



Online Pizza Delivery Web Application

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Abstract – Food Industry has always been a profitable industry not only for manufacturers, suppliers, but also for the users, distributors. The online food delivery system is the need of hour because of the recent changes in the industry and the increasing use of the internet. E-commerce refers to the purchase and sale of goods and/or services via Internet Hero Pizza is a part of e-commerce. **HERO PIZZA** is a website designed primarily for use in the food delivery industry. Through these services restaurants can sell and distribute their resources at minimal resource usage effectively with high profits by gaining the customer trust. This Online food order system database will be helpful for the business owners to extend their business just by placing the orders online and not visiting the restaurant.

There is no confinement for placing and receiving the orders, since the order can be placed online. There will be no waiting time with the vast amount of varieties at the comfortable prices. To develop this application database is the main part which will communicate through the application to retrieve the details. We will be creating the Online food ordering database with **MONGODB** as a platform. Database includes Customers can place their orders from different pizza and restaurant staff will process the orders and deliver the requested order.

1. INTRODUCTION

It is very typical to establish a small-scale business with less resources to provide quality services. Now a days people are attracted to online business. Let us assume if there is any online business where customers can order their needs and the goods will reach them at the expected delivery time. The customers of today are not only attracted because placing an order online is very convenient but also because they have visibility into the items offered, likewise online food ordering system customers can order their favorite foods and this database will be the barrier for the customers and restaurants to provide the services.

Our solution provides ordering process for the restaurants and customers and the employees of the restaurants. The Items list and categories of the pizza are available in the database so that a customer can place an order with multiple items. Once the order is placed restaurant employees process the order and deliver it to the customer at the expected delivery time. At the end of the order customer will know about the amount how much he had to pay for the restaurant for the order.

2. LITERATURE SURVEY

Restaurants can offer electronic ordering both through their own online web or mobile site and through sites that serve various restaurants, and all restaurants also accept orders via text message more over the credit point and discount coupon out that many restaurants increased sales level as a result of accepting electronic orders. The restaurant now day a interactive and up-to-date menu with all available options in an easy-to-use manner. Most of Younger consumers were more likely to have used online food ordering is essentially adoption on self-service approaches. Well-designed self-service ordering systems give customers actual control over the pace of their transaction and

allow them to limit the amount of personal interaction of restaurant. In most cases, an increased level of control has been shown to lead to higher level of customer satisfaction and greater intent to use or recommend suggested the service. Perceived convenience of a self-service system also leads to an increase in adoption and satisfaction. In this instance, the definition of convenience is related primarily to access convenience and transaction convenience. A customer will search for a favorite restaurant base on customer location, choose from available items. Payment can be amongst others either by credit card or cash.

In [1] an automated food ordering system is proposed which will keep track of 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 JAVA, 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 when confirmed, order slip shall be printed for further order processing. The solution provides easy and convenient way to select pre-order transaction form customers.

In [3] there was an attempt to design and implementation of digital dining in restaurants using android technology. This system was a basic dynamic database utility system which fetches all information from a centralized database. This application improved the accuracy and efficiency of restaurants as well as human errors. Earlier drawbacks of automated food ordering systems were overcome by this system and it requires a onetime investment for gadgets.

In [4] an application of integration of hotel management systems by web services technology is presented. Ordering System Kitchen Order Ticket (KOT), Billing System, Customer Relationship Management 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 [5] research work aims to design and develop a wireless food ordering system in the restaurant. Technical operations of Wireless Ordering System (WOS) including 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 the high demands of handheld devices such as PDAs.

In [6] 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 [7], the purpose of this study was to investigate the factors that influence the attitude of internet users towards online food ordering in Turkey among university students. A Technology Acceptance Model (TAM) developed by Davis in 1986 was used

to study adoption of Web environment for food ordering. Trust, Innovativeness and External Influences are added to the model as main factors along with TAM.

3. PROPOSED SYSTEM

To overcome the restrictions of above system, based on Internet of Things an Online Food Ordering System is proposed. 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 smart-phones and tablets android is a Linux built operating system. As a general Objective of the study to develop a reliable, convenient and accurate Food Ordering System is considered. As an objective, a system that will surely satisfy the customer 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 the 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.

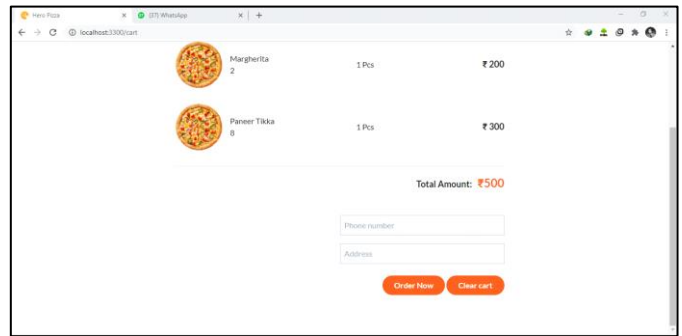
4. ARCHITECTURAL DESIGN

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 in 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 selected 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 ratings are checked with it. The search can be carried out by accepting distance from user where it needs to search and displaying service provider within a distance.

