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Digital Tiffin Services Using Responsive Web Application

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Abstract: ***The food industry has always been a profitable one, not only for manufacturers and suppliers, but also for consumers and retailers. Nowadays online food delivery system is the need of the hour due to the recent changes in the industry and the increasing use of the internet. Our proposed system is a real-time digital Tiffin services ordering system for the customer and students. They can be easily join and ordered online from restaurants and mess services through our proposed system. Users can choose the desired meal items from the menu that is displayed. The user places a food order. Payment options include online and cash-on-delivery. It maintains a separate account for each user so that information provided by the user is kept private. Every user gets their own user ID and password. It offers a more secure ordering approach as an outcome. It makes use of Cloud to figure out the user's location and then displays nearby mess service providers who have registered with it. This allows the user to rapidly locate the mess service providers nearby and choose the appropriate mess based on their food ordering needs. The many types of mess that are offering good service can be searched by users.***
Keywords: CRM, Sorting, Dynamic Database, GPS, Web Page Application.

I. INTRODUCTION

Nowadays, Hotel services currently are very active on the internet, but mess services lag behind. People who move to an unfamiliar location for a job, to school, to travel, etc. frequently struggle to find nearby meal services. Some users also search for outside food sources because they don't always receive meals that fit within their budget or provide satisfactory services. Prior to the user's location, our system will interact with their location to provide information about active mess services. Customers' records can be monitored and kept up to date via the system, and orders can be placed online. The menu cards for each mess list the many meal options that are offered there.

Customers have an easy way to place orders for food online. It resolves the issue with the conventional method. Online or cash-on-delivery payment options are available. Each user has their own account, which is kept separate to ensure the privacy of the user's information. For each user, a User ID and password are given. It offers a safer ordering process as a result. The user can provide reviews by using this application. Ordering, processing, and delivery of meals are all handled by the system. An authorized customer with the necessary identification places the order. The goal is to automate its current manual method with the use of fully functional computer software and computerized equipment, satisfying their needs, so that With easy access to and modification of the same, their vital data/information can be stored for a longer period of time.

II. OBJECTIVE

1) It is provide a convenient and efficient way of customers to order freshly cooked meals online and have them delivered to their doorstep.
2) Healthy and home-cooked meals: The meals offered by these services are typically prepared by local home chefs, who use fresh and locally-sourced ingredients to ensure that the food is nutritious and flavorful.
3) Sustainability: By sourcing ingredients locally and reducing food waste through careful meal planning, Tiffin services can help promote sustainable and environmentally-friendly food practices.
4) Vendors will be receive feedbacks from customers. Feedback can be in form of ratings or reviews. It can also able to upload pictures of their dish.

III. LITERATURE REVIEW

1) Our suggested solution will eliminate some of the drawbacks of the present meal delivery platforms like Zomato and Swiggy. The aforementioned services don't offer any options for monthly Mess or Tiffin service.

2) Many of the home quarantined individuals in this pandemic required tiffin service. These people were compelled to reach out to friends or family in order to locate tiffin services, which is a little challenging. Our system will fix this so that users can look on our web application to identify nearby tiffin services.

A. *Traditional Services*

The quality of food provided in traditional mess services may not always be up to the mark. The food may be stale, unhygienic, and lack proper nutrition, which can affect the health of students. Mess services usually follow strict timings, which may not be suitable for everyone. Students who have late-night classes or need to study late may not be able to get food at the mess. Traditional mess services can beexpensive, and students may not always have the option to opt-out or choose a meal plan that suits their budget.

IV. EXISTING SYSTEM

Atul R. Dange et. al. [1], an automated food ordering systemis 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. Thefront end was developed using JAVA, Android and at the backend MySQL database was used.

Adarsh J. et. al.[2], proposed 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 accuracyand efficiency of restaurants as well as human errors. Earlierdrawbacks of automated food ordering systems were overcome by this system and it requires a onetime investmentfor gadgets.economical. The machine is helpful for both whom having small or big farms.

Vaishnav Kanade et.al. [3] In 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.

