GLA UNIVERSITY

TOPIC: Full Stack project SYNOPSIS ON Restaurant Management App

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Submitted to

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DECLARATION

We hereby declare that the project entitled as "**Restro**" submitted to the GLA University, is a record of an original work done by us group-mates under the guidance of **Mr. Akash Kumar Choudhary**, and this project work is submitted in the partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Computer Science & Engineering. The project work have not been submitted to any other University or Institute for the award of any degree or diploma.

Acknowledgement

It gives us a great sense of pleasure to present the synopsis of the B.Tech mini project undertaken during B.Tech III Year. This project is going to be an acknowledgement to the inspiration, drive and technical assistance will be contributed to it by many individuals. We owe special debt of gratitude to Mr. Akash Kumar Choudhary, Technical Trainer , for providing us with an encouraging platform to develop this project, which thus helped us in shaping our abilities towardsa constructive goal and for his constant support and guidance to our work.

His sincerity, thoroughness and perseverance has been a constant source of inspiration for us. We believe that he will shower us with all his extensively experienced ideas and insightful comments at different stages of the project & also taught us about the latest industry-oriented technologies. We also do not like miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind guidance and co-operation.

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INTRODUCTION

A restaurant management system is a type of software that has been specifically designed for within the restaurant industry. It is a technology that enable a single outlet or enterprise to better serve its customer and aid employees with food & beverage transactions and controls. It is a complete solution, beginning with inventory, stock, billing and tax reports. The user interface is carefully optimized for high speed input of a customer order and the prevention of common mistakes. Payments also accepted through the app. It is also helpful for restaurant employees to check the inventory, customer orders and their timings.

The restaurant management system project involves designing and developing a software application that will help restaurants manage their operations effectively. The system can be customized to meet the specific needs of a restaurant, such as menu customization, table layouts, and more.

Overall, a restaurant management system project is an important undertaking for restaurants looking to improve their operations and provide a better dining experience to their customers and make the work easy for employees.

It's easy to install and easy to use.

Primary Reason to Choose This Project

The primary reason to choose a full-stack restaurant management system project is that it provides a comprehensive solution for managing all aspects of a restaurant's operations. A full-stack system includes both front-end and back-end components that work together to provide a seamless experience for both restaurant staff and customers.

Here are some reasons to choose a full-stack restaurant management system project:

- Integrated Functionality: A full-stack system includes all the necessary components for managing a restaurant, such as order taking, billing, inventory management, table reservations, and employee scheduling. All these functions work together seamlessly, allowing restaurant staff to easily manage their day-to-day operations.

- Improved Customer Experience: A full-stack system can improve the customer experience by providing a user-friendly interface for placing orders, making reservations, and providing feedback. This can help increase customer satisfaction and loyalty.

The Main objective of the Project.

The main objective of a full stack restaurant management system project is to provide a comprehensive software solution that streamlines and automates all aspects of a restaurant's operations. The project aims to develop a system that enables restaurant owners and staff to manage day-to-day operations more efficiently, reduce errors.

Some of the key objectives of a full-stack restaurant management system project include :-

- Order Management
- Billing Management
- Inventory Management
- Employee Management
- Mobile Support

Overall, the main objective of a full-stack restaurant management system project is to provide a comprehensive solution that improves the overall efficiency and profitability of the restaurant while enhancing the working enviroment for resturant employees.

Scope Of the Project

The scope of a full stack restaurant management system project can vary depending on the specific needs of the restaurant.restaurant management system app has a wide scope and can benefit restaurant owners and managers by providing a comprehensive solution to manage all aspects of their business. With the ability to customize the system to fit the specific needs of each restaurant, it can improve the overall customer experience, increase efficiency, and help drive profitability However, generally, the scope of the project will include the following:-

- Front-end development
- Back-end development
- Security and compliance
- Mobile support
- Customization

Working Methodology of the Full stack chat Project.

The working methodology of the "Restro" project is very simple and easy to understand. The project is developed using the MEAN stack. The MEAN stack is a collection of JavaScript-based technologies used for developing web applications. The MEAN stack includes the MySQL database, the Express.js web application framework, the AngularJs web application framework, and the Node.js runtime environment.

The project consists of two parts: the front-end and the back-end. The front-end is implemented using AngularJs, and the back-end is implemented using Node.js. The front-end of the project is responsible for the user interface and the user experience. It handles all the user inputand output, and it communicates with the back-end using the NodeJs with Express framework. The back-end of the "Restro" is responsible for the business logic and the data storage. It communicates with the front-end using the Node.js Express.js framework.

Completion of the project would take around 2 to 3 weeks.

Week 1:

In the 1st week, we would be working on the development and designing of the project as per the client requirements.

Week 2:

In the 2nd week, we would be working on the development and designing of the project as per the Front-end.

Week 3:

In the 3rd week, we would be working on the development and designing of the project as per the Back-end.

