 **A STUDY ON THE**

**RESTAURANT MANAGEMENT**

**SYSTEM**

**PROJECT REPORT**

**Submitted by**

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**CHAPTER 1**

1. **Introduction**

Restaurants are a vital part of the food services industry, serving customers with a variety of meals, drinks, and experiences. However, managing a restaurant can be a complex task that involves multiple processes, such as inventory management, menu planning , order, generating bills , and customer service.

We have decided to create a system for restaurants. This system is well known as **Restaurant Management Services**. **The Restaurant Management System (RMS)** is a software solution that can streamline these processes, enabling restaurants to operate more efficiently

* 1. **Background Study:**

Traditionally, restaurant management involved a lot of manual processes and paperwork, which made it time-consuming, error-prone, and inefficient. For instance, ordering food supplies from suppliers required phone calls, faxes, emails, which often resulted in miscommunication and delays. Managing customer orders involving manually taking orders from customers and sending them to the kitchen staff. This process could be slow , and errors could occur during the transfer of information, leading to incorrect orders and unsatisfied customers.

Restaurant Management Systems have been developed to streamline these processes and improve efficiency. These systems perform various task to manage orders, track inventory, and generate bill . RMS also provides real-time updates on customer orders, and other restaurant-related events.

RMS has several benefits, including increased efficiency, accuracy, and cost savings. For example, by efficient inventory management, restaurants can reduce the risk of overstocking or running out of supplies, leading to cost savings. By automating the ordering process, restaurants can reduce the time taken to process orders and improve accuracy, restaurant operators can make informed decisions about business operations, such as menu planning and employee scheduling.

In summary, implementing a Restaurant Management System can significantly improve the efficiency and effectiveness of restaurant management , leading cost savings, increased revenue, and customer satisfaction.

* 1. **Statement of Problem(SOP):**

Some potential problems and challenges in restaurant management that the proposed system aims to solve may include:

1. **Inaccurate inventory management:**

Manual inventory management methods can be error-prone, resulting in overstocking or stock shortages, which can lead to wasted food, increased costs, and lost revenue.

1. **Ineffective employee scheduling:**

Scheduling employees manually can be a complex and time-consuming task that can lead to understaffing or overstaffing, both of which can negatively impact restaurant operations and profitability.

1. **Limited access to teal-time data:**

Traditional restaurant management methods may not provide real-time access to important data, such as sales reports, inventory levels, and customer feedback, which can make it difficult for restaurant operators and managers to make informed decisions about business operations.

1. **Poor customer service:**

Long wait times, inaccurate orders, and other service-related issues can lead to customer dissatisfaction and negative reviews, which can harm the restaurant's reputation and profitability.

* 1. **Objective**
* To maximize profit by increasing efficiency without compromising customer satisfaction.
* To reduce the time and cost associated with restaurant management through the use of RMS.
* To avoid paper-based system and improve communication.
* To provide fast and efficient services to the customer.
* To provide a platform that enables user to manage orders, track inventory, schedule employees and generate bills in real-time.
  1. **Questions**

* How to maximize profit?
* What can we do to reduce the time and cost associated with restaurant management through the use of RMS?
* How to avoid paper-based system?
* How can we provide fast and efficient services to customer?

**CHAPTER 2**

**Requirement Engineering**

* 1. **Feasibility Study**

1. **Technical Feasibility**

The proposed system will be made using modern frontend and backend technologies. Suitable database will be used for data storage. Every of the technical requirements for the proposed system is feasible.

1. **Operational** **Feasibility**

The proposed system is operationally feasible because of the following reasons.