Gurucharan Kapale et al. [4] proposed that project provides a Web page application through which people can order Dabba service online using the internet. Presently, readymade food is available but homemade food and is tastehave another matter. In our busy schedule fresh and homemade food preparation is difficult in early mornings. But it is made possible by our web application to add homemade food and deliver the same before our lunch time. This web application allows people to directly order a Dabbafor online For 24hr. This application is built to be beneficial to customer as well as Homemade food maker. Our Project connect the tiffin services provider with customer to providethe quality food.

Pandhare Sonali et al. [5] In Food finder- Mobile food ordering application paper the purpose of this application is to develop an online Food Finder application. The reason to develop the system is due to the issues facing the food industry. The challenges encountered by the existing system serve as a major drawback to the realization of efficiency and customer satisfaction. This application will contain different types of food varieties available for the user to buy online. The system also allows to quickly and easily managing onlinemenu which customers can browse and also predict how much is spend on food, and use to place orders with just a fewclicks. The main aim is to increase efficiency and improve services provided to the customers through better applicationof technology in daily operations. The disadvantages of the paper-based system are that papers can get easily damaged bystain marks they can be lost due to fire or accidents or can get lost in general. Hence, time and money are wasted. This system is very Timeconsuming. lack of visual confirmation that the order was placed correctly

Chavan P. B. et al.[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 ordering 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. These order details are updated in the central database. The restaurant owner can manage the menu modifications easily.

Swami Megha et al.[6] Automated mess service based on user's location paper [6] discusses the Android-based systemto develop an online mess ordering system which will identify and locate nearby mess and order mess food servicesvia online. This system will interact with the user's location with the help of 'GPS & Geo Tagging on Android Platform' and provide information about active mess services prior to their location. They use 'Dijkstra algorithm' to find the shortest path to measure the nearest mess. By using this application user can give their review based on their order history which will validate good service practices among mess to compete for higher ratings.

S.K.Senthil Kumar et al. [5] Cloud Computing is a revolutionary way of providing shared resources over the Internet. Though there are numerous researchers working towards the development of Cloud computing, still Cloud Computing is in its infancy. So to reap its full benefits, muchresearch is required across a broad array of topics. The objective of our research is to achieve and improve the reliability cloud services and availability of cloud resources. We try to maximize the utilization of resources to keep working resources available for tasks that are yet to come and also concentrate on the reliability of cloud services. We propose a new scheduling algorithm called Dabbawala cloudscheduling Algorithm based on Mumbai Dabbawala deliverysystem. In our proposed system the tasks are grouped according to its cost required to complete in a Cluster and its VM resources. We find the lowest cost cluster and its VM foreach task requested and group it together for getting servicesas in the Hadoop Map Reduce model.

V. PROSPOSED SYSTEM

The intention of the project is to design in a method that resolves problems for both the service providers and the customers who receive the meals. People now relocate to various cities for a variety of reasons. The person who is relocated cannot consistently afford to eat at restaurants and stay in hotels. Finding a specific, excellent, local, and reasonably priced service is another challenge for the recently relocated person. On the other hand, businesses that provide food services, such as mess or tiffin-based services, encounter numerous issues with record-keeping.This platform should have an easy-to-use interface that allows users to browse menus, select dishes, and place orders quickly and easily. The interface should be accessible on desktop and mobile devices and should offer a streamlined, user-friendly experience. It should also allow vendors to register and manage their accounts, upload menus and photosof their products, and set pricing and availability. Vendors should be able to manage their inventory and receive alerts when stocks are low.

