**DESIGN AND IMPLEMENTATION OF DIGITAL FOOD ORDERING SYSTEM**

**(A CASE STUDY OF QUICK SERVICE RESTAURANT)**

**By**

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**Being a National Innovation Diploma Project submitted to the Department of Computer Software Engineering, Digital Bridge Institute, Kano in partial fulfilment of the requirements for the award of National Innovation Diploma (NID) in Computer Software Engineering Department of Computer Software Engineering, Digital Bridge Institute, Kano.**

**DECLARATION**

I …………………………………………………………………………...

, hereby declare that everything proposed in this project proposal is based on my own knowledge and research carried out with exception to printed or electronic content and has not been submitted to any institution of learning for any academic awards.

SIGNATURE………………………………………DATE ……………………………

**APPROVAL**

This project proposal has been presented for examination with my approval as the supervisor: Mr. Jaafar Aliyu

SIGNATURE………………………………………DATE …………………………........

**DEDICATION**

This project proposal is dedicated with profound admiration and appreciation to ALMIGHTY GOD for giving me strength and breathe and my beloved Father and my mother for their moral support. Great appreciation also goes to my supervisor Mr. Ja,afar Aliyu and all my Instructors, classmates and who made it a success through their constant support supervision, encouragement and moral support.

**ACKNOWLEDGEMENT**

Most importantly, I sincerely thank the Almighty God for giving me strength and breathe throughout the preparation of this project proposal. I also wish to extend my sincere and heartfelt gratitude to my loving mum for the financial, moral and emotional support, my classmates and friends who helped in various ways for the successful completion of this project proposal. Finally, it is a great pleasure for me to also acknowledge the assistance and support of all the people who helped me to start and finish this project proposal successfully especially Mr. Ja’afar Aliyu who has been a great supervisor during this period. I would like to give my special thanks to Digital Bridge Institute Kano campus for giving me enough knowledge and skills that made me to innovatively and successfully research and compile this project proposal

***ABSTRACT:***

*A fast-food restaurant also known as quick service restaurant (QSR) within the food service industry is a specific type of restaurant characterized both by its fast-food cuisine and by minimal table service. Food served in fast food restaurants is offered from a limited menu, cooked in bulk in advance and kept hot, is finished and packaged for order and is usually available ready for pickup or to be delivered though seating may also be provided. The customers presently spend an average of 60 minutes per day going to the restaurant, selecting their meals and paying. Some restaurants have the provision of customers making a call to the restaurant in advance to order a meal to be ready for them for pick or to be delivered to them.*

*Some of the customers don’t always get the selection they want because the restaurants run out of certain items or because there is no provision of ordering custom meals. This project is aimed at developing a complete online ordering system for use in the foodservice industry which will allow the restaurants to quickly and easily manage an online menu which customer can browse and use to place orders with just a few clicks. The customers will have to choose whether they want the food to be delivered to them or it will be packaged for pick up and the payment method will be upon delivery or pick up. There will be a system administrator who will have the right to add and manage user accounts, a manager who will be managing product and orders and last but not least a meal deliverer who will be dealing specifically with pending deliveries. The customer will be in a position to view the products, register and place an order. There will be a confirmation receipt for each and every order made by the customer which can be printed. The development of this system will be based on SDLC with PHP and HTML as the programming languages while MySQL server as the database of the system. HTML language is advantageous due to its easy to use and learn validation properties while MySQL has better advanced features and properties, has good security, is open source and has cross platform operability. The advantages of using PHP programming language in developing this system include:*

* *It is a stable open-source language development and maintained by a large group of PHP developer which a creating a support community abundant extension library.*
* *It's easy and quick to learn and use*
* *Can be run on many platforms thus easy for user to find hosting service.*
* *It has built-in database module which make it easy to connect to the database.*

*On the other hand, the disadvantage of PHP programming language is security since it's open source, so people see the source and if there are bugs in the source code, it can be used by people to explore the weakness of PHP.*

