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WEBSITE ON RESTAURANT MANAGEMENT SYSTEM USING VUEJS AND NODEJS BACKEND

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Abstract - *This project entitled "Website on Restaurant Management System" designed with mongo DB and NodeJS framework for Backend and vuejs for frontend. There are different features like an admin can add new food items, can view the orders, and can remove the unavailable food items from the order list. User first have to log-in then they can order the food and can view the process of food preparation if the user is facing any problem then they can give their review with the help of feedback process. This project is designed to reduce the manual work as much as possible and improve the features of the restaurant. The website is capable of maintaining and managing the food order, events, and table booking. This website has been made in a user-friendly interface. Through the place ordering menu, the customer can simply click and order the food. The notification module tells the customer about the activities performed. Also tracking module track the order. This system entirely reduces the unnecessary time.*

Key Words: **JavaScript Framework, Vuejs, Nodejs, MongoDB.**

1. INTRODUCTION

JavaScript framework are tools designed to speed up development and organize code used to build modern web apps. They exist to solve problems more directly rather than providing an open set of tools like most libraries do. Vuejs is an open source framework mainly used to build user interfaces.

This framework is simple enough to learn its documentation is simple and understating, you can easily download it and get yourself going. It is quite flexible and gives liberty to the user to write his template aim html file, JavaScript file and pure JavaScript using virtual nodes.

Node.js is an open source server environment. Node.js runs on various platforms (Windows, Linux, Unix Mac OS X, etc.). It uses JavaScript on the server. Node.js eliminates the waiting, and simply continues with the next request. It runs on single threaded, non-blocking, asynchronously programming, which is very memory efficient.

MongoDB is a NoSQL database which stores the data in form of key-value pairs. It is an Open Source, Document Database which provides high performance and scalability along with

2. DETAILED PROBLEM DEFINATION

The food industry is a high-risk business proposition. You've got a lofty level of competition and a lot of details to perfect. According to an often-quoted study, 60% of businesses fail in the first year. How do you ensure your restaurant's success?

You can help increase your chance of success by understanding seven of the surprisingly common problems restaurants face and developing strategies to combat these issues.

In a normal Restaurant Management system, a person first has to look for the table and if all tables are booked, he/she has to wait unlit it gets vacant then order their food and have to wait for its preparation. But in online restaurant management system the customer just needs to select the food items then select the payment method and place the final order and food will be delivered. Now comes the managers work in manual management system the work load of manager is more complicated as he/she needs to keep the record of all ordered food items and payment. It become very difficult to manage the restaurant manually, to overcome those problems online methods are being used, here the calculation of ordered food and how may food have been ordered per day/month becomes easier. The manager can easily add new items, remove food items, and view food orders. Many owners fail to pay enough attention to marketing making this a common problem in the restaurant world. Following are a few areas to attend to now in order to avoid the pitfalls that not-enough marketing incurs:

Formalize your brand standards. This includes mission statement, logo, graphics, guidelines, etc.

Make a marketing plan. Daunting? Start small and work up to a six month or yearlong plan.

3. EXISTING SYSTEM

If the restaurant manager is facing several problems with restaurant marketing the manager should prefer going with the online restaurant management process. There are several other system or web app for online food ordering system. Some of them are: Zomato, Swiggy, UberEats – These are the system which handle various features of restaurant management system but it has a chain of restaurant at the back which is a big advantage for both the restaurant managers and the owner of the system. There are different

features in different system some are good in quality of food and some in quantity.

4. MARKET SURVEY

The global online food delivery services market size was valued at USD 23,539 million in 2018 and is expected to register a CAGR of 15.4 % over the forecast period. The increasing use of smart phone and internet penetration are contributing to the market growth. The growth of the overall food delivery industry that allows customers to order food from an array of restaurants is playing a pivotal role in driving the market growth the expansion of delivery aggregators such as Zomato and swiggy in the Indian market over the last couple of years has future contributed to the market.

5. ARCHITECTURE

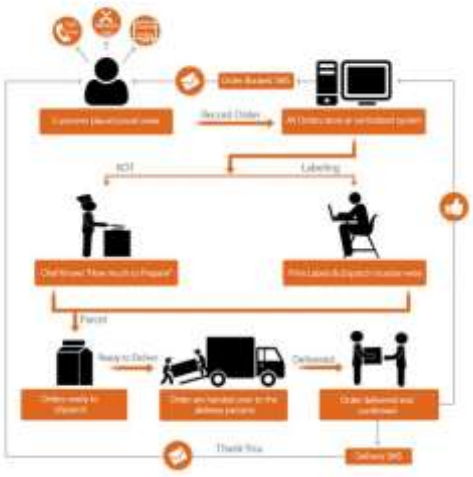


Fig -1: Architecture Diagram

The proposed system is implemented using request-response model. The system architecture is shown below: The whole system is divided in two module

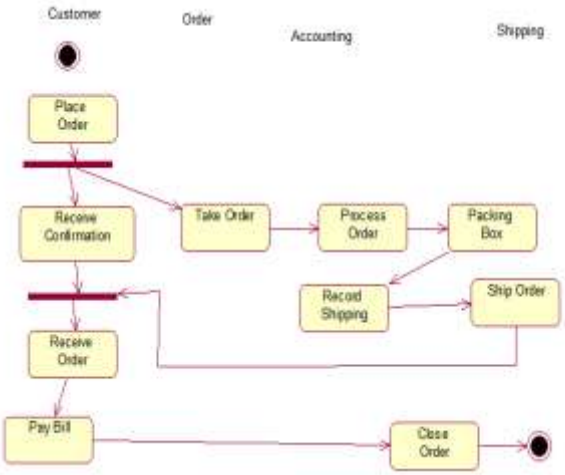
1. Admin module: In this module only admin is the authorized person who can access the data handle the data. Other then admin any other person is unauthorized to access the module. The admin is actually the manager of the restaurant. All the facility provided to the manager can be controlled by the system.

2. Client module: In this module the customers can perform different activity such as ordering food, booking table, tracking food process, payment method, etc.

6. WORKING

The activity diagram given below shows the working of the System.

The Customer logs in or registers into the website and may use services such as viewing the food items, ordering a food, or cancelling the order. Also, the admin can add food items, remove food items from menu. The admin can access all recent orders and many more. Our Website being a single vendor website, can be trusted on the quality of the food. It wouldn't vary as it being sold from a single vendor. The website being made in JavaScript framework is a light-weight, responsive and user-friendly website. Working part of our project consist of



Injector – is a dependency injection micro framework, used to implement dependency injection design pattern in formal and pretty way also in a web style.

Adapter - builds structure for the code

Singleton class (only one object of the class can be made) - helps to save memory

Saga - used to handle fetch calls

redox - global access of the data for multiple component and can be used to avoid useless calls to the API intern increasing speed.

CONCLUSIONS

1. The projects entitled" Restaurant Management System" has been proposed to be implementing to replace the manual system. The developed system accomplishes all the objectives stated for the need for the change of the system.
2. The outputs produced seem to satisfy all the users but it will definitely take to look forwarded for the real consequences the new system could produce.
3. This project was made user-friendly by the use of visual basic enabling the user to interact easily with the database.

4. It also enabled the platform to serve the needs of emerging information technology trends and needs.
5. Digital restaurant menu brings tremendous benefits to everyone. It brings benefits to restaurant managers by saving money and time and thereby, making enhanced profit for the business.
6. It brings benefits to Restaurant guest by providing an easy and comfortable food ordering and payment experiences.

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