VI. SYSTEM ARCHITECTURE

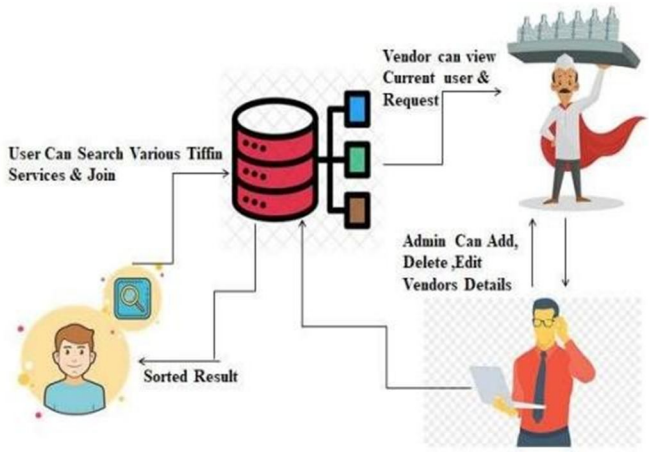

Fig:- System Architecture

In this paper, we have mentioned an architecture which describes the complete understanding about how does it work. Firstly, the admin have to study their local area and get thedetails of mess services providers after that they have to approach for Registration in their platform for digitalization of their Current business. After discussing the pros and cons of this system vendor can register by admin only because it'scheck the vendor is faked or genuine. Admin also check theirfood licences certificate. It can add Vendors by simple signing up also here the list of menus of is take by admin if vendors provide otherwise admin can design there menu by their own. Admin can delete any vendor if any suspicious happened in their platform.

Secondly, the role of vendor is depend upon the their literacyas we survey local mess they don't have knowledge of application and here admin can help them to edit or change any meal plans. Vendor can easily view the number of activesubscribers in their mess so that they can cook for them without wasting an food.User and Admin has privileges to give the ratings to their mess so they can improve their meals.

Here the customer will get connected to the internet. Here, Customer can put the Domain main of site in address bar of browser. After that, the browser needs to send HTTP requestto the server and the server responds to the customer's request and the browser displays the website.

The end user can have interactive and responsive web page where they cansee different mess at one platform so they can enjoy the tasteof every mess which is present at their location. User role is very short and convenient they have to fill a form after that they have to create their password the mobile number which is register by user utilize as username. User can see the day wise meals which is present on menu card if they have a planfor going out so they can simple call or message which is directly text on whatsapp so the vendor does not cook for them.

VII. SYSTEM DESIGN

Using the Staruml, we construct the application design workflow for restaurant, customer, the user experience design. use case diagram, class diagram, sequence diagram, activity diagram, class diagram, object diagram, dataflow diagram and database structure design are comprised in the Unified Modeling Language.

1) *Database Structure Design:* According to the results of the class diagram, the structure of the database is created. The training that want to be stored inside the database and its relationships are eliminated with the aid of this layout.
2) *Data Flow Diagrams:* A data flow diagram (DFD) is used toshow a graphical representation of the flow of data through an information system, modelling its process aspects. A DFDis also used as a preliminary step to create an overview of thesystem, which can later be elaborated.

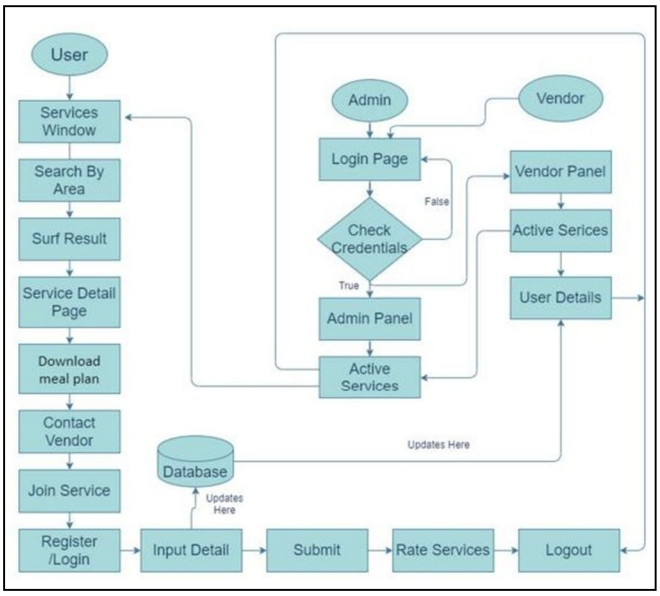

Fig: Data Flow Diagram

A. *Admin Module*

1) The admin cannot sign up for this system since admin is the only one to control the features, therefore admin login is pre-defined in the code itself.
2) Once the admin is logged in to the system admincan now add, delete and view various tiffin services currently active on our system.
3) Admin has to manage only the number mess services who is register in our portal. It can alsohelp to increase the CPC of the Website.
4) Admin Works as an mediator between mess anduser it can able to manage the Vendor Account also it they Assist it.
5) Troubleshooting technical issues that may arise on the platform, such as payment processing or server downtime.