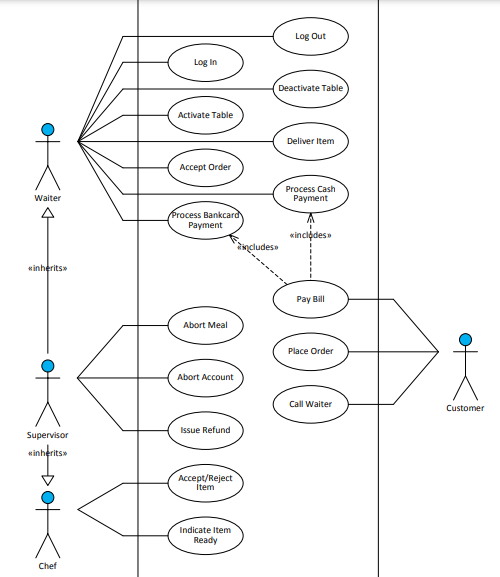
* Users can meet their expectations in a shorter time
* The restaurant is located in an area that is easily accessible to customers and suppliers
* Adequate parking and public transportation
* The staff are properly trained and experienced in food service

**2.2** **Requirement Analysis**

The requirement of the system to meet all the objectives will be discussed among the team members and supervisor. User experience and usability is kept on the top priority while listing the project requirement

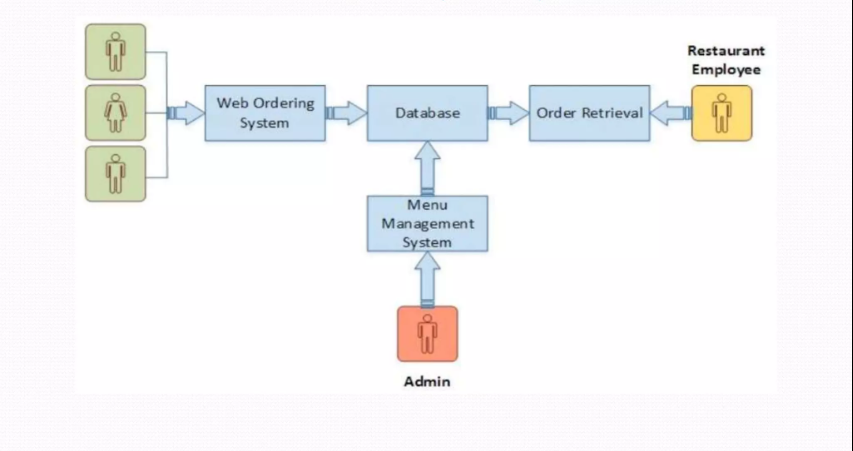
**2.3. Design**

**2.3.1 Use case design**

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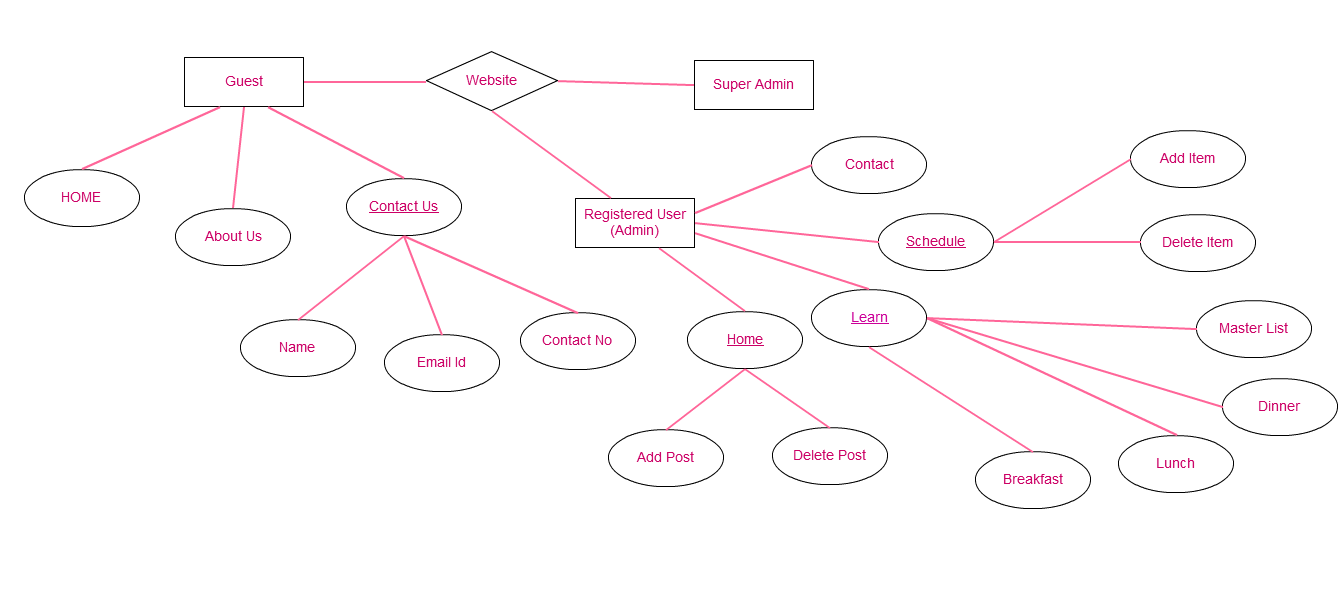
**Fig: Use case diagram**