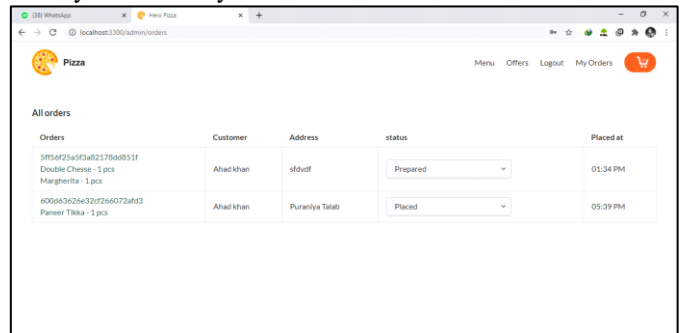
4.1 REQUIREMENTS DEFINITIONS

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:

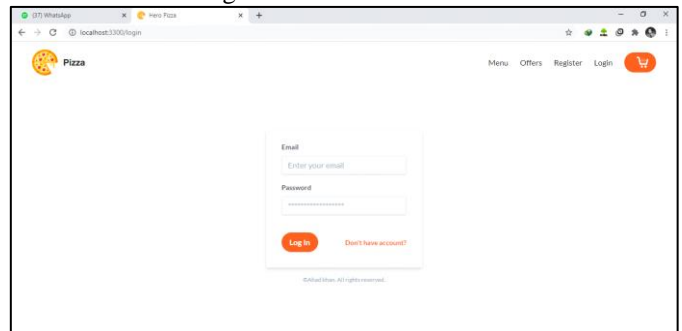
- **New Order:** New Order is the main feature of the customer side application that will be used to make orders. An order can be made in two separate ways, the one is by is using My Favorites feature to make an order by choosing one of the top three favorites restaurant and the other one is by using Make a new order feature to make an order by choosing restaurant and menus provided easily.



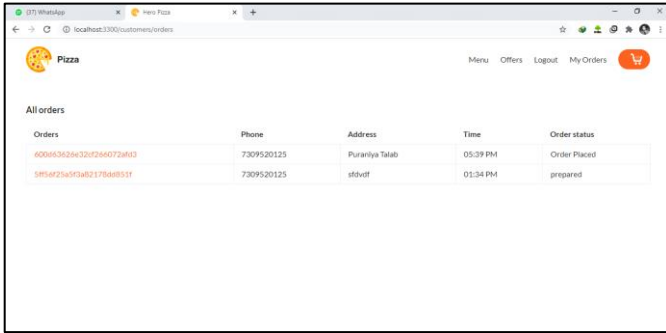
- **Order Status:** This feature is used to show that order status that includes “order received” means that restaurant has received the order, “order confirmed” means that restaurant has confirmed the order, “cooking” means restaurant is preparing the order, “delivering order” means that delivery of the order is done. While the status is on “delivering order” the customer can also show the delivery map. Customer’s order history is shown by this feature namely order history.



- **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. Restaurant list is shown by this feature. Admin can modify restaurant data and insert new restaurant including transformation from restaurant active or inactive status through this feature.



- **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.



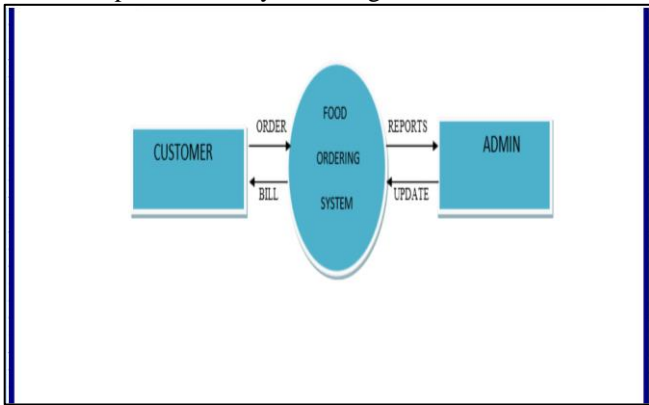
the final product. The process starts by interviewing the customers and developing the incomplete high-level paper model. This document is used to build the initial prototype supporting only the basic functionality as desired by the customer. Once the customer figures out the problems, the prototype is further refined to eliminate them. The process continues till the user approves the prototype and finds the working model to be satisfactory.

