

# Smart system for mess ordering

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**Abstract**— This paper discusses Web based system to develop online mess ordering system in which the system identify and locate nearby mess providers which have registered via system, user can order food and rate their service experiences through this system by reviewing and rating. Our system opens ways to business for mess providers and customer satisfaction for users who use our system to order food. User can search for different varieties of mess providers and sort them according to price, ratings or type of food prior to their location. This web system provides an easy and friendly way towards digital commerce. This could light up new ways of entrepreneurs and opportunities for today's competitive world. In the current module, the system which are used by the user for food services, and other day-to-day activities are present in applications with the respective module.

**Keywords** — *Online services, Rating system, mess services, k-means, location system.*

## I. INTRODUCTION

In past few years addition to starting rental sites, various system like booking, guests, hotels, flats, etc., which deal in their respective areas, have been solved. Some well known applications are Nest ways, OYO Rooms etc. When people felt the need to find restaurants, they created another application to eliminate the problem of restaurant research. Some of the applications in this area are ZOMATO, FOODPANDA, etc. These systems are perfectly good in their respective areas. In current system hotels services are digitally active were as traditional mess services lag behind, basically our system tends to digitalize mess service to fully automated service which will be guided by each instances of the system. Our aim is to create user friendly and easily accessible platform to interact with mess services, mess services don't have a platform for advertisement and make themselves aware among the busy

crowd. New comers to unknown place for job, study, travel, etc. usually facing the problem in finding mess services near to their location, also the one who leaves in hostel don't always get food for their budget or a satisfactory canteen service they look for external food source and end up having unhealthy junk food or having overpriced food from restaurants That motivates us to develop an web system to Resolve these issues and increase the good service and customer satisfaction by taking advantage of current services.

Many system will interact with user's location with the help of 'GPS' and provide information of active mess services prior to their location. They use 'K-means algorithm' to find the shortest path to measure nearest mess. By using this web system user can give their review based on their order history which will validate good service practices among mess to compete for higher

ratings. Thus our system provide platform for advertise and interact-action between mess and customers and vice versa. Filters are added to sort on bases of user's requirements, such as sort by ratings, popularity, price, Veg or Non-Veg, nearest, etc.

Globally, it is known that in today's market, it is extremely difficult to start a new small business and live in a competition between well-established and settled owners. In fast paced time of today, when everyone is squeezed for time, the majority of people are finicky when it comes to placing a food order. Today's customers are not just attracted, because keeping orders online is convenient, but they have visibility in order for their offers, prices and extremely easy navigation. Online ordering system that we are proposing here, greatly simplifies the ordering process for both the customer and the restaurant. The system offers interactive and updated menus with all the available options that are easily accessed. Customers can select one or more items to order in the cart. Customers can view the cart details of all orders before checking out. At the end, customer gets order confirmation details. Once ordered, they are entered into the database and they are retrieved in real time. This allows mess Employees to quickly go through the orders as they are received and process all orders efficiently and effectively with minimal delays and confusion.

Let us discuss the previous article and how to implementing effective our system using the methodology of k-means. The k-means is effective algorithm for clustering and understand nearest nebour or nearest location also its advantage and benefit over the other system.

## II. LITERATURE REVIEW

In order to analyze the background of current system, material surveys are mainly done, which help in detecting existing system flaws and the

problems that can be solved are not problematic. Therefore, the following topics not only describe the background, but also offer problems and flaws to offer solutions and problems and motivate them to work on this project. Various research has been done on collective behavior. The next section analyzes different references that collectively. There are many system developed on restaurant management so to take an idea about all process we reviewed various papers on restaurant management, various algorithms and various android system which are in market. The waiter used traditional food order processing by bringing a paper-based menu to the guests, and then waiting for the guests to select an item from the menu and in many full-service restaurants that started sending the order to the waiter. This process is usually required to sit in a restaurant as a facilitator for sitting and ordering guests. A traditional paper-based system is one of the most commonly used food ordering systems. All entries in this system are stored on paper. The main drawback of this system is that[13]. To reduce service costs and to increase customer experience, invest a few restaurants in the Service Volunteer system. Automatic systems used to capture food order from guests were in many formats but most of them are electronic. The order of the first waiter to order order to accept the input of the device and the user's input with the screen presenting the menu takes the order. After ordering, the machine should enter the system where the order should enter the PC in that order [8].

