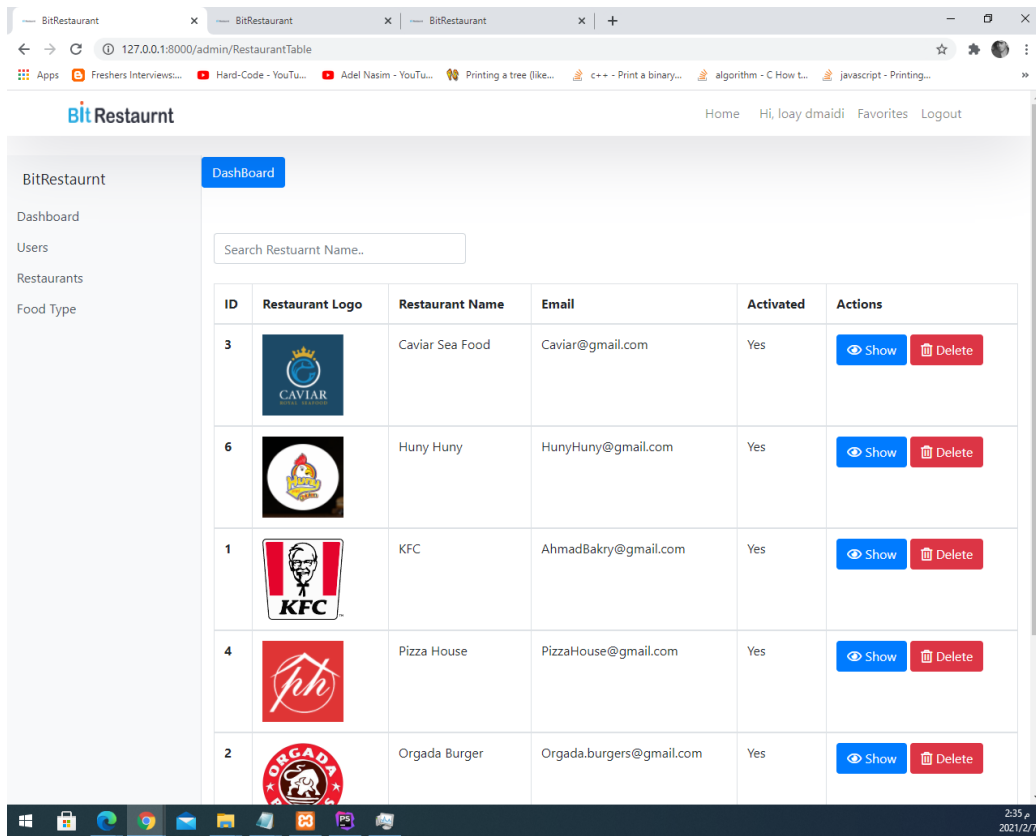


Figure 4.26: Restaurants

- Delete users, Edit permeation , show all Users.