**CHAPTER ONE 1: INTRODUCTION**

Background of study

The online food ordering system is one of the latest servicers most fast-food restaurants in the western world are adopting. With this method, food is ordered online and delivered to the customer. So, the system designed in this project will enable customers go online and place order for their food. Due to the great increase in the awareness of internet and the technologies associated with it, several opportunities are coming up on the web. So many businesses and companies now venture into their business with ease because of the internet. One of such business that the internet introduced is an online food ordering system. In today’s age of fast food and take out, many restaurants have chosen to focus on quick preparation and speedy delivery of orders rather than offering a rich dining experience. Until recently, most of this delivery orders were placed over the phone, but there are many disadvantages to this system. It is possible for anybody to order any goods via the internet and have the goods delivered at his/her doorsteps. But while trying to discuss the transfer method of the goods and services, attention is focused on the payment mode. In other words, how possible is it to pay for goods and services via the internet? This then leads to the discussion of the economic consequences of digital cash. What are the implementations from the view point of economic? Since the world is fast becoming a global village, the necessary tool for this process is communication of which telecommunication is a key player. A major breakthrough is the wireless 2 telephone system which comes in either fixed wireless telephone lines or the Global System of Mobile communication (GSM).

What I propose is an online ordering system originally designed for use in college cafeterias, but just as applicable in any food delivery industry. The main advantage of this system is that it greatly simplifies the ordering process for both the customer and the restaurant. The system also greatly lightens the load on the restaurants end, as the entire process of taking orders is automated. Once an order is placed on the webpage that will be designed, it is placed into the database and then retrieved, in pretty much real-time, by a desktop application on the restaurants end. Within this application, all items in the order are displayed, along with their corresponding options and delivery details, in a concise and easy to read manner. This allows the restaurant employees to quickly go through the orders as they are placed and produce the necessary items with minimal delay and confusion. The greatest advantage of this system is its FLEXIBILITY.

1.1 STATEMENT OF PROBLEMS

The challenges encountered by the existing system serve as a major drawback to the realization of efficiency and customer satisfaction. The experience of ordering in most fast-food restaurants is not pleasant for the customers. Customers will have to make long queues before placing their orders especially during peak hours and then the ordering staff will record customer orders. Having placed their order, the customer must then wait near the counter until their order is ready for collection. The other problem in the food service industry is that restaurants are not realizing the efficiencies that would result from better application of technology in their daily operations. Fast food business in a very competitive business and one way to stand out from competitors is through improving the business process where business process automation can assist business improvement. The other problem with the current system is that the customers are not able to see the ingredients of the meals before they place their order and also, they only have to pay for an order online.

1.2 OBJECTIVES

* Increase efficiency and improve services provided to the customers through better application of technology in daily operations.
* be able to stand out from competitors in the food service industry

1.3 SPECIFIC OBJECTIVES

1. To enable customers to order custom meals that aren’t in the menu
2. To enable customers to have a visual confirmation that the order was placed correctly
3. To enable customers to know food ingredients before ordering
4. To reduce restaurant’s food wastage
5. To ensure correct placement of orders through visual confirmation
6. Improve efficiency of restaurant’s staff
7. Eliminate paper work and increase level of accuracy
8. Increase speed of service, sales volume and customer satisfaction.

1.4 JUSTIFICATION

* To increase efficiency by shortening the purchasing time and eliminating paper work like receipts through online transaction
* To be able to stand out from competitors by automating daily operations which will give food service providers the opportunity to increase sales
* To reduce restaurants food wastage and increasing efficiency of the restaurants staff by enabling the restaurants staff to know what food items the customers wanting advance.
* increase customer satisfaction by speeding up food delivery
* To reduce time wasting by eliminating long queues

1.5 PROJECT SCOPE

Online ordering system will be a web-based application whose main language of programming will be PHP. Its main aim is to simplify and improve the efficiency of the ordering process for both customer and restaurant, minimize manual data entry and ensure data accuracy and security during order placement process. Customers will also be able to view product menu sand their ingredients and be able to have a visual confirmation that the order was place correctly.