The leak service needs to provide customer service certification and better service to improve the quality and quality of services. We use review and ratings in this application so that customers will get better service based on the rating given by their customers on their order history. Reviews are ways to give feedback and views of users' experiences. On the basis of the review we are

confused and triggered to show top rated mess services [21], so that customers can get a good service[22].

Today, Android smart phones are very common and GPS is present in the 'Global Positioning System' [1] where high probability of using them in our application. [23] We use the Google Map API 'Application Interface' to get detailed geographic information to identify a mess around the user with certain radius. [2] Along with that, we use the Dijkstra Algorithm to track and detect close confusion. Since we are working on an Android smart phone, which has limited power supply.

In today's world, all family members are working members and office goers. They find less time to buy groceries, vegetables and prepare food on daily business. Many of them rely on restaurants, Tiffin providers, or office/college canteens. People from villages come to cities for their further studies and they find difficult to cook food on daily basis in hostels. Also, they need various choices on food and restaurant selection and find it difficult to search every other restaurant, compare food prices/menu items and order. Online catering home delivery service can bridge the gap for this. It can be single step solution where customers can have choices from different restaurants and home cooks for their daily meals. They can order and get their meals deliver to their offices & homes [14]. In the existing system placing any orders customers have to visit hotels or restaurants to know about food items and then place order and pay[13]. This method requires time and manual work. Lack of visual configurations placed properly on the order when the customer does not have a physical copy of the menu item while ordering on the phone. Each restaurant is required to order specific customers on the phone or individually, to offer a rich dining experience and to make payment payments [12]. In today's market, employment is increasing every day, when

employees are separated when needed. In this rough and shocking circumstance of life, people compromise on a large scale, quality and dietary diet, which can lead to obesity, diabetes, hypertension, cancer, etc. Many health problems like this occur. Most of the time, people living away from home exclude food or eat any type of fat junk food they can easily get. That's why all the service providers realized that increasing needs for all three services are increasing. But the distribution of these tiffins is very stable (i.e. they distribute food in your home only [6]. In the beginning, in the nominated Zomato food in 2008, Mr. Deepinder Goyal has started. It is a restaurant searching platform that offers In depth details with autonomous reviews and ratings. Foodie bay, in November 2010, the initial name changed to Zomato so that their growth would increase among the people. To distinguish themselves from their opponents, Zomato focuses on connecting PPX. From 18,000 new places to eat. Along with that he has directed special dishes or opening times [11][12].

### III. PROBLEM DESCRIPTION

The system sets up a food menu online and customers can easily place the order as per they like With food menus, online customers can easily track orders. The management maintains customers database, and improve food delivery service. The systems motivates us to develop the system. There are various facilities provided to users of the system effectively. Also, the system considers Mess facility to the customers. Again, the idea comes that mostly mess users are person who are shifted for various reason in new cities. So, they are interrelated. Increasing use of smart phones is also considered as a motivation, so that any users of this system get all service on single click. Users can provide feedback and recommendations and can give rating. For more secured ordering separate accounts are

maintained for each user by providing them an ID and a password.

