ONLINE FOOD DELIVERY SYSTEM

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Abstract- *Food Industry has always been a profitable industry not only for manufacturers, suppliers, but also for the users, distributers of the recent changes in the industry and the increasing use of the internet. An Online food delivery system for the customer is our proposed system. Food can order online in a hassle-free manner through our proposed system from restaurants as well as mess services. The food order taking method from customer are improved by our system application. A food menu is set up online and as per their wish customers can simply place their order through the proposed system. Also, restaurants and mess services are recommended to the new customers based on the user rating through the proposed system and for the improvements with the quality, the restaurant/mess staff will be informed. For the initial implementation of the system application pay-on-delivery payment system is used. Separate accounts are maintained for each user for more secured ordering by providing an ID and Password.*

Keywords- Food, Per-Order, system, Restaurant, service, Online, ordering, software, Delivery, Dynamic Database Management

I. INTRODUCTION

The online food ordering system sets up a food menu online and customers can easily place the order as per they like. Also with a food menu, online customers can easily track the orders. The management maintains customer's database, and improve food delivery service. The Restaurant management systems motivates us to develop the system. There are various facilities provided so that the users of the system will get service effectively. Also, the system considers Restaurants as well as 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. Another motivation can be considered as the system will be designed to avoid users doing fatal errors, users can change their own profile, users can track their food items through GPS, users can provide feed and recommendations and can give ratings, it will give appropriate feedbacks to Restaurants/ Mess services providers.

Due to lack of a full fledge application that can fulfill the customer requirements by providing him food from restaurants as well as from mess service, there is a need for the system. This proposed system will be used by the people who keep shifting from cities to cities. As well as, it will be useful for the students studying in different cities.

The proposed system will provide the flexibility to the Customers/Users to order from either Restaurants or Mess. It will also provide Recommendations to the customers from the restaurants/mess owners uploaded on a daily basis. In the proposed system, there will be no limitation on the amount of order the customer wants. Also, same application can be used as a Startup Business for the developers. It will provide real time customers feedback and rating along with comments to the restaurant/mess owner. It gives appropriate feedbacks to users, so if there is any error happened, then there will be a feedback dialog toward users.

The proposed system is designed to avoid users doing fatal errors and inappropriate action. Scope of proposed system is justifiable because in large amount peoples are shifting to different cities so wide range of people can make a use of proposed system. The system/interface will take from the user. The major attributes that will give input to the dataset are: name, address, email-id, mobile no, other personal related values, etc. The output will include user/customer's Order, Bill, Feedback and Payment options. Initially there will be 10 to 12 restaurants and mess services inside 2 to 3 areas.
The reason why to choose this project is the idea behind project that is to solve problem of people which they are facing when they shift to different city. The system is not only for user but also for making efficient communication between consumers and producer of the food system which will then leads to the idea and effective system.

PROBLEM STATEMENT

The online food delivery system sets up a food menu online and customers can easily place the order as per they like. Also, the online customers can easily track their orders. The management maintains customer's database, and improve food delivery service.

This system also provides a feedback in which user can rate the food items. Also, the proposed system can

recommends hotels, food, based on the ratings given by the user, the hotel staff will be informed for the improvements along with the quality. The payment can be made online or cash or pay-on-delivery system. For more secured ordering separate accounts are maintained for each user by providing them an ID and a password.

II. LITERATURE REVIEW

In [1] an automated food delivery system is proposed which will keep track user orders smartly. Basically, they implemented a food ordering system for different type of restaurants in which user will make order or make custom food by one click only. By means of android application for Tablet PCs this system was implemented. The front end was developed using PHP, Android and at the backend MySQL database was used.

In [2] Customer using a Smartphone is considered as a basic assumption for the system. When the customer approach to the restaurant, the saved order can be confirmed by touching the smartphone. The list of selected preordered items shall be shown on the kitchen screen, and processing. The solution provides easy and convenient way to select pre-order transaction form customers.

In [3] an application of integration of hotel management systems by web services technology is presented. Ordering system kitchen order ticket, billing system, customer relationship system (CRM) are held together by the Digital Hotel Management. Add or expand of hotel software system in any size of hotel chains environment was possible with this solution.

