A REAL TIME WEB SERVICE SYSTEM FOR FOOD DELIVERY

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Abstract
Main goal for us to research on this topic is to ensure the availability of fresh and hygienic food for the customers living outside their home and are not able to cook by themselves as per the less availability of the time due to their busy hours of study. The main reason for having research on this topic was because there are so many customers in our locality and college who want very hygienic and healthy food as they had the habit of eating good, healthy and tasty food cooked by their mother.
There is always a need to have nutritious and healthy food for the customers living outside their home but they don't even get a proper diet. The problem of customers is that they don't even get the food in an appropriate quantity and the food is also not as beneficial as their home. They get unhygienic food made with dirty hands i.e. not washed before their making. The quality of good food with reasonable price becomes the major problem for the customers living outside their home as ordering from restaurants on Zomato and Swiggy every day is something of an out of budget option for most of them. The main motto of the web service is to provide healthy, hygienic and tasty food to the customers with reasonable prices having good quality.

1. Introduction

A real time web service system for food delivery is one of the most desirable online services for the customers who are not getting the proper balanced diet food. Tiffin's availability can be made easy by using this web service with an appropriate quantity of food along with the maintenance of hygiene in order to serve good quality food by the tiffin service providers. Reasonable prices for the food as per the quantity and the quality of food is the must to take

into account. The reason behind choosing the topic of real time web service system is just to provide the good quality and variable tastes of food within reasonable prices.

Another main objective of this research is to provide good quality of food to customers and employment to the housewives who like to serve food to others with the help of this web service.

There is a wide chance for the web service to have a high demand these days as per the requirement of customers living outside their home for their higher studies. There are too many paying guest rooms present outside the college campus that are not serving food to them. The demand for a web service for having proper tiffin will be increased rapidly as the phase for saving money and getting fresh and healthy food delivery on time increases. There are so many customers who don't like to have food from outside as it is much costlier than they can spend on food. There are some who sell a full meal of thali tiffin for Rs.50/- and claim that they use all the best ingredients and people believe it but there may be some loss of quality in such cases.

To reduce these expenses over using the online services for having meals on time, this web service is going to help a number of people and customers living outside their home for having their courses to be done as per the required time. There is so much research already done on this topic as mentioned in the literature review further.

2. Literature Review

In literature review, we describe the previous work done on online food delivery systems. Applications and web services present on the internet are important to conclude the real time web service system for food delivery.

Li, C., Mirosa, M., & Bremer, P. [1]. The paper was published in the year 2020 that contains the information about the impact of food providers on the sustainability of the businesses that are going on in India that was an issue to overcome and review.

Ray, A., Dhir, A., Balaa, P. K., & Kaur, P. [2]. They proposed consumer behavior to the use of Food Delivery Apps (FDAs).

Kapale, G., Naikwadi, R., Devkar, R., Pardeshi, O., & Gorde, S. [3]. They proposed an online tiffin service system in which their main approach was that every customer has their own priorities of time for which they always used to prefer the tiffin's delivery at their requirement of routine.

R., A., Singh, A., Pathan, S., & Kanade, V. [4]. They proposed a system which is user centered and based on various issues related to mess/tiffin that will be solved by providing them a full-fledged system.

Rawat, S., Rana, S., Lamba, G., Mongia, S., & Singh, T. P. [5]. They present a case study for creating an AI-based platform where users can decide which supplier they want their meals from. The system will present the user with nearest tiffin suppliers who can provide home-cooked meals on weekly or monthly subscription bases.

Shah, N., Shah, H., Sheth, S., Chauhan, R., & Desai, C. [6]. They proposed their aim to provide users the services of local vendors to connect online which became beneficial during

covid scenarios as previously the customer had to move out from their homes to take food. Through this system the customer could also have a live track over their orders.

Singh, A., & Kapur, D. S. [7]. They proposed that due to the presence of some social, cultural, and economical developments, people are trying to change their lives swiftly nowadays. This research paper was intentionally published to investigate the tiffin services and measure the employability opportunities present for the homemakers and determine how it can help in the empowerment of women.