**2.3.2** . **Data flow Diagram**

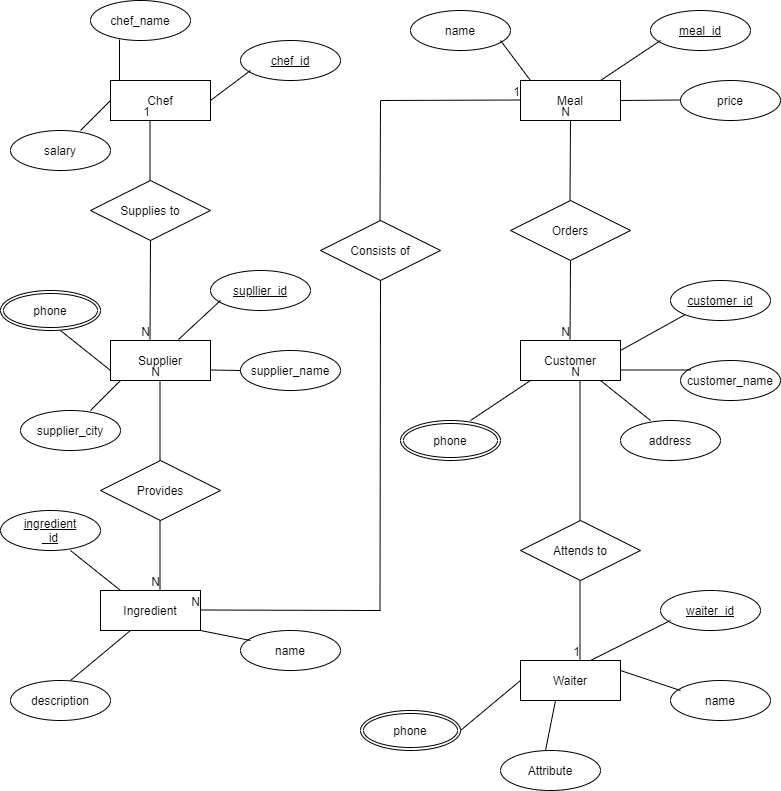


**Fig: Data flow Diagram (DFD)**

**2.3.3 Entity Relationship Diagram**

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1. **ER diagram guest and Admin**



1. **ER diagram of Meal**

**2.4. Implementation**

1. **Software requirement**

There are numerous of software used in the development of this system.

Basic Software requirements necessary for the smooth functioning of this project are as follows:

* Operating System :Any (Windows, MacOs, Linux)
* Text editor
* Web browser :any
  1. **Tools and Technique**

The framework and language to be used for the project is not yet decided. Frameworks of preference are as follows.

* Fronted

**HTML, CSS, Java Script**

* Backend

Framework-**Django**

Database used-SQlite, MySQL

1. **Hardware requirement**

* **Processor:** A multi-core processor with a clock speed of at least 2.0 GHz or Higher is recommended
* **RAM:**  Minimum 4GB of RAM
* **Storage:** A minimum of 10GB of free disk space is recommended

**Conclusion:**

The implementation of a Restaurant Management System has been proposed to replace the manual system. This project was made user friendly by using basic visual enabling the user to interact easily .

**Reference**

1. DOI :

Carl Abernethy, <https://www.academia.edu/36675814/Restaurant_Management_System>, 5th May 2010

1. DOI:

https://www.slideshare.net/joilrahat/restaurant-management-presentation?from\_action=save