1.6 LIMITATION OF THE SYSTEM

* Internet connection and also the user must be computer literate.
* Set back of the system is that the customers targeted are adults with access to computer systems while the minors might have to go physically to the restaurant to purchase the food that they want or order food the food with the help of an adult.
* Other limitation is that the system will only be convenient to people with a small geographical region, basically just around the restaurant i.e., can only help a small area.

1.7 DEFINITION OF TERMS

**FOOD**: Any nutritious substance that people or animals eat or drink, or that plant absorbs, in order to maintain life and growth.

**MENU**: A list of dishes that may be ordered (as in a restaurant) or that are to be saved (as at a banquet)

**ONLINE FOOD ORDERING**: is the process of ordering food, for delivery or pickup, from a website or other application. The product can be either ready-to-eat food

**CREDIT CARD**: A credit card is a payment card issued to users as a system of payment. It allows the cardholder to pay for goods and services based on the holder's promise to pay for them.

**ORDERING SYSTEM**: This is referred to as a set of detailed methods that is being used in handling the ordering process.

**RESTAURANT**: (eating place) is a place where meals and drinks are sold and served to customers.

**CUSTOMER**: Sometimes known as a client, buyer, or purchaser) is the recipient of goods, services, products or idea obtained from a seller, vendor, or supplier for a monetary or other valuable consideration.

**TECHNOLOGY**: It is the study of techniques or process of mobilizing resources (such as information) for accomplishing objectives that benefit man and his environment.

**Chapter 2: Literature Review**

**Introduction**

An ordering system is referred to as a set of detail methods that is being used in handling the ordering process. Food ordering can be computerized or done manually. Those help customer to order their food themselves which is known as the customer self-ordering system.

The customer self-ordering system can be defined as a computerized system that is being used by customer to place their own orders in the restaurant and allow the order to be tracked. In order to prepare and deliver the food to the computers.

2.1 SELF SERVICE/SELF-ORDERING IN RESTAURANT

Self-service or self-ordering in restaurant industry refers to the restaurant taking orders from customers through applying various types of technologies such as internet and many others. Self-service or self-ordering is successful when it is applied at restaurants in many other countries. The usage of the self-service or self-ordering technology is proven to benefit most of the.

Odesser-Torpey (Odesser-Torpey, 2008) reports that most of the Americans hate waiting for an order. Therefore, they prefer self-service technology, which can be in form of text messaging, the internet and kiosk. Usually, the customer prefers self-service because of speed and convenience in making order and transaction while minimize the miscommunication. He also mentioned that self-activated terminals are more likely to serve as ordering innovation in the future. The 7 implementations of alternative ordering can increase check size, free up counter staff that need to serve customers and take money handling out of service equation.

Bhatnagar (Bhatnagar, 2006) mentioned that the innovation of kiosk and computerized table top ordering screen will force restaurant industry re-jigger an often-used acronym quick service restaurant to the self-service restaurant. Customers can get information or search for recipes from the kiosk and internet. The kiosk and internet also take orders and receives credit cards or debit cards payment.

As a result, wrong order and long queue can be avoided, order staff can be arranged to somewhere else and focus to speed up on delivery orders. On the other hand, a table-top touch screen order system can take customer orders as well as handle other customer requests such as refill drinks, call a waiter and make payment by credit card and debit card. Bytes, a restaurant located at Canterbury has been successfully standing apart from the competitors because of applying online self-service ordering and the payment concepts. The system used in Bytes allows the customers make an order through the touch screen, and the order will be directed to bar or kitchen. The system also offers games after a customer placed the orders while internet access will be provided to customers in the future. Touch screen ordering reduces the need of the waiter. The system also provides database for customers’ habits and preferences, generate the management reports, perform analysis as well as allows the menu to be updated instantly. (Bricker’s, 2006).