3. Methodology

Methodology is something that refers to the overarching strategy and rationale of the project that can help for making a change in the society. It should involve some sort of studies of such methods that are used in the field and the theories or principles present behind them, in order to develop an approach that must match the objectives.

Phases that are important for a real time web service system:

•   Database Designing : In order to develop a web service for having meals via tiffin services, it must include the database of the customers and the tiffin service providers. The database also includes the menu, address, phone numbers and ratings of the tiffin service provider. The database should contain all the information about the prices along with the reviews about the taste of the tiffin. There may be additional information contained in the database of nutrition or calories present in the tiffin box.
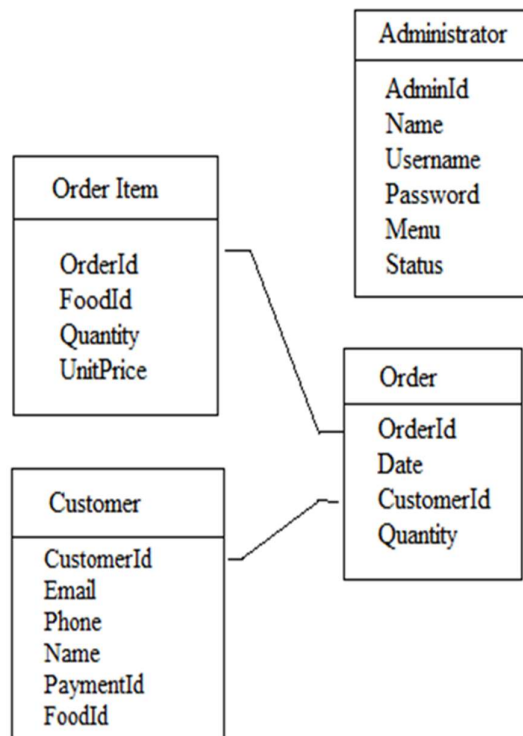

Figure 1. Database Designing

•   User Interface : The interface of the web service will be pleasing and simple enough, attractive too.

The interface comprises of:

➢   Login / Register: The first most important part of the user interface contains either login, if already a user or register, if not a previous member.

➢   Navigation Bar: The navigation bar will comprise important parts of the web service such as home page, menu, tiffin service providers' details, billing system, location, order history etc.

➢   Colors and Themes : The colors and theme of the web service is pleasing enough.

➢   Responsiveness : The web service will be responsive in order to work on mobile phones and personal laptops or desktops.
Applicable to almost all the screen sizes available in the market.

➢   Payment Methods : There are relevant options available in order to do payment of the tiffin service provider containing the details of the bill ordered so far. These payment methods are very popular among the customers such as UPI, Google Pay, Paytm, Debit Card and Cash On Delivery.

Figure 2. Payment Options

•   Order Tracking : In order to create the web service dynamic, there should be a live tracking of the order present which helps to track the order details and how far it is from the current location of the customer so that they can have their tiffin's sizzling food on time.