Details About the Hardware and the Software

*S**oftware and hardware requirements*

- A Mac, Linux, or Windows 10 or Windows 11 computer

- An internet connection

- A web browser like Chrome or Microsoft Edge

Frontend and backend

- Front-end– Html, Css, JS, Bootstrap, Angular JS

- Back-end - NodeJs, SQL

Project description

The purpose of this project is to develop a back-end application for restaurant Management . It allows multiple users to interact with each other where they can chat.

The project is divided into 3 modules – Sign-In, Sign-up, Dashboard. The roles of the modules are as follows:

- **Sign-up:**

The sign up page allows a user to create an account by their credentials to gain access to application

- **Sign-in:**

The login page allows a user to gain access to an application by entering their username and password. A user navigates to an application and is presented with a login page as a way to gain access to the application.

- **Dashboard:**

This is where user can see themselves to the very first interface of the application . Interface is different for admin and customer.
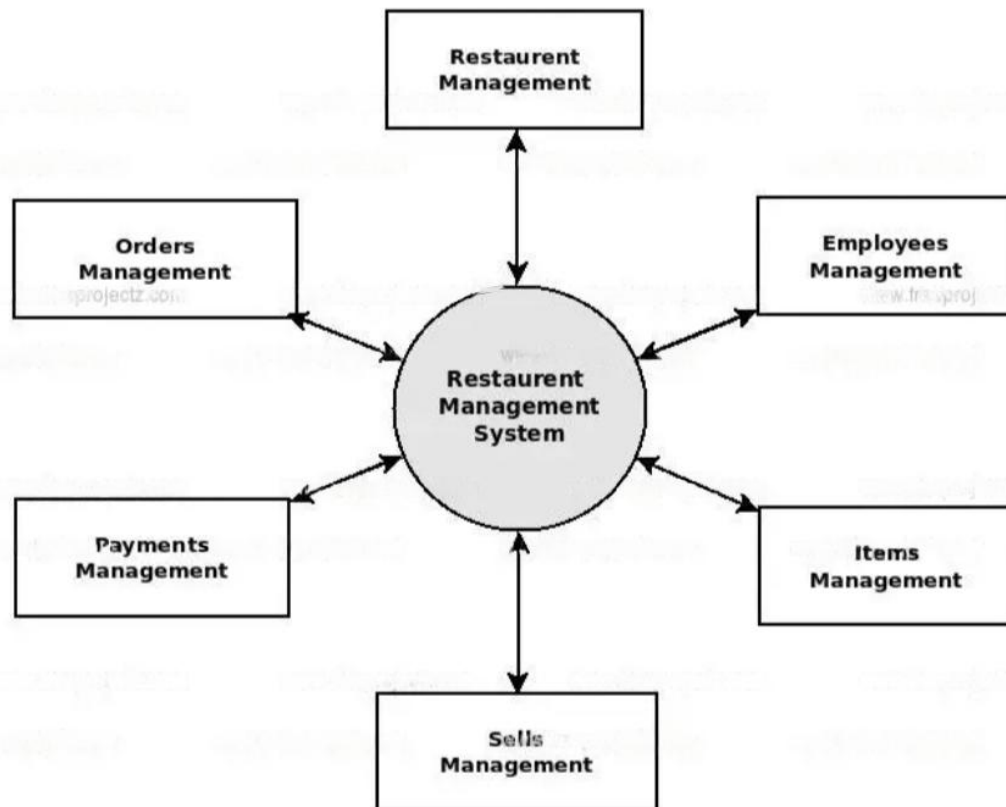
Admin Dashboard :-

- User management: The admin should be able to manage the restaurant's staff and assign different roles and permissions to them.
- Menu management: The admin should be able to add, update, and delete menu items, as well as manage their prices, descriptions, and availability.
- Order management: The admin should be able to view and manage all incoming orders, including the customer's details, order items, payment status, and order status (e.g., preparing, ready for pickup, delivered, etc.).

- Sales and revenue tracking: The admin should be able to track the restaurant's sales and revenue over time, as well as generate reports and analytics on sales trends, customer behavior, and menu performance.
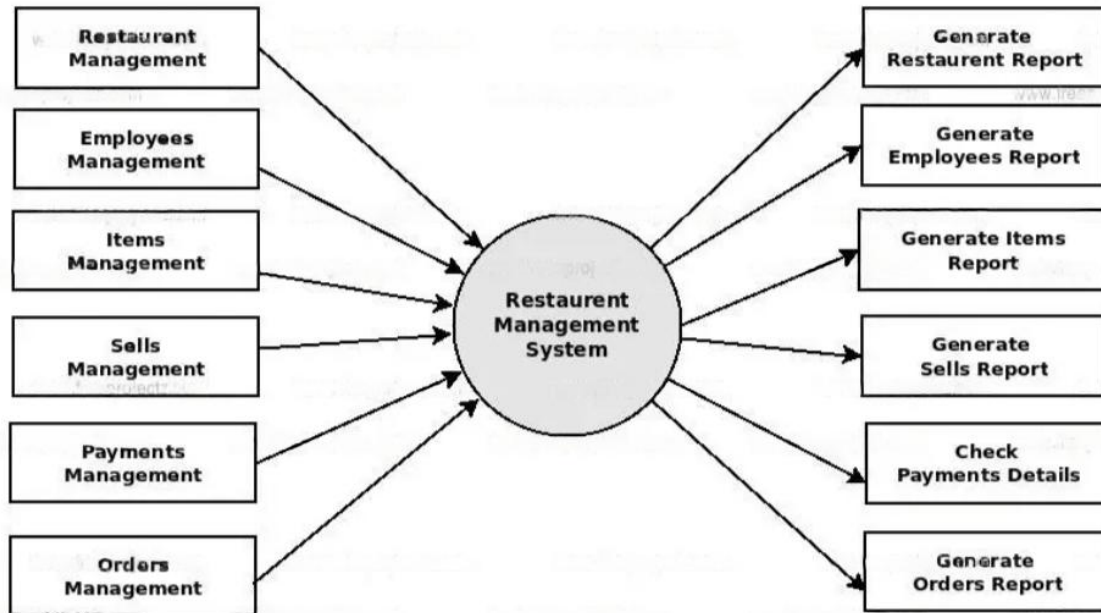
Customer Dashboard :-

