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RESEARCH PAPER

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AN ONLINE FOOD ORDERING SYSTEM FOR ACE RESTAURANT IN OYO TOWNSHIP

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Abstract: Online foods ordering system is one of the new trend that represents some of the extension of online services available on the internet world. Foods ordering system refers to any electronics automated system that enables restaurant, canteens, coffee and other foods stores to process and deliver internet-based food orders from online customers through a branded website or mobile app. Based on initial findings at this Supermarket, it has been difficult to meet the requests of the customers due to the manual means being used by Ace restaurants in Oyo town.

This package presents the alternative service for Ace restaurant within Oyo metropolis why the main objective is to make the ordering process automated and a such convenient for both the customers and the employees thereby eliminating long queuing in front of the counter. The proposed system allows the restaurant to accept and manage orders placed online for delivery or takeaway. The software was implemented using software (wampserver, Dreamweaver) and hardware (Multimedia Computer, functioning battery and 40 GB HD). The Ace online food ordering system was designed for use on Windows Pcs and other mobiles using window application.

***keywords*:** Buying and selling, Online ordering system, Ace Restaurant, menu, delivery etc.

INTRODUCTION

Food is any nutritious substances that we eat or drink in order to sustain our growth. The online food ordering system is one of the latest services most fast food restaurants in Nigeria are using. With this method, food is ordered online and delivered to the customer without any physical conversation between customers and the restaurant employees. This is made possible through the use of electronic payment system. Reference [5] defined an online food ordering system as a web based system that allows restaurants, coffee shops, or bars accept orders online. It typically allows customers to choose and pay for food,then alerts the kitchen when an order is made. This happens without contact between staff and customers. An online ordering system is a simple automated system that enables your restaurant to process internet-based food orders from online customers through a branded website or mobileapp.

Today, almost any restaurant can now be ordered with a few taps on a phone app with the help of the internet and technological advancements which have bring a great impact to the restaurant operations[4]. With most people spending much of their day on the internet, it makes it a huge marketpotential for restaurants. In fact, the demand for online food ordering continues to grow among restaurant consumers. Restaurant owners and managers consistently look for solutions that allow customers to place their orders online and have it delivered fast. Indeed, online ordering and delivery systems are slowly becoming well known as more restaurants adapt to this business model. Meanwhile, an online ordering and delivery system provides the restaurant a complete sales channel. This means that the restaurant can use it as a method for generating more profits and making the restaurant more organizing. Labor costs and restaurant space needed to serve customers within the restaurant will be saved using online ordering system. With an effective ordering software, a restaurant can sell food directly to customers without the involvement of external parties. Using this method, the customer orders directly from the restaurant website. The customers browse the menu and select the food items that they would like to order. The customer then pays for their choice and the food is delivered to their desired location or they can choose a pick up location themselves.

Another option is to use food aggregators. These are the middle men between restaurant businesses and the consumer. They are part of the restaurant delivery model. Food aggregators take orders from their customers and route them to restaurants. They then handle the delivery process themselves.

HISTORY OF ACE SUPERMARKET

Ace started as a small business in order to plug the gap the CEO observed in Akobo area of Ibadan and to generate employment. Today, Ace has become a household name spanning across major cities in Southwest Nigeria namely Ibadan, Oshogbo, Abeokuta, Oyo, Ogbomosho, Ijebu-Ode, Ile-Ife, and Ilorin. Ace as the elite eatery in all these cities has continued to be of tremendous serviceto the need of the people who in the past have had to travel to Lagos or Ibadan in order to shop fortheir essential needs. With over 400 workforce, Ace Supermarket is one of the leading employers of labour in Southwest Nigeria and her services span accross Groceries, Bakery, Boutique, Eatery, Lounge

and Cinema. It has a mission to bring quality products, nutritious foods and dependable retail services to people at lowest possible price. Similarly, the vision is to top the retail business space in south-west Nigeria (short term), Nigeria (mediumterm) and global (Long term).

STATEMENT OF THE PROBLEM

As industries are fast expanding, people are seeking more ways to purchase products with much ease and still maintain cost effectiveness. The manual method of going to the restaurant to purchase food is becoming more tasking. Also there is large amount of queue in the restaurant that may chase many other customer away, because the customer may not have the time to wait. The supermarket is not making maximum profit because most of the clients on queue often left un attended to. Some office workers may not have the chance to move out of the office until break time, and they may need to eat, without leaving their respective offices. The business outfit must align with both the current trend in terms of operation in order to stand among its contemporary outfits and most importantly be able to sustain her businesses through marginal growth realized from increased patronages. These reasons makes the online food ordering system a necessity.

