PROJECT REPORT

RestroWeb- by Anshuman Kumar

PROBLEM STATEMENT:

The food and hospitality industry is increasing at a tremendous speed. As a result restaurants are witnessing an increase in the no. of customers. Online modes are important but a flawless dine in experience is also something which customers lookout for. Restaurants have food delivery apps to help them somewhat create an online presence but as the business gets bigger ,things become harder to manage . Especially out of the online world , in the real world also restaurant operations face challenges like keeping record of the orders, billing errors, misplaced orders , menu management , staff co-ordination and inventory issues management .**RestroWeb** addresses these problems along with online functions .especially it addresses the real world problems which makes it standout as this space is where its innovation lies as this space has not been addressed before.

PROJECT GOALS:

The project aims to provide a powerful **platform for restaurants** to scale up their efficiency and performance thereby leading them to increase their revenues .

More specifically it helps by :-

Providing easy and efficient way of noting orders for waiters

Keeping record of orders

Providing forum for posting inventory shortcomings

Management of the menu and the item prices

Improvement by enabling customers to post reviews

Providing platform for Online orders

★ Providing nutrition details of the dishes in just a click , a feature that will attract today's increasing health savyy audience and also helps customers who don't know about a particular item in menu.

METHODOLOGY:

RestroWeb has two types of accounts :normal user and staff

The staff will use the website to enchance the workflow in restaurants.

The waiter can use the website to note orders , by going to the note an order tab . Here a very user friendly interface is provided similar to apps like Zomato etc. here he enters the table no. and enters the order easily after which the order is registered in the system with automatic billing. Also the interface includes an **innovative** feature which with just one click the nutritional values can be accessed and shared with customer.

The existing orders tab can be used to track the orders, which provides user friendly interface to see the unattended , attended, unpaid or paid orders with the details and mark them paid or attended when done so.

The inventory tab provides a forum for all the staff to post any shortcomings observed by them ,like a chef may post that a stove is not working etc. It also provides option to mark the posts as resolved and keeps a history of resolved and unresolved issues.

Reviews tab can be used to assess the reviews by customers.

The nutrition tab to search any dish for its nutritional values.

For a normal customer, three tabs are provided one is to enable them post an order and the user friendly interface includes a check nutrition feature(stated earlier), a tab to post their reviews and the nutrition tab similar to the previous one mentioned.

TECHNICAL DETAILS:

Bootstrap,MongoDb , Express , Node js , ejs templating , mongoose and other libraries were used.

The project is a full stack project with API also being used in it.

Embedded Javascript templating was used to manage the frontend.

Node js was used for backend. POST and GET requests were used to communicate to the server according to the functionality. Server would reply back with the data or perform any needed operations.

Custom routing parameters were also used for various operations.

MongoDB was used for database. Four tables were used :

Database name : RestroWebdb

Menu : To store the items and the details

Reviews :To store the details of the reviews posted by the customers

Orders: To store the order details

Customers: This was used to store the details of the users(2 types of users distinguished by the attribute:type - “staff” or “user”)

User Authentication and session also integrated with the help of Passport js.

It was ensure through it that the normal accounts don’t get access to pages for staff.

Mostly Bootstap was used for designing the webpages and giving it user friendly interface.

A very interactive interface was created instead of the conventional enter id etc…

API was used for the nutrition details

CHALLENGES FACED

One of the big challenges faced were the note an order page(“staff” accounts) and order page(“user” accounts).

The challenge mainly lied in ensuring that I display the items sorted in types(ex. Starters, dessert, etc.) and within the type the items are sorted according to the cuisines ,along with it the interface including +/- buttons to adjust the quantities. To make things more complex the automatic cost totalling feature also had to be implemented. Then It was also needed to create an array of pairs to be sent to the server to register the order which also made it more challenging.

However this challenge was overcome by complex code on server side and on the frontend .The DOM was used on frontend to solve problems like totalling.

On server side items were divided and sorted according to their groups and sub groups. These were however bit tricky to implement. Basically I assigned preference in the usual order(ex. Starter first) and then grouped them then I used the Filter function .