Based on study, it is possible for applying the online food ordering system to the fast-food restaurants in Nigeria. This is because the system can improve workplace efficiency, increase sales of the restaurant as well as reduce making incorrect order. As a result, it is worth for investing on the system, whereby it can shorten the return on investment.

In addition, the system should be supported by the food origin taste and services to maintain the customers’ loyalty and satisfaction. However, widely implementing the food ordering system may cause the influx of labor due to the elimination of waiters in restaurant industry. Even the system is important to be implemented, yet there is still some risk in other factors such as a direct interaction and restaurant design concept, which need to be considered for ensuring the success of the system.

Gan (Gan, 2002) proposed to develop an online fast food restaurant ordering system that allows customers to place orders anytime at any place. The system helps to manage order from customer as well as advertise promotion. It allows kitchen staff to view ordering information, management to manage fast food raw materials and staff to search customer delivery and profile information. This system helps to reduce queue issues during peak hours, speed up food preparation and increase customer volumes. As a result, market share of fast-food restaurant can be boosted up and increases return of investment for the investor.

De Leon (De Leon, 2008) mentioned that there are several aspects that should be included in a good online food ordering system. System should be simple to navigate, not clustered and easy to make an order, (Sharma, 2007,) designed with professionals looking with search engine optimize capability and available 24hours. The system should also have a secure payment gateway to protect their customers’ credit cards information, fast and keep track on orders and sales history easily as well as generate a comprehensive sales report, (Sharma, 2007).

2.2 E-COMMERCE

Electronic commerce or e-commerce according to Garret, (1996) is the exchange of goods and services by means of the internet or other computer networks. In ecommerce, buyers and sellers transact business over networked computers.

Electronic commerce is also sharing business information, maintaining business relationships and conducting business transactions by means of communication networks. It includes the relationship between companies (business-to-business), between customers (customer-to customer) as well as between companies and customers (business- to-customer). Business to business segment currently dominates the e-commerce while customer-oriented segment is significantly lagging behind and current estimate places it at less than 10% of the total volume, even though they are all experiencing an exponential growth (Vladimir, 1998).

E-commerce offers buyers convenience. They can visit the World Wide Web (www) sites of multiple vendors 24hours a day and seven days a week to compare prices and make purchases, without having to leave their homes or offices.

For sellers, e-commerce offers a way to cut costs and expand their markets. They do not need to build staff or maintain a store or print and distribute mail order catalogs. Because they sell over the global internet, sellers have the potential to market their products or services globally and are not limited by the physical location of a store.

E-commerce also has some disadvantages, however. Customers are reluctant to buy some products online. Online furniture businesses for example, have failed for the most part because customers want to test the comfort of an expensive item such as a sofa before they purchase it. Many people also consider shopping a social experience, for instance, they may enjoy going to a store or a shopping mall with friends or family, an experience they cannot get online. Customers also need to be reassured that credit card transactions are secure and that their privacy is respected. E-commerce is not only widening customer’s choice of product and services, but also creating new business and compelling established business to develop internet strategies.

2.3 HISTORY OF FAST FOOD/RESTAURANT

A fast-food restaurant is a restaurant characterized both by food ready to eat quickly after ordering and by minimal service. One trait shared by all fast-food establishments is that the customer pays for the food prior to consuming it. Often this food is referred to as fast food. The food in these restaurants is often cooked in bulk and in advance and kept warm or reheated on order.

Although fast food restaurants are often viewed as a representation of modern technology, the concept of “ready cooked food to go” is as old as cities themselves, unique variations are historical in various cultures. Ancient Roman cities had bread-and-olive stands; East Asian cultures features noodle shops. Flat bread and falafel are ubiquitous in the Middle East. Popular Indian fast-food delicacies include Vada Pav, Papri Chaat, Bhelpuri, Panipuri and Dahi Vada. In the French speaking nations of west Africa, meanwhile, roadside stands in and around the larger cities continue to sell- as they have done for generations-a range of ready-to eat char grilled meat sticks known locally as “brochettes” (not to be confused with the bread snack of the same name found in Europe).