Figure 3. Order Tracking

•   Process Diagram : The process diagram for the web service is as shown below and it consists of the journey, how the admin and user will interact with the interface of the web service. The diagram comprised of the flow of two users, one is for the customer and another one is for the administrator. There is a huge difference in workflow and authenticity between the two. For example, the customer has only the authentication to check the menu, order the food item and payment of that item whereas, in case of admin, they have the authenticity to change the menu, add or remove payments options present in the web service. The basic idea about the working of the web service is well described in the flow diagram of the web service.
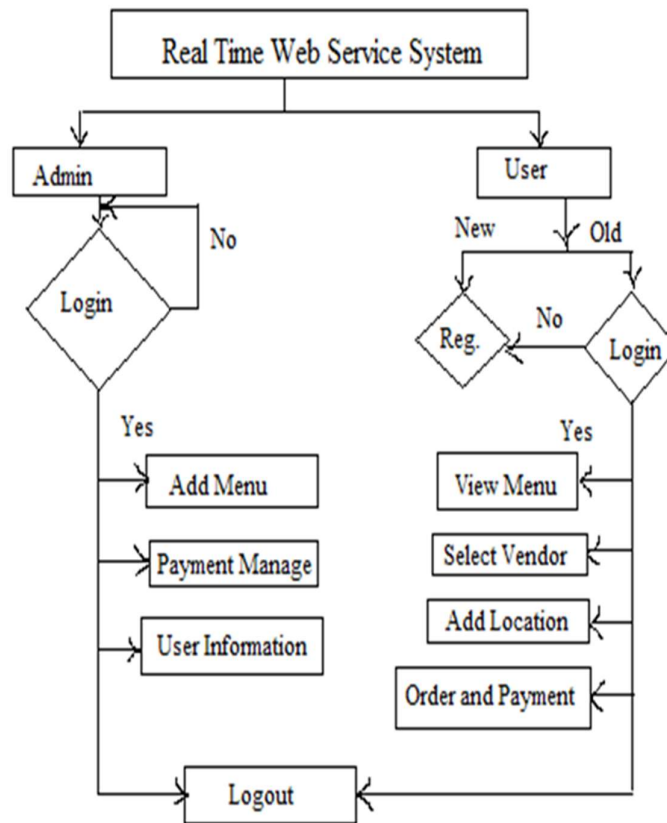

Figure 4. Flow Chart

The flow chart above explains some relevant points that are to be covered in the development of the successful tiffin service web service that will help customers to get home-like food at their place. The working of the chart is just simple in the sense how an admin performs his/her task along with the user interface necessary items.

•   **Workflow :** The figure below illustrates that firstly, the user will open the web service and login into it if already have an account over the web service otherwise, will sign up and register himself as a new user. After completing these steps, the user will find an interface for the further interactions to proceed into the web service which is the Homescreen to find out the user's desired options such as menu, list of tiffin service providers, their addresses, ratings and many more required things. Nutiffin is the solution of the hour in the form of a web service and the flow for the user journey will going to happen like this process diagram.
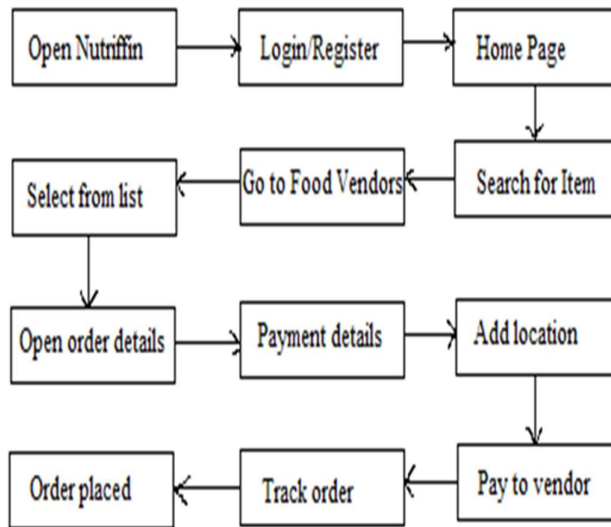
Figure 5. User Journey

The user will choose from the list and get into the order, amount to be paid and add address and payment details . After these steps, the user will pay and place the order and track the reports about his order. And finally, the order will be received as a result of the desired steps followed by the user to get healthy, hygienic and tasty food. Open Nutriffin.

4. Conclusion

Therefore, the result of the above research paper showcases the need of the healthy, home-like food for happy and energetic living of a customer who is living in the city where he/she studies but not having even a proper nutrition for his/her brain so that the study will go effectively rather than having a malnutrition.

The overall result for the above problem is an effective web service which is named by us as "Nutriffin" that will provide healthy and tasty food to the customers along with the employment to the housewives. This web service will make a difference among other food delivery web services introduced so far as this web service will contain only those food vendors who serve quality rather than quantity having less nutrition and hygiene.

The conclusion about a web service is simple in the sense of using its interface and this web service is something that will be easily accessible by all the food service providers and for the customers too as they are having a lack of time due to their busy hours of study at their college premises. This web service will also help those customers who don't even have the permission to go outside to have different food from the hostel food which is not a hygienic one. The delivery of the food will be done at the college campus by the food service providers during the lunch hours by itself.

5. References

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