OBJECTIVES OF THE STUDY

The main objective of this system is to automate the food delivery process and as such, make it convenient for both the customers and the operators of Ace Supermarket. Oyo.

The other objectives of this systems are to:

1. design an online platform that will provide a place in the home page where customerswill be able to gather reliable information about what the fast food industry really does.
2. provide the customers with all the different categories of available menus so that they (customers)
   could have host of varieties to choose from.
3. provide a users' friendly environment between the customers and the operators for increased efficiency of the food ordering system.
4. To provide a web based system will be able to accommodate huge amount of orders at atime.

SIGNIFICANCE OF STUDY

It is important to look into the development of online ordering system in order for the restaurant to meet up with the demands of the customers. Therefore, the online food ordering system will help the management to advertise available foods in their restaurant and then reduce the workload in the present system. It is the target of the system to provide customers a way to place an order at Ace restaurant Oyo town over the internet. The reason being to benefit both the customer and the business.

LITERATURE REVIEW

A recent online food ordering statistics done by [6] says, 70% of people prefer ordering food directly from the restaurant. They often had their money go directly to the restaurant, then, take out the middle-man. Similar to this, over half (52%) of American diners prefer using the branded app or website of a restaurant to order food instead of a food portal app. To be specific, online ordering software allows someone to put in place a system that will allow a restaurant or cafe to take orders and accept payments from all clients - both online and physical presence. With this system, customers simply access a menu through mobile ordering by scanning QR code, or clicking a link into the browser. Once the request is submitted, payment is made, and that's all. The order is then received and processed on the restaurant's end, while the package is taken to the customer's table or delivered to the remote client as the case may be.

Reference [7] reiterated that life in a digital world has made people accustomed to the convenienceof getting whatever they want or need with just a few clicks of a button. Customers now expect their favorite restaurant to offer online ordering. Offering online ordering on website or app brings several benefits to both restaurants and customers. More often than none, the process becomes more seamless as it offers better customer service for everyone.

Reference [1] recommend online food businesses to monitor how long it takes their delivery people to transport their customers' food to establish whether it is being handled with the necessary care it deserves. However, more studies are required to highlight the customer's grievance which can easily fall on the businesses when the delivery issues are ignored.

Despite the various implications of using mobile apps to order food online, there are numerous benefits associated with online models. As such, as the growth of online applications continues, the subsequent studies need to add to the existing literature on the benefits businesses are likely to accrue from adopting such technologies. According to [8], this trend is a result of the numerous benefits associated with using the apps compared to the conventional methods of shopping over the phone or waiting in line. These benefits are 2-fold, they include benefits to the consumer and the restaurants. Firstly, there are numerous consumer benefits of using mobile ordering apps to purchase food.

Reference [2] study on consumer preference and attitudes regarding online food products shown that internet has changed people's food-buying behaviors. The study establishes the underlying consumers' concerns with regards to food safety information, especiallyfor online food products. Compared to other products, consumer preferences and attitudes toward buying food online differs in the perceived risks and information quality do not play major roles in influencing their buying behavior. The study relied on a cross-sectional study conducted in Hanoi, Vietnam. The findings was based on responses gathered from over 1736 customers through face-to-face interviews. While the preferences and attitudes toward buying food online differ from buying othercommodities.

Reference [3] reported that during the new normal of the COVID-19 pandemic, online food delivery services

became widely implemented, especially in the developing countries. The study determined the relationship between the perceived severity towards the customer's satisfaction in using online food delivery platforms during the new normal of COVID-19 in. The data was gathered through on online survey questionnaires of 158 respondents concerned about using online food ordering website. The results show that perceived severity,perceive ease of use and information quality has positive effect toward satisfaction in using food ordering website. Through this study, accurate explanation and understanding of factors that affect the satisfaction in using foods ordering website was established.
However, studies focused on making future forecasting will help in understanding how online food platformscan achieve the social roles enjoyed by supermarkets.

METHODOLOGY

The existing system is the use of a non-computerized system were all operations are done manually. Whereby the waiter will be carrying paper around to take down the order of the customer or making an order over the counter. This also involved the collection and transferring of orders to the kitchen without any automation. It has often lead to mistakes and several in balances within the system.

The proposed system is developed to manage ordering activities. It helps to record and manage customer's orders for both in-person and remote delivery.