The modern history of a fast food in America began on Jul y 7, 1912 with the opening of a fast-food restaurant called the Automat in New York. The Automat was a cafeteria with its prepared foods behind small glass windows and coin operated slots. Joseph Horn and Frank Hardart had already opened an Automat in

Philadelphia but their Automat at Broadway and 13th street, in New York City, created a sensation and numerous Automat restaurants were quickly built around the country to deal with the demand. Automats remained extremely popular throughout the 1920’s and 1930’s. The company also popularized the notion of “take-out” food, with their slogan “less work for mother”. The American company

White Castle is generally credited with opening the second fast food outlet in Topeka, Kansas in 1921, selling hamburgers for five cents apiece. White Castle later added five holes to each beef patty to increase its surface area and speed cooking times. White Castle was successful from its inception and spawned numerous competitors.

Mc Donald’s, the largest fast-food chain in the world and the brand most associated with the term “fast food” was founded as a barbeque drive-in in 1940 by

Dick and Mac. After discovering that most of their profit came from hamburgers, the brothers closed their restaurant for 3months and reopened it in 1948 as a walkup stand offering a simple menu of hamburgers, French fries, shakes coffees and Coca-Cola, served in disposable paper wrapping. As a result, they were able to produce hamburgers and fries constantly, without waiting for customer orders, and could serve them immediately; hamburgers cost 15cents, about half the price at a typical dinner. The McDonald’s stand was the milkshake machine company’s biggest customer and a milkshake salesman named Ray Kroc travelled to California to discover the secret to their high-volume burger-and-shake operation. Kroc thought he could expand their concept, eventually buying the McDonald’s operation outright in 1961 with the goal of making cheap, ready-to-go hamburgers, French fries and milkshakes a nationwide business.

**Chapter** **3: METHODOLOGY**

Methodology

Research methodology has many research dimension and methods. The scope of research methodology is wider than research method. This is mainly adopted by the researcher in undertaking this research. Methodology is the underlying principles and that govern a system method, on the other hand it’s a systematic procedure for a set of activities. Thus, from this definition a methodology encompasses the method used within a study.

A waterfall model under the software development life cycle (SDLC) is the methodology used to procedure the online food ordering system and the customer self-ordering system. It is used by system developers to produce or alter information system or software.

It divides the development process in to several stage or processes. After the completion of one stage, it will logically move to another stage. Sometimes moving back to the previous stage is necessary due to failure that occurs in current stages.

System design method are a discipline within the software development industry which seek to provide a framework for activity and the capture, storage, transformation and dissemination of information so as to enable the economic development of computer system that are fit purpose.

3.1 METHODS OF DATA COLLECTION

Although there are various methods of data collection, the researcher chose the two main sources of data collection in carrying out their study. They are:

1. Primary source
2. Secondary source

The primary source refers to the sources of collecting original data in which the researcher made use of empirical approach such as personal interview.

The secondary sources of data for this kind of project cannot be over emphasized. The secondary data were obtained by the researcher from magazines, journals, newspapers and library source.

3.2 ORAL INTERVIEW

The interview method of data collection can be defined as a systematic way of collecting data or information from a respondent through asking questions directly from the respondent and also collecting information with the aim of facilitating understanding. The oral interview was done between the researcher and the management of staff of FAST FOOD, RESTUARANTS. Reliable facts were gotten based on the questions posed to the staff by the researcher which help the researcher in starting the work and also helped in the area of solution presentation of the new design.

3.3 STUDY OF MANUALS

Manuals and report based on fast food services were obtained and studied and a lot of information concerning the system to be produced was obtained.

3.4 EVALUATION OF FORMS

Some forms that are necessary and available were accessed. These includes the restaurant menu fast food order form, payment receipts etc. these forms helped in the design of the new system.