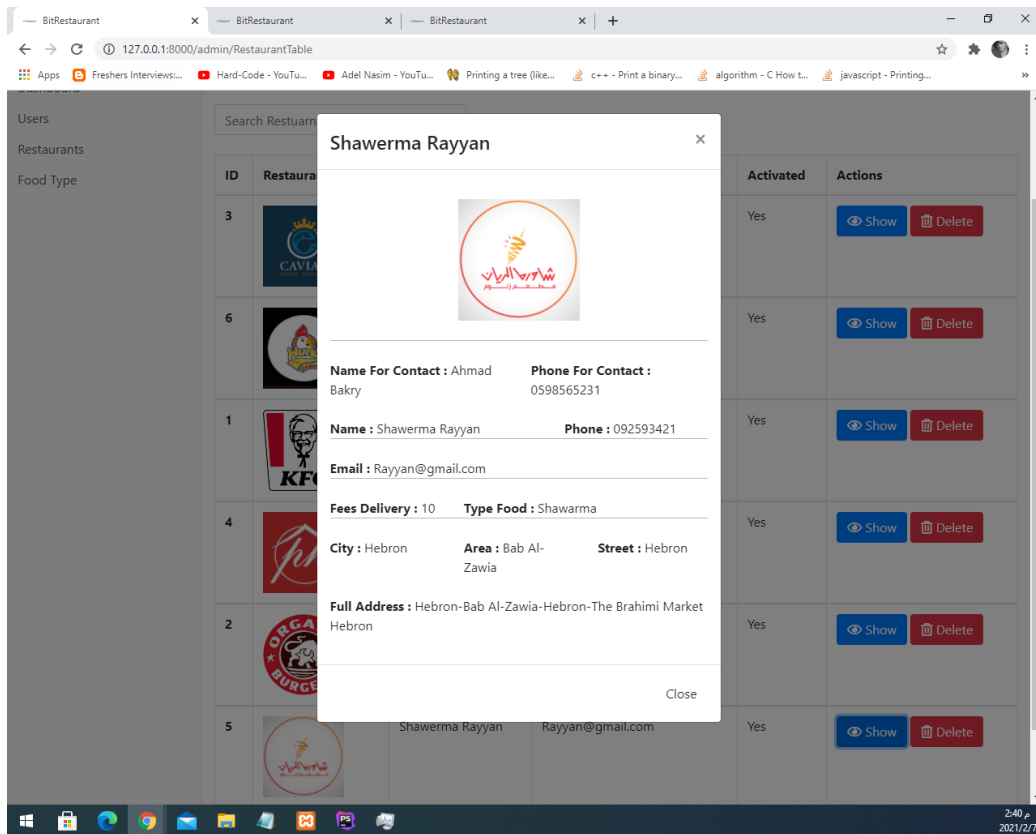


Figure 4.27: Restaurants Details

- A new food type, and the food type can also be edited and deleted. When adding a food type, the name and description for it must be filled and show all food type by order latest .