B. *User Module*

1) User will choose a specific tiffin service from our web-page then he can join that specific service.
2) There are number of mess services is available according to location and name of mess so that can easy to user to see who is nearby services.
3) User can see Daily Menu as pdf is upload by vendor so he or she can cancel their tiffin easily without wasting the food.
4) There is user responsive web page of user can easily register to any mess and without installingany android application.

5) Users can also play a role in promoting the digital tiffin service to others by referring friendsand family to the platform. This can help to increase the user base and generate additional revenue for the business.
6) Users have the ability to provide feedback and ratings on the quality of the food, delivery times,and overall experience with the platform.

C. Vendor Module

1) The primary responsibility of vendors is to prepare and supply food products that meet the standards and requirements of the digital tiffin service. This may involve sourcing ingredients, preparing meals in compliance with food safety and hygiene standards, and ensuring timely delivery to the platform.
2) Vendor is able to Change their Menu items they have to upload PDF. It is also Manage by admin if vendor is illiterate but wants to grow their business.
3) Vendors may have some input into the pricing of their products, though the final decision may ultimately rest with the digital tiffin service.
4) Effective communication between vendors and the digital tiffin service is critical for ensuring thatorders are fulfilled on time and to the customer's satisfaction. Vendors may need to communicate any issues or delays with the platform, and respond promptly to any inquiries or feedback from customers.

VIII. SYSTEM IMPLEMENTATION

Following the conclusion of the system design, the system will begin to be implemented. During the development phase, the database's structure will initially be built. Then, during the testing stage, the server side and client side were also built to enable customer and vendor communication. The system is developed using PHP, Django, MYSQL. We have used HTML,CSS, JavaScript to create a secure web application. Based on the web-based application we have created. Our web-based application is built on our own proprietary technology. A desktop or laptop with a browser and aninternet connection is also necessary for our project. The hardware is an smart phone. In our database, restaurants/mess from 4 neighbouring regions were taken into consideration for the system's initial installation. The user has to register after joining the mess then they are able for give feedback on their particular mess as part of the implementation of our system, which includes a Day wise Menu .

IX. CONCLUSION

In conclusion, digital tiffin services are a convenient and innovative solution to address the busy lifestyle and dietary needs of modern consumers. These services leveragetechnology to provide online platforms for ordering and delivery of customized meals, which can be accessed through web or mobile applications. Digital tiffin services offer several benefits, such as time and cost savings, flexibility, and convenience. They allow customers to order meals on-the-go and customize their meals based on their preferences and dietary restrictions. They also enable vendorsto expand their customer base and streamline their operationsthrough automation and analytics. However, digital tiffin services also face several challenges, such as competition, quality control, and food safety. They need to ensure that their services are reliable, consistent, and comply with healthand safety regulations.

X. RESULT

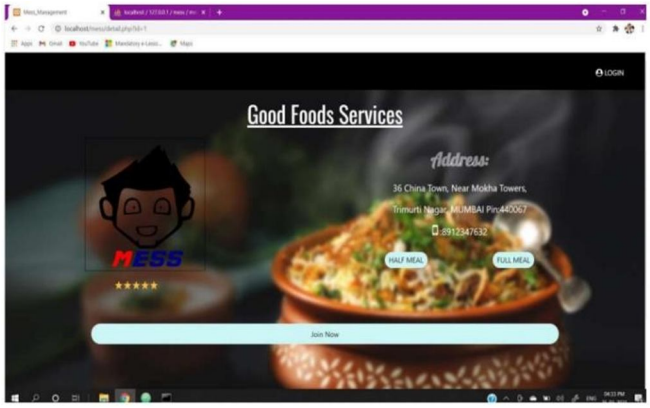

Fig: Details of Tiffin Services

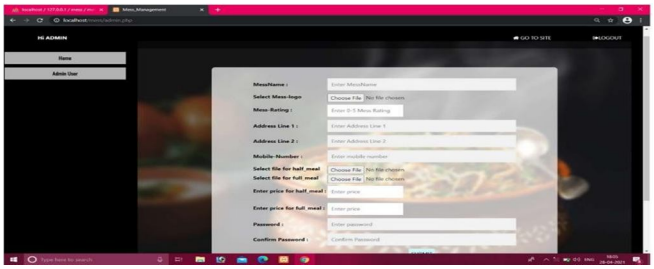

Fig: Admin Panel (Admin Adding service to the site)