3.5 ANALYSIS OF EXISTING SYSTEM

Throughout the system analysis, an in-depth, study of end-user information is conducted, for producing functional requirement of the proposed system. Data about the existing ordering system is collected through several fact-finding techniques such as website visit and document review, at the beginning of this stage. The data collected information required during detailed analysis. A study on the current system is performed based on the collected data. As a result, user requirement of the proposed system is determined. At the end of this stage, requirement specification is produced as deliverable.

3.6 THE EXISTING SYSTEM

The existing system happens to be a non-computerized operating system where all operations are done manually by the waiter carrying paper and to take down the order of the customer or making an order over the counter. This leads to mistakes because the waiter might not understand what the customer had ordered therefore serving him/her a different menu. This could be so embarrassing because the customer might not take it lightly with the waiter which may lead to misunderstanding.

3.7 PROBLEMS OF EXISTING SYSTEM

Due to manual means being employed by the fast-food restaurants, it is very difficult to satisfy the wants and needs of the customers. Most of the problems include:

1. Mistakes are made when taking the orders of the customers
2. The process of collecting customers’ purchases order is very tedious.

This makes it impossible to deliver goods on time.

1. It leads to lack of understanding between the customers and the employees.
2. The record keeping system is poor. Losses of vital records have been reported in the past consequently. Besides, protecting the file system from unauthorized access is a problem that has defiled solution.
3. Unnecessary time is wasted conveying information through the ladder of authority. Management at times seeks to get a copy of the customer’s order form and this may take a lot of time to obtain it.
4. It causes reduction of production flow.

These are the major problems facing the existing system and would be corrected with the help of the proposed system.

3.8 OBJECTIVES OF THE PROPOSED SYSTEM

The proposed system is developed to manage ordering activities in fast food restaurant. It helps to record customer submitted orders. The system should cover the following functions in order to support the restaurant’s business process for achieving the objectives:

1. To allow the customer to make order, view order and make changes before submitting their order.
2. To provide interface that allows promotion and menu.
3. To prevent interface that shows customers’ orders detail to front-end and kitchen staffs for delivering customers’ orders
4. Tools that generate reports that can be used for decision making
5. A tool that allows the management to modify the food information such as price, add a new menu and many others as well as tools for managing user, system menu and promotion records.

3.9 JUSTIFICATION FOR THE NEW SYSTEM.

It is the purpose of the new system to address all the problems plaguing the present system. This system will do the analyzing and storing of information either automatically or interactively. It will make use of PhP-MYSQL. This will be like this: a report is generated conforming to particular information needed by the management via the monitor. This will require the input of necessary data and record of fast-food ordering and delivery and then a report is generated.

The proposed system will also have some other features such as:

1. Accuracy in handling of data
2. The volume of paper work will be greatly reduced.
3. Fast rate of operation as in making the ordered food available and delivered on time.
4. Flexibility (i.e., it can be accessed at any time)
5. Easy way to back up or duplicating data in CDs in case of data loss
6. Better storage and faster retrieval system
7. Errors in the reports will be greatly minimized.

**Chapter** **4. OVERALL DESCRIPTION**

**Overall Description**

The main reason is that it benefits both the customer and business. With a website, customers can easily browse all the dishes the restaurant has available, customize dishes to their requirements and place an order. It can also save their favorite orders allowing them to easily re-order that in the future. From the restaurant’s perspective, they no longer spend time taking the customer’s order, stop worrying about communication errors and streamline their order management workflow.

4.1 WEAKNESSES OF THE CURRENT SYSTEM

* Inconvenience of customer needing to have a physical copy of the menu
* Time consuming
* Lack of visual confirmation that the order was placed correctly
* Necessity for restaurant to have an employee answering the phone and taking orders
* in tracking customers past history
* Manual work and consumes large volumes of data
* Lack of data security.

4.2 MERITS OF THE PROPOSED SYSTEM

* Security of data. Data are well protected for personal use.
* data accuracy during order placement process
* Minimized manual data entry
* Greater efficiency since data processing is very fast
* User friendly and interactive interface with provision for customer to view menu sand have a visual confirmation that the order was place correctly.
* time requirement during the order placement process
* Greatly simplifies the ordering process for both customer and restaurant.