System Requirement

For the effective implementation, the proposed system is optimized for Windows Xp, Windows 7, Vista, window 10 or higher. Furthermore, The platform make use of the following front-end web development tools to create the front-end page; HTML, CSS, JavaScript, Wampserver, Chrome, Fireworks and Dreamweaver. HTML was used to create all the structure of the front-end of the proposed system. Use of CSS to modify layout and format the HTML Document of the front-end page. JavaScript controls all the behavior of different element of the front-end web page while wampserver served as the Local Host server. Chrome helps to view the code testing in the browser, Fireworks used for editing, modifying and formatting of proposed system images. Most common back-end development tools, PHP and MySQL were employed for the back-end of the new system. Firefox, Google chrome or higher while Multi-media Computer Systems with at least 2GB RAM and above, 40GB HD, Well-functioning, Mouse, Keyboard etc. as the needed hardware.

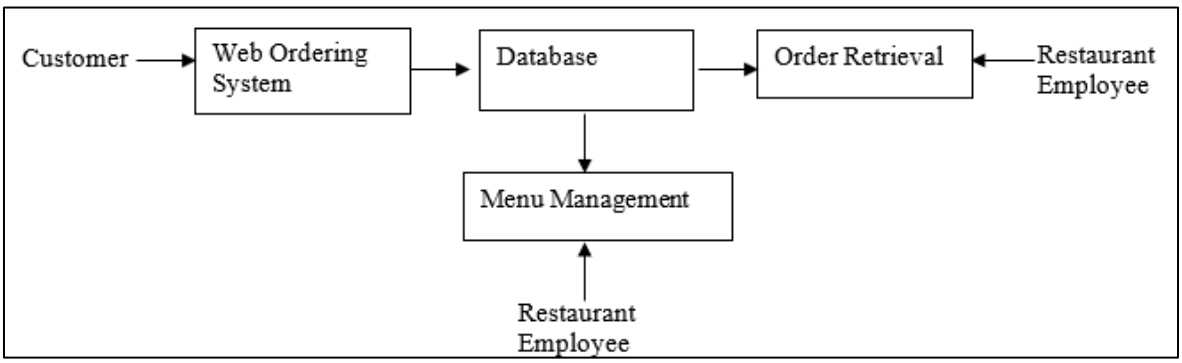

Figure1. System functional diagram

As can be seen in the system functional diagram above, each of the three system components (Web Ordering System, Menu Management and Order Retrieval) are essentially provides a layer of isolation between the end user and the database. Because of this design pattern, it is essential to enumerate exactly which functions a user will be presented and these functions are outlined below, grouped by component.
Users of the proposed system must be provided the following functionality:

- Create an account.
- Log in to the system.
- Navigate the restaurant's menu.
- Select food from the menu.
- Add food to the cart.
- Remove food from cart.
- Review their current order.
- Provide delivery and payment details.
- Place an order.
- Receive confirmation in the form of an order number.

All of the functions outlined above, with the exceptions of account creation and management, willbe used every time a customer places an order from the proposed system.

Menu Management System

The menu management system will be available only to restaurant employees and will allow themto manage the menu that is displayed to users of the web ordering system. The functions affordedby the menu management system provide user with the ability to, use a graphical interface:

- Add a new, update or delete vendor from the menu.

- Add a new, update or delete food category from the menu.
- Add a new, update or delete food item from the menu.
- Add a new, update or delete option for a given food item.
- Update price for a given food item.

Table 1: Admin

Field	Type	Null	Key	Default	Length
Id	Int	No	PRI	1	11
Username	Varchar	No			30
Password	Varchar	No			30

Welcome Page

A new customer visiting Ace online catering service must register on the welcome page through the website link **(**https://www.aceonlinecaterineservice.com/interface/). The Welcome page will display the register and login then click the 'Login' your details willthen be checked and access will be granted immediately.

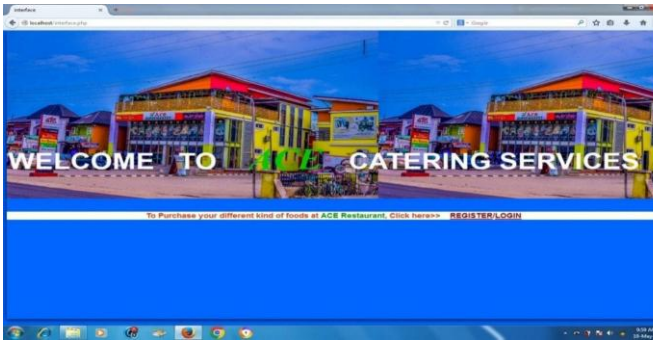

Figure 2: Welcome Page

(i) Registration Page: After clicking on the register, the next page is for customer to register with his/her emailaddress

(ii) Password Page After the customers have submitted his/her email address, the next is to create password andinput answer to the security question incase if password is forgot next time visiting the website.