In [4] research work aims to design and develop a wireless food ordering system in the restaurant. Technical operations of wireless ordering system (WOS) including recommendations were presented in this systems architecture, function, limitations and recommendations were presented in this system. By providing higher quality customer service and reducing human errors to improve the management aspect for restaurants, pervasive application will be a valuable tool due to high demands of handheld devices such as PDAs.

In [5] along with customer feedback for a restaurant a design and execution of wireless food ordering system was carried out. IT enables restaurant owners to setup the system in wireless environment and update menu presentations easily. Smart phone has been integrated in the customizable wireless food ordering system with real-time customer feedback implementation to facilitate real-time communication between restaurant owners and customers.

In Paper [6], the research work aims to automate the food ordering process in restaurant and also improve the dining experience of customers. Design implementation of food delivery system for restaurants were discuss in this paper. This system implements wireless data access to servers. The android application on user's mobile will have all the menu details. Kitchen and cashier receives the order details from the customer mobile wirelessly. The restaurant owner can manage the menu modifications easily.

In Paper [7], this research works on efforts taken by owners of restaurant to adopt information and communication technologies such as PDA, wireless LAN, costly multi-touch screens, etc. to enhance dining experience. This paper highlights some of the limitations of the conventional paper based and PDA-based food delivery system and proposed the low-cost-touch screen-based Restaurant Management System using and android Smartphone or tablets or tablet as solution.

III. PROPOSED SYSTEM

To overcome the limitation of above system, an Online Food Delivery System based on Internet. It is a wireless food ordering system using android device and web application. The use of mobile technology has revolutionized as the Android devices have gained popularity in the automation of routine task in wireless environment. For mobile devices such as smartphone and tablets android is a Linux built operating system. As a general Objective of the study to develop a reliable, convenient and accurate Food Delivery System is considered. As an objective, a system that will surely satisfy the customer's service will be considered. To design a system that can accommodate huge amount of orders at a time and automatically compute the bill is one of key objectives. One of the important objective is to evaluate its performance and acceptability in terms of security. User-friendliness, accuracy and reliability. One of key objective is to improve the communication between the client and customers.

The figure.1 represents the simple system architecture of the proposed system:-

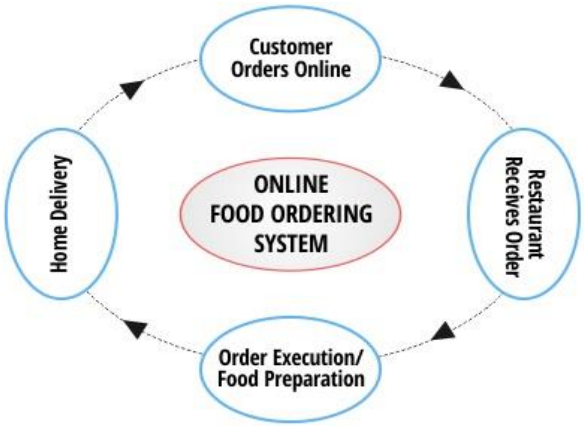

Figure -1: System Architecture

IV. ARCHITECTURAL DESIGN

The system implementation contains 3 main users:- Service Customer, Proprietor of Mess/Restaurant, and Worker of mess. When a person moved to new city he must find source for clean and superior food, so he/she will explore and select restaurant or mess, or tiffin service based on his category.

The pattern is which user will search the services for a purpose GPS system should be on and a part of Geo-Hashing Algorithm is used. Person can have the facility to search service by location that is home location of the person is detected with GPS and nearby service get searched according to select option location. Searching by cost is another way.

Search by rating is also possible by our system. List of service is given if matched by the user given ratings when the services that has rating are checked with it. The search can be carried out by accepting distance provider within a distance.