**IV. SYSTEM ARCHITECTURE**

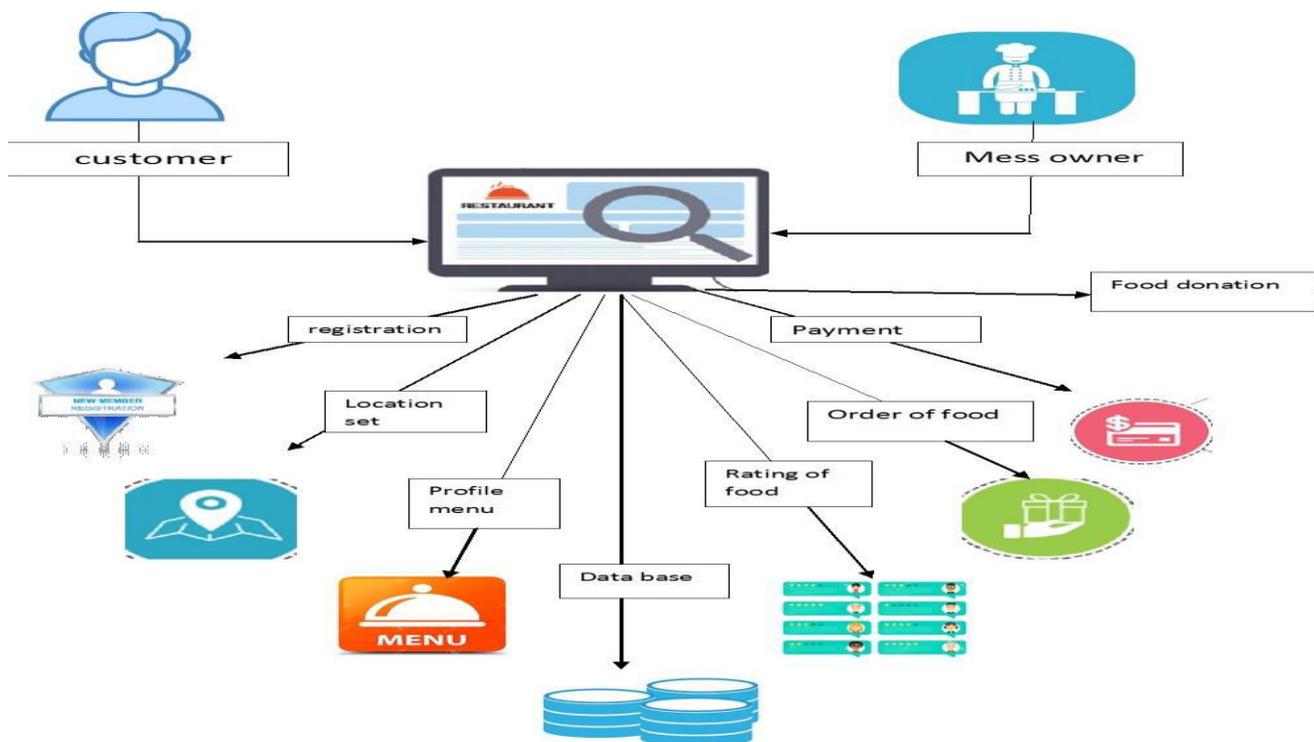
Architecture will simplify the system in such a way that every user will gets benefits of mess system are As shown in figure, there Figure show the System architecture of our system. Here, there are two users as Customer the one who takes the services of mess application & Mess owner the person who does their business using our system. User name and password is also provided to the customer for login of mess system. Our system will interact with user’s location with the help of GPS if not set then will set manually and provide information of active mess services to their location. The system with detailed information includes gender and food type Veg, non-Veg. When the employee login to the system it having the options includes add recipes, view recipes, message to the owner about the requirement food. By using this application user can give their review based on their order h which will validate good service practices among mess to compete for the higher ratings. After choosing the food customer will redirect to the ordering the food item which customer had selected in application. After the order of food customer go to the process of payment gateway where customer will have two option online delivery payment or credit card payment. All these information is stored in the data base system in mess application.