Homepage

After clicking on the register button, the browser will take the user to the homepage. The homepage show all different kind of food that customer may like and food can also be search from the menu

Figure 3: Homepage

Categories Page

The categories page contain different categories of foods which include: Carbohydrate,Protein, Pastries, Sides, Swallows and Soups.

(i) Carbohydrate. This page allow customer to add all different kind of carbohydrate foods to cart.

(ii) Protein. This page allow customer to add all different kind of proteins foods to cart.

(ii) Pastries This page allow customer to add all different kind of pastries foods to cart, e.g. pizza, pie,doughnut etc.Pastries.

(iv) Swallows. This page allow customer to add some kind of local foods like eba, fufu and so on.

(v) **Soups**. This page allow customer to add some delicious soup to support the swallows foods.

(vi) Cart Page Every foods selected will be view from this page, we can check what we have selectedfrom the foods menu in our cart then order the foods from the cart.

Order Page

After viewing the foods selected from cart and clicking on the order now button, the next page is the order page where user can choose the order methods which he or she prefer, either pay with card, pay on delivery or through the whatsapp.

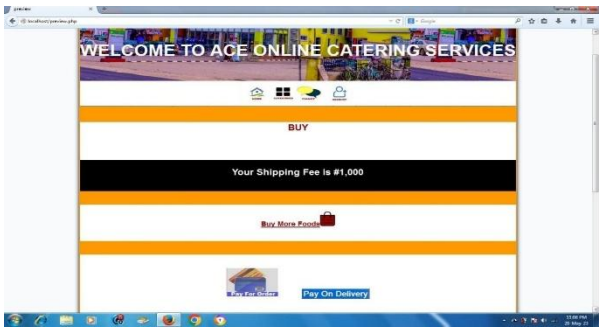

Figure 4: Order Page

(i) Pay for Order Page

This page allow the customer to pay with any bank debit card that is use Nigeria before shipping the foods.

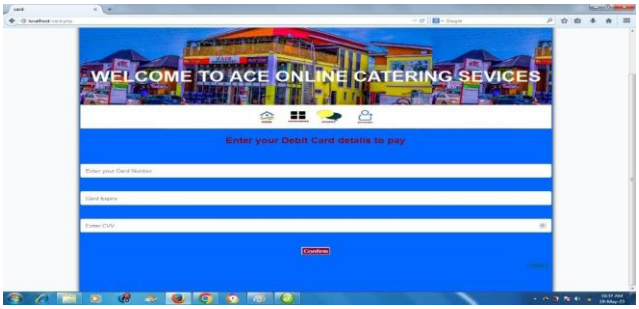

Figure 5: Pay for Order Page

(ii) Pay on Delivery Page

From this page customer can order and pay once their foods have reach them. That is afterthe foods have been delivered to them.

Log out Page

After the shipping Address have been submitted, the foods will be processed and deliveredto you before the timer countdown, then you can log out down the page. But tracking ID must be copied before logging out

Users Requirements

1. Users should be able to create an account easily by providing necessary informationsuch as name, contact details, and delivery address.
2. Users should be able to view detailed descriptions, prices, and images of the food items.
3. Users should be able to select food items from the menu per their quantities. This mayinclude options for choosing portion sizes, add on, wrap quantities and add more.
4. The system should provide a seamless ordering process where users can add selecteditems to their cart, review the order, and proceed to order the foods.
5. Users should be able to choose between Pay on delivery and card options based on theirchoices.
6. Users should be able to track the status of their orders, confirmation of order placement and estimated delivery time.
7. Users should be able to earn and redeem rewards or promotional codes during theordering process.
8. Users should feel confident that their personal information, including payment details,is securely stored and handled by the system.

CONCLUSION

The development of online food ordering service for Ace restaurant in Oyo town involve many steps. The first step started with a detailed study of the problems and the prospects of ordering in Ace online catering Services in Oyo Township. In the course of this study, many problems to have hindered the effectiveness of the existing manual system was discovered. These problems of the existing system, information needed and all activities were documented and later used as the basisfor development of new system design, which immediately followed the first step. The design stepwas concerned primarily with the specification of the system development elements that best met with the organization's business needs.

RECOMMENDATIONS

Implementing a computer-based information management in a organization require proper training and orientation for the users either the staff or management. Proper training should be given to the staff that would be in charge of data entry on how to handle the computer software and hardware especially during backup processes for Ace online ordering. The staff should also be well acquainted with the advantage of the new system and how it will equally assist them in most of their various routine in the restaurant. The users should also be informed ofthe maintaining cost of this online food ordering system so that they will handle this system with carefulness. Training materials should not be presented in formal way but with procedures like policies and form to workers in ace restaurant. This will at the end generate appreciation and needed interest to operate this online food ordering system.

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