There are 2 approaches for this model:

1. Rapid Throwaway Prototyping – In this method, a developed prototype need not necessarily be a part of the ultimately accepted prototype. Customer feedback helps in preventing unnecessary design faults and hence, the final prototype developed is of a better quality.

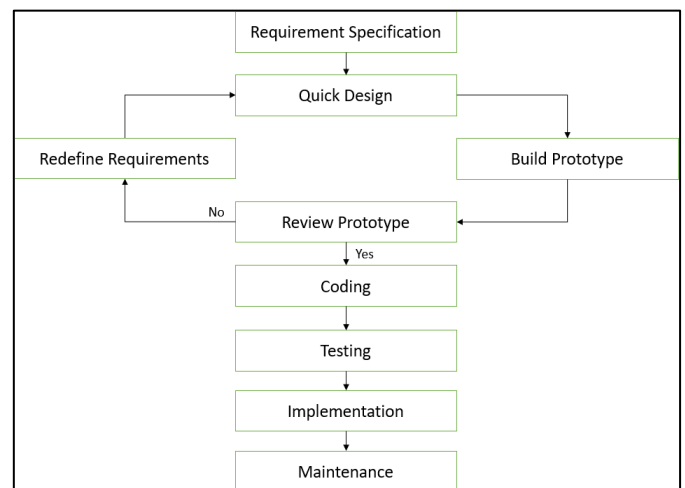
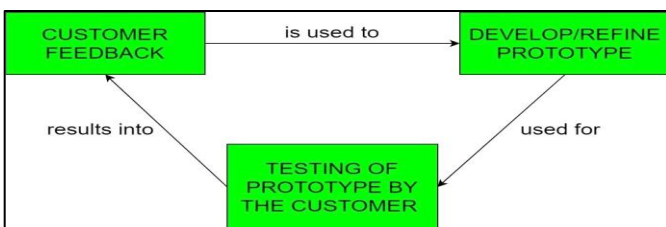
2. Evolutionary Prototyping – In this method, the prototype developed initially is incrementally refined on the basis of customer feedback till it finally gets accepted. In comparison to Rapid Throwaway Prototyping, it offers a better approach which saves time as well as effort. This is because developing a prototype from scratch for every iteration of the process can sometimes be very frustrating for the developers. The objective of the software project planning is to provide a framework that enables the manager to make reasonable estimates of resources, cost and scheduling. These estimates are made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses. In addition, estimates should attempt to define best case and worst case scenarios so that project outcomes can be bounded.

• **UML design:** The UML design 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 METHODOLOGY APPLIED PROTOTYPE MODEL

Prototyping is defined as the process of developing a working replication of a product or system that has to be engineered. It offers a small scale facsimile of the end product and is used for obtaining customer feedback.



The Prototyping Model is one of the most popularly used Software Development Life Cycle Models. This model is used when the customers do not know the exact project requirements beforehand. In this model, a prototype of the end product is first developed, tested and refined as per customer feedback repeatedly till a final acceptable prototype is achieved which forms the basis for developing

5. RESULTS & DISCUSSION

Deals Advancement involves Shopper Advancement Devices that are discounts, money savings incentives cost off, fees, prizes, and so on. Deals & limitations were those that really attracts each

Shopper so that they may enjoy on-line pizza ordering consistently. Cost has served the major sole measure for the purchaser's decision. Lower Evaluation seen during web pizza administration just like users to do shopping in web pizza administration. Since everyone prefers to set aside cash & capitalize on what they are paying for, so these outstanding sales and other special exercises will earn the customer's principal premium. 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 consists 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 can track the order in our system application

6. CONCLUSION

Each customer's feedback upon this web pizza application vary throughout person by person & acknowledgment was limited upto certain limited degree and also including shopper perception fluctuates as well. They rely on their closely held convictions for various similarities and distinctions. The review reveals that teens are usually linked to the online pizza application and, as a result, seniors do not use this online administration much as compared to the more youthful ones. The investigation reveals how teenagers are usually prepared to use online pizza to request administration. The investigation also revealed cost for products, limitations or exclusive deals get more important effect upon its web pizza application. Now 2nd one impacting aspect was accommodation, another very impacting variable being correct-time travel. This same investigation features the participants would like plan to a weekly basis, the kind of dinners that were most likely to be scheduled were bites followed before sundown. Quick pizza was liked by a significant portion including its participants for the food choices. This investigation also found large proportion from the participation utilizes ubereats and zomato for arranging the pizza on the web. It was also seen few lower level of participants was inclined using swiggy & pizzapanda. More or less, such an investigation has shown the lion's share from Jaipur district under-studies is very much informed including its web pizza request and that a large portion of them have used online pizza to request administration, that shows increasing prevalence for web pizza in youth. The change throughout pizza-requesting trends seems to be a direct product including its evolving lifestyle of shoppers across India as well as the expansion of web action.

7. REFERENCES

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