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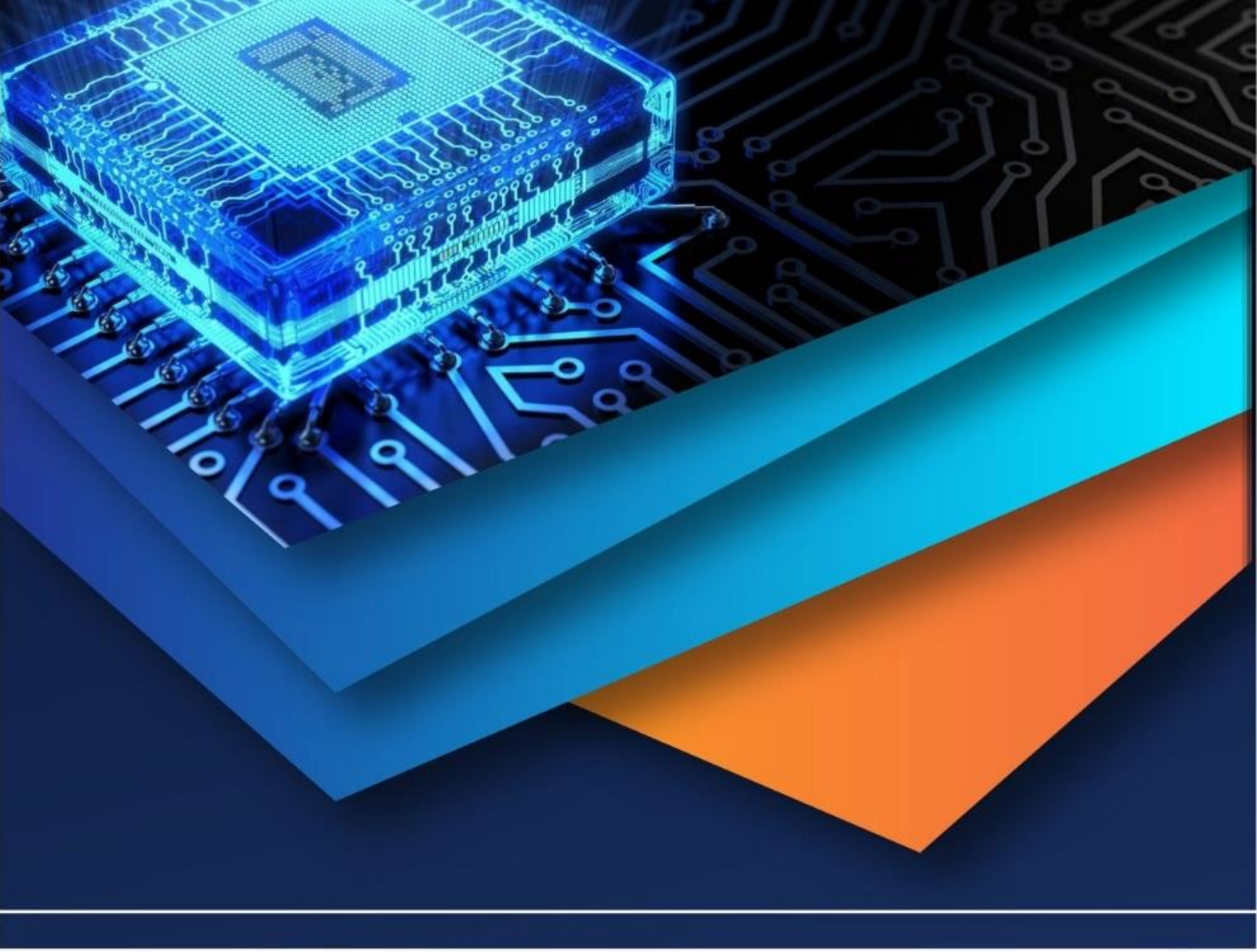

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