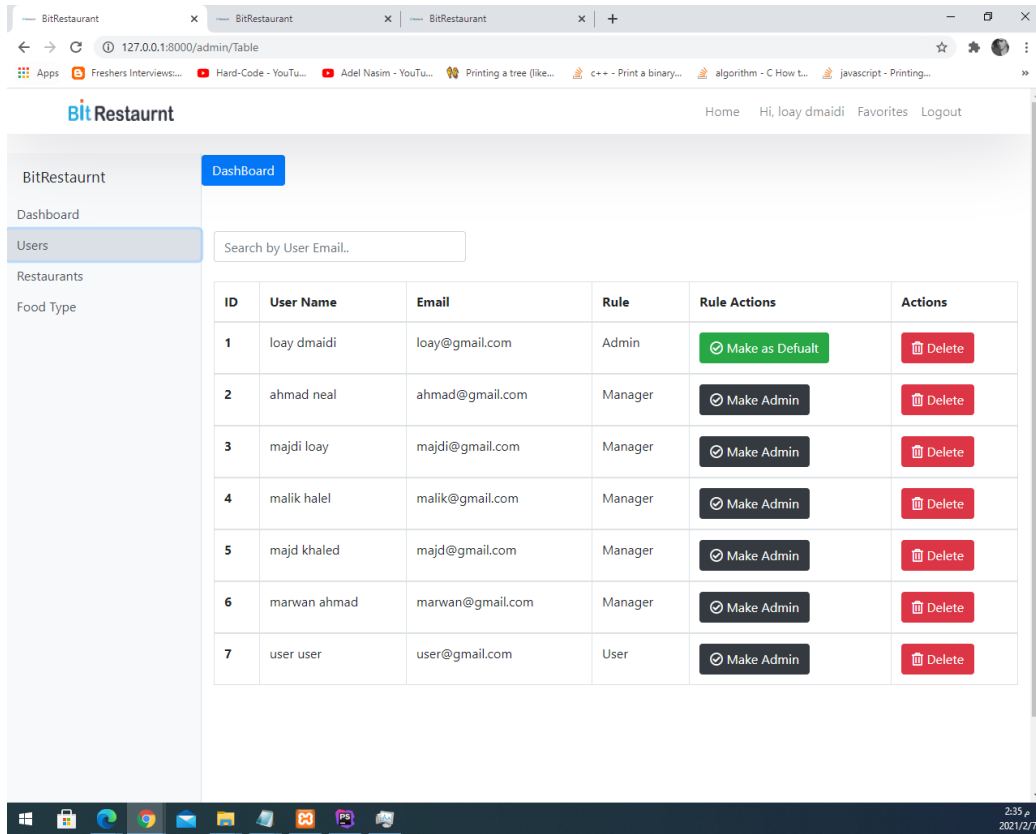


Figure 4.28: Users

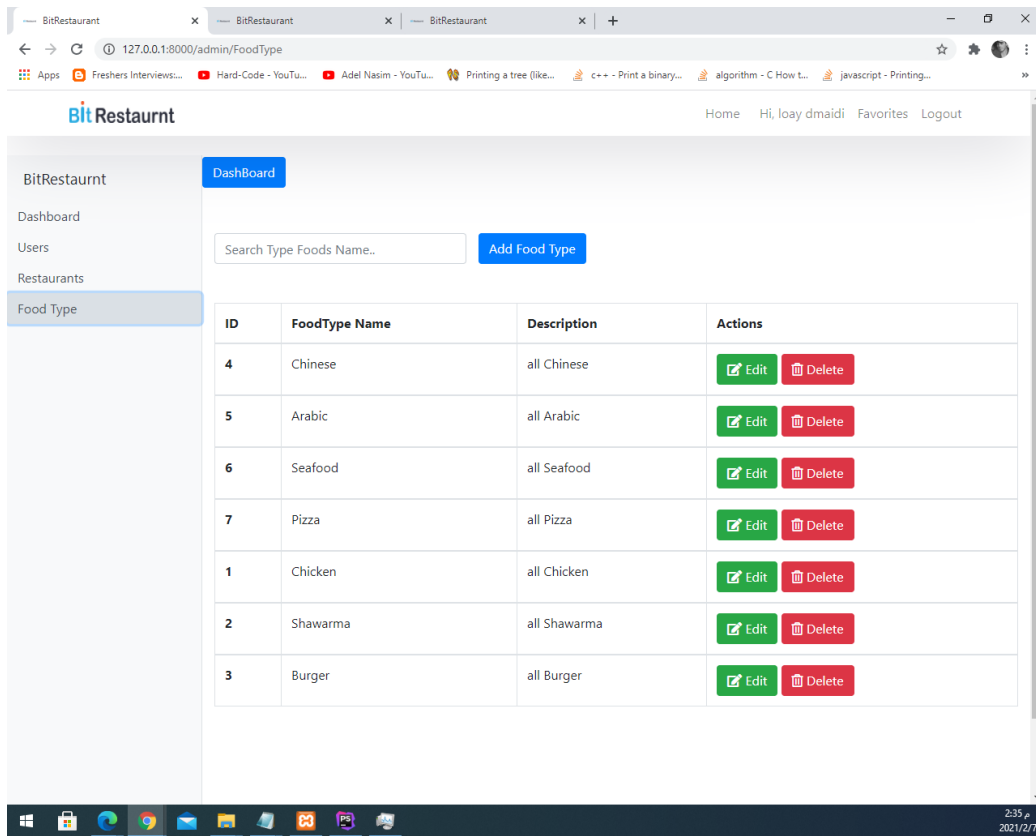


Figure 4.29: Food types

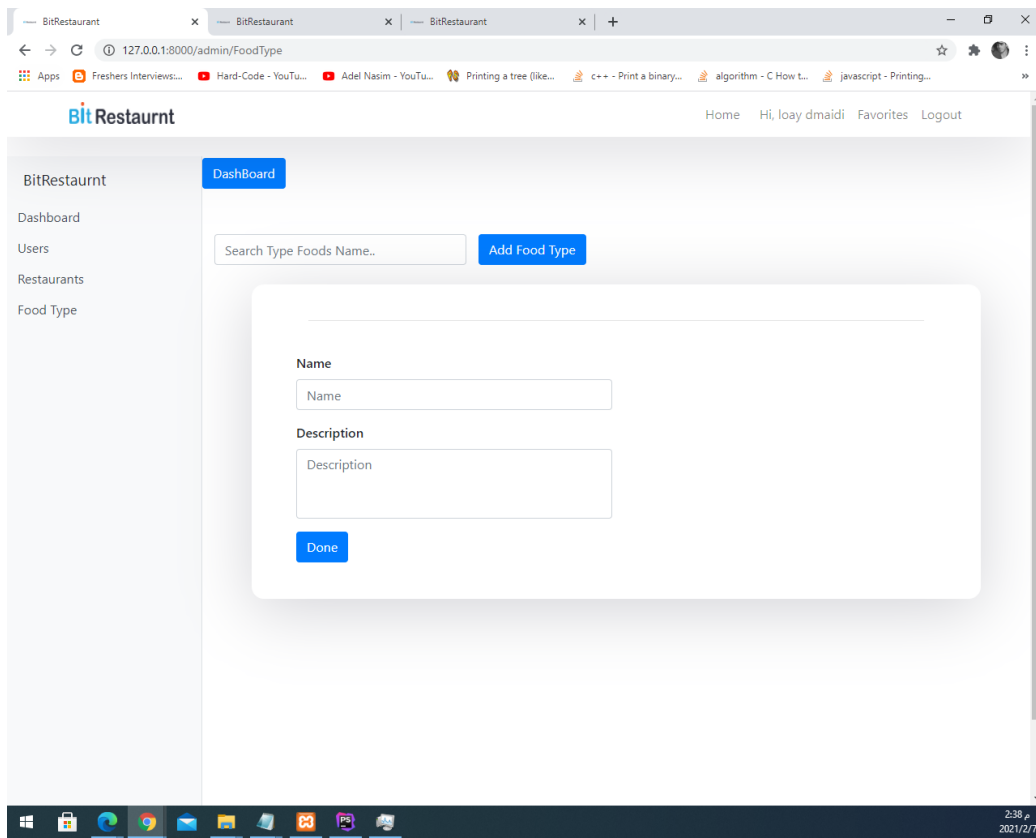


Figure 4.30: Add Food type

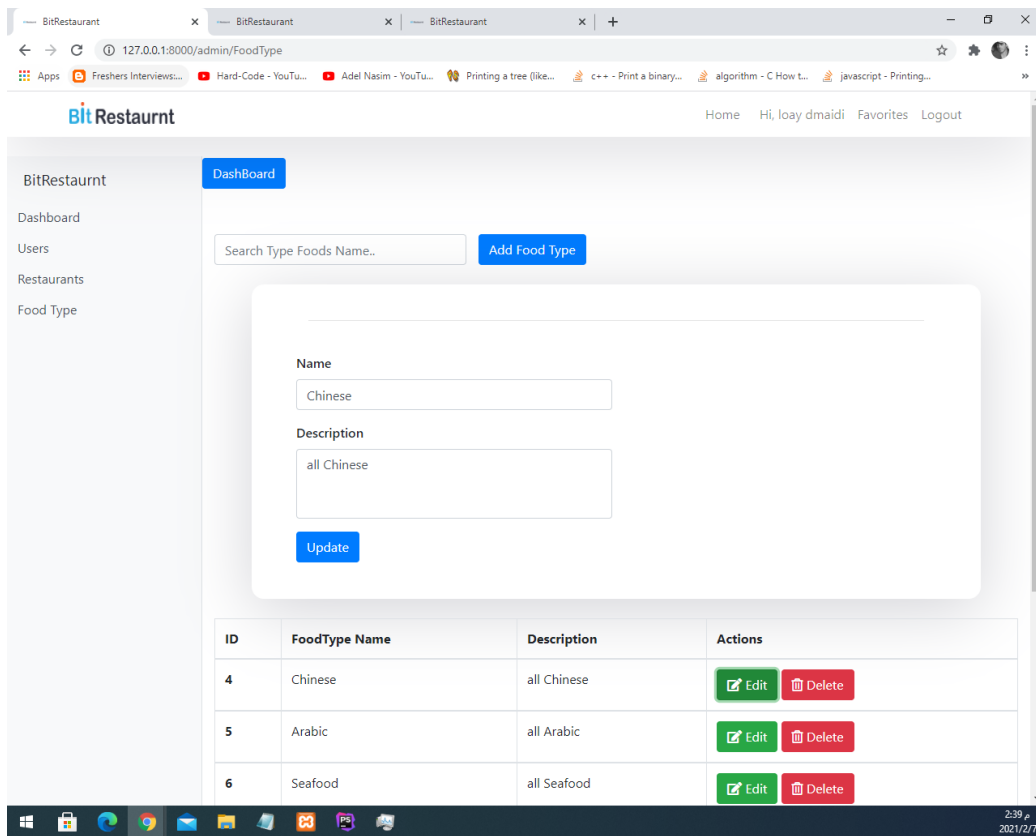


Figure 4.31: Edit Food type

Chapter 5

Results and Discussion

This project is a web application that allows its users to know information about restaurants in its area, such as menus, type of food served, and restaurant address, and it makes it easier for them to know the services provided by restaurants and deliver food orders without a defect in the order such as delay or failure to deliver the correct order as happens in the traditional way. Over the phone, it gives users the ability to rating and reviews restaurants and can add them to their favorites list. It also provides the user with recommended meals based on what suits him and provides him with the most recent meals and the ability to obtain appropriate healthy meals. The web application is easy to use so everyone can deal with it easily. As the design is easy to use in addition, we have ensured that the design is simple, responsive with the sizes of the screens and purposeful. It also benefits restaurant owners as it reduces material losses by reducing the occurrence of errors in orders and improving the image of the restaurant, reducing the effort and time of the restaurant manager in receiving orders, and increasing profit due to increased orders when using the web application.

Chapter 6

Conclusions and Recommendation

6.1 Conclusions

This project provided us with knowledge about frameworks and API, and thus we can draw the following conclusion:-

- Learning vue js framework which is good for the front end.
- Learning laravel framework which is good for the back end.
- Learning to deal with API.
- Learning the single page application principle.

6.2 Recommendation

- Better to follows Systems development life cycle to reduce problems.
- We recommend using vue js with front end and laravel with back end for good project.

6.3 Future Work

- Spread this app on the international stage.
- Working to create an application for smartphones, which has become a part of our lives and everyone uses it.
- Log in by linking with social media.
- Make reports and invoices for orders and print them.
- Implement artificial intelligent algorithm in recommender system.
- Establishing a chat system between users and restaurant managers and developing the site so that customers have the ability to make comments and interact on the meals provided by the site

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