Components	Description
User Information	In these profile management module contains the information regarding to the customer name and also the mess profile including location of customer and its

	<p>detailed. Mess owner must register himself/herself through our application then only they are permitted to make their profile by uploading mess pictures, details, location, menu items with price, etc Users of the system, namely restaurant customers, must be provided the following functionality:</p> <ul style="list-style-type: none"> <li>• Create an account.</li> <li>• Manage their account.</li> <li>• Log in to the system.</li> <li>• Navigate the mess menu.</li> </ul>
<b>Nearest Location</b>	location tracking nearby mess services and provides mess and profile module. Whereas customer can view nearby mess profiles prior to their location with the help of Google map API. He/she can select mess based on their requirements and place their order
<b>Review and Rating</b>	It is very important to give customer validation to mess service and encourage the good service to improve the standards and quality of mess services. We use anonymous review where user name is not displayed but not all users can give review, only that customers who have their

	<p>order history from the respective mess can give review, thus it provides more faithful review. Reviews are the way to give feedback and views of user experiences. Based on the review we rate the mess and are triggered to show top ranked mess service.</p>		<p>final Total of the order.. User can then use a 'Proceed to checkout' button to proceed further.</p>
<p><b>Network Ordering System</b></p>	<p>Customers of the Web Ordering system will interact with the application through an easy to use top navigation menu.</p> <ul style="list-style-type: none"> <li>• "Home" menu option: allows the users to see all food items offered with nice images as well as select an item to place an order.</li> <li>• My Cart menu option: - Allows users to see details of the items placed in cart. Details include Item #, food Name, food, food Description, Quantity, Unit Price, Total per item and</li> </ul>	<p><b>Payment Portal</b></p>	<p><a href="#">Payment</a> issued to users as a system of <a href="#">payment</a> . It allows the cardholder to pay for goods and services based on the holder' promise to pay for them.</p>

Table.1.1.System Modules



**Fig.1.1.System Architecture**

**V.ALGORITHMS**

Input

P- the number of clusters

Q:a data set containing n objects

Output:

A set of P clusters

Steps:

- 1) Randomly select P data objects from dataset Q as initial cluster centers.
- 2) Repeat.
- 3) Calculate the distance between each data object  $Q_i$  ( $1 \leq i \leq n$ ) and all P cluster center  $sc_j$  ( $1 \leq j \leq P$ ) and assign data object  $Q_i$  to the nearest cluster.
- 4) For each cluster j ( $1 \leq j \leq P$ ), recalculate the cluster center.
- 5) till no change in the clusters center. The computational complexity of the algorithm is  $O(nPs)$

n: the total number of objects

P: the number of clusters

s: the number of iterations

**VI.ADVANTAGES**

1. The main advantages of the system is to donate food.
2. User can easily order any food at any time.
3. The proposed system is secured and user friendly system.
4. The payment can made online or cash on delivery system.
5. Online menu is simpler and easy to operate by a user.
6. Number of users or customers increases.
7. In these system customers are offeres discount.

## VII. Future Scope

Scope of the proposed system is justifiable because large number of people are shifting to different cities so wide range of people can make a use of proposed system.

More and more these system are using the web platform for food ordering. That means competitiveness is high in the market place As a result, the price of food gets lowered and it is a blessing for the customers. One engages customers online also offers promotions, rebates and discounts and that makes sure customer is loyal to the brand.

## VIII .CONCLUSION

In this paper our system shorten the gap between the customer and vendor by using online food ordering system. This system is not only serves the problems but it can be also looks after the choices or liking of the customer using the system in a new location. From the executive point of view it is rightly said "Time Is Money and it is valuable commodity". This system is provides the easy way towards mess service and this application is very beneficent for students, employees stay out of their home. Thus, implementation of online mess service is done to help and solve one of the important problem of people and it can be set up and easily place order. In this application it can be allow mess providers to create their mess profile and add item which can be view and order by customer. Customer can be rate and review their services and use more secure and user friendly payment method which would engage customer to use digital commerce.

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