4.1 REQUIREMENTS DEFINITIONS

Analyzes based on similar application and determines the necessary features in the application, as well as do the details about the features that will be created with function of each features. Features that are needed in application for customer are as follows:

- **New Order:** New Order is the main feature of the customer side application that will be used to make one is by is using My Favorites feature to make an order and the other by choosing restaurant and menus provided easily.
- **Order History:** Customer's order history is shown by this feature namely order history.
- **Restaurant Profile:** Restaurant's profile is shown by this feature. Through this customer can make call to the restaurant directly.
- **Order Status:** This feature is used to show that order status that includes "order received" means that restaurant has received the ordered the, "order confirmed" means that restaurant has confirmed the order, "Cooking" means restaurant is preparing the order, "delivering order" means that delivery of the order is done. While the status is on "delivering order" the customer can also show the delivery map.
- **Profile Setting:** To show and to change customer profile this feature is used that comprise of name, address, email, and phone number.

Features required in website for admin are:

- **Resto:** Restaurant list is shown by this feature. Admin can modify restaurant data and insert new restaurant inactive status through this feature.
- **Order:** Order list watch has been done by each restaurant is shown by this feature.
- **Menu:** Menu list of each restaurant is shown by this feature. Through this feature admin can also alter each menu.
- **Courier:** Courier list of each restaurant is shown by this feature. Through this frame admin can also amend each courier data.
- **Customer:** Customer list in this application is shown by this feature. Through this feature admin can also modify customer profile.

4.2 SYSTEM AND SOFTWARE DESIGN

Using the storyboard design, we construct the application design workflow for restaurant, customer, courier and admin side; the user experience design. The use case, class diagram, sequence diagram, activity diagram and database structure design are comprised in the Unified Modeling Language.

- **Storyboard Design:** Designing the user interface is done by storyboard design which includes each interface description.
- **User experience design:** When interacting with the application, designing the totality of end user perception this design is used.
- **UML design:** The UML contains use case to define the system function from each actor perspective, then accomplished by explanation in use case narrative to draw the process of each actor in diagram activity diagram is used, to draw object or class of system with its relationship class diagram is used and to draw the message interaction with its objects base on its order of time sequence diagram is used.
- **Database structure design:** By the result of class diagram, database structure design is made. Classes that need to be saved in database and its relationship are drawn by this design

4.2 SYSTEM IMPLEMENTATION

The implementation of the system application is done in PHP, JQUERY, HTML and datasets are stored in MySQL database.

We have developed a web-based application and based on it we have developed the android application.

The hardware required for our application includes Android Smart phone and a desktop or laptop with browser and internet connection

For the initial implementation of the system we have considered 2 restaurant / mess from 5 areas nearby in our datasets.

Implementation of our system consists of a real time feedback system where once you place an order, an email will be sent to the customer regarding the feedback of their order.

According to the comments and rating of the customers, using Setiwordnet analysis we provide recommendation to the customers providing the highly rated restaurant / mess first and other respectively. The Sentiwordnet analysis uses the comments mentioned in the feedback and assign a value that can be positive and negative and organize the restaurant / mess in a fashion. This means the restaurant / mess with the highest positive value will be shown first and vice versa.

V. RESULT

The Result of our system application includes an Android application as well as a Web-based application. Once a customer place an order for a restaurant / mess, he / she will get the order Id on the screen dynamically.

The customer can check the status of the order through the Order Status interface provided in the GUI of the application. We have developed the system application in such a way that the customer can order the food first and then enter the required credentials while checkout.

Once the order is delivered to the customer, a feedback mail is send to the customer regarding his experience with the entire application. The feedback mail consist of the star rating as well as comments of the customer.

The customer can track his order through the tracking Interface provided in the GUI of the application. The restaurant / mess owner as well as customer cam track the order in our system application. The preview of this tracking system is shown below:

VI. CONCLUSION

The application is based on user's requirement and is user centered. All issues related to all user which are included in this system are developed by this system. If people know how to operate android smart phone wide variety of people can use the application. This system will solve the various issues related to Mess / Tiffin service. To help and solve important problem of people implementation of Online Food Delivery System is done.

It can be concluded that, based on the application: Orders are made easily by this system; Information needed in making order to customer is provided by the system. Receiving orders and modifying its data is possible through the application and it also helps admin controlling all the Food system.

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