- Menu browsing and ordering: The customer should be able to browse the restaurant's menu, view item details and images, and place orders for delivery or pickup.
- Payment management: The customer should be able to pay for their order using various payment methods, such as credit card, PayPal, or cash on delivery.
- Profile management: The customer should be able to create and manage their account, update their personal and delivery information, and view their order history
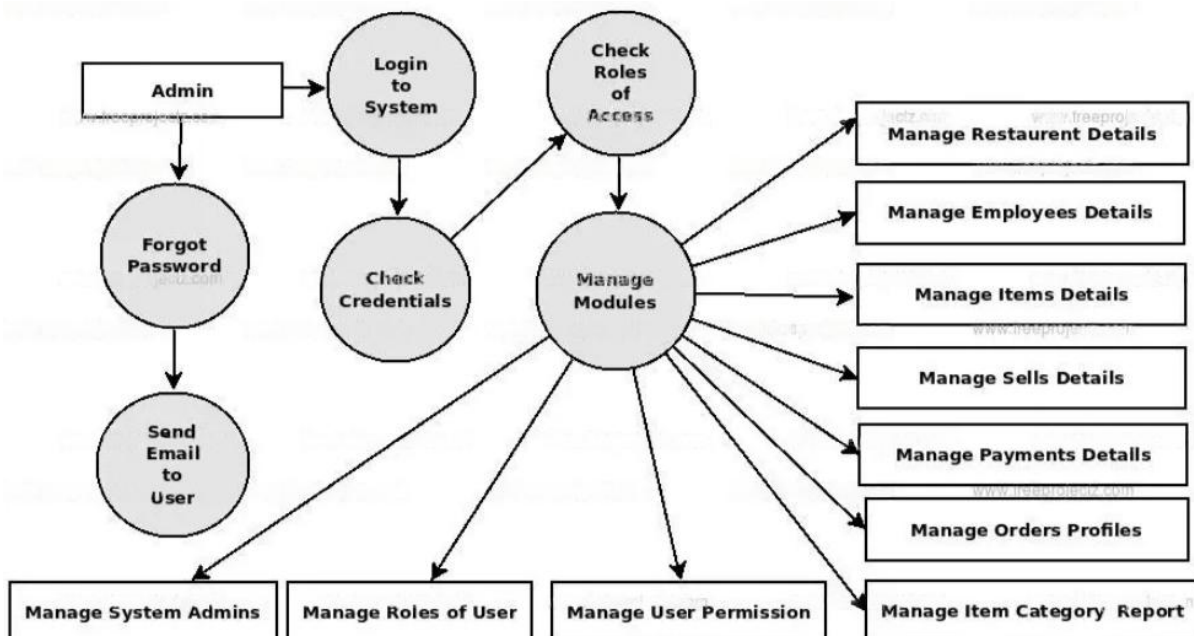
Data Flow Diagrams

0 Level DFD

Zero Level DFD - Restaurent Management System

1 Level DFD

Restaurent Management		Generate Restaurent Report
Employees Management		Generate Employees Report
Items Management	**Restaurent Management System**	Generate Items Report
Sells Management		Generate Sells Report
Payments Management		Check Payments Details
Orders Management		Generate Orders Report

First Level DFD - Restaurent Management System

2 Level DFD

Admin → Login to System → Check Roles of Access

Forgot Password

Check Credentials

Manage Modules

Send Email to User

Manage Restaurent Details
Manage Employees Details
Manage Items Details
Manage Sells Details
Manage Payments Details
Manage Orders Profiles
Manage Item Category Report

Manage System Admins
Manage Roles of User
Manage User Permission

REFERENCES

Books:

- Full-Stack

  Modern Full-Stack Development

  Pro MEAN Stack

- Full-Stack React Projects

Websites:

- https://AngularJs.org/

- https://www.w3schools.com/

- https://getbootstrap.com/

- www.google.com

Faculty Guidelines:

Mr. Akash Kumar Choudhary (Technical Trainer , GLA University)

GitHub Repository link:

https://github.com/iamsam0945/Restro