4.3 FEASIBILITY STUDY

This is an evaluation and analysis of the potential of the proposed project which is based on extensive investigation and research to support the process of decision making. [1] It assesses the operational, technical and economic merits of the proposed project. The feasibility study is intended to be a preliminary review of the facts to see if it is worthy of proceeding to the analysis phase. From the systems analyst perspective, the feasibility analysis is the primary tool for recommending whether to proceed to the next phase or to discontinue the project.

4.4 TECHNICAL FEASIBILITY

This assessment is focused on gaining an understanding of the present technical resources of the organization and their applicability to the expected needs of the proposed system. Evaluation of the hardware and software and how it meets the needs of the proposed system. The systems project is considered technically feasible if the internal technical capability is sufficient to support the project requirements. The essential questions that help in testing the technical feasibility of a system include the following:

* Is the project feasible within the limits of current technology?
* Does the technology exist at all?
* Is it available within given resource constraints?
* Is it a practical proposition?
* Is there enough manpower- programmers, testers & debuggers?
* Do the required software and hardware exist?
* Are the current technical resources sufficient for the new system?
* Can they be upgraded to provide the level of technology necessary for the new system?
* Do we possess the necessary technical expertise, and is the schedule reasonable?
* Can the technology be easily applied to current problems?
* Does the technology have the capacity to handle the solution?
* Do we currently possess the necessary technology?

4.5 OPERATIONAL FEASIBILITY

Operational feasibility is the measure of how well the project will support the customer and the service provider during the operational phase.

It is dependent on human resources available for the project and involves projecting whether the system will be used if it is developed and implemented.

The essential questions that help in testing the technical feasibility of a system include the following:

* Is the project feasible to operate or not?
* Does current mode of operation provide adequate throughput and response time?
* Could there be a reduction in cost and or an increase in benefits?
* Does current mode of operation offer effective controls to protect against fraud and to guarantee accuracy and security of data and information?
* Does current mode of operation make maximum use of available resources, including people, time, and flow of forms?
* Are the current work practices and procedures adequate to support the new system?
* If the system is developed, will it be used?
* Does it agree with the government regulations?
* Will the proposed system really benefit the organization?
* Will the system affect the customers in considerable way?
* Do the end-users feel about their role in the new system?
* How will the working environment of the end-user change?

4.6 ECONOMIC FEASIBILITY

This assessment aims to determine the positive economic benefits to the organization that

The proposed system will provide. It typically involves a cost/ benefits analysis and it’s the most

Frequently used method for evaluating the effectiveness of a new proposed system. Possible questions raised in economic analysis are:

* Is the system cost effective?
* Do benefits outweigh costs?
* The cost of doing full system study
* The cost of business employee time
* Estimated cost of hardware
* Estimated cost of software/software development
* Is the project possible, given the resource constraints?
* What are the savings that will result from the system?
* Cost of employees' time for study
* Cost of packaged software/software development
* Selection among alternative financing arrangements (rent/lease/purchase)

**Chapter** **5: ANALYSIS AND DESIGN**

**Analysis And Design**

Development of computerized systems requires analysis of the process to be digitized in order to enable a correct system, a system that functions as required and to assist the potential users of the system understand the general functionality of the system. The analysis specifies the system's objectives and constraints to which designers have to comply. The purpose of doing**.** Analysis is to transform the system’s major inputs into structured specification.

5.1 OUTPUT SPECIFICATION.

The system is designed in such a way that it efficiently provides output to the user promptly and in a well-organized manner. The format for the several outputs is make available on the output web pages. Output can be relayed using the following page modules:

1. Product\_list.php: This display output information for the list of food delicacies which are currently available

2. Search\_result.php: This displays output information for the order report

3. Aboutus.php: This displays output information that talks about the ordering outfit (OFOS).

5.2 INPUT SPECIFICATION.

The system is designed to accept several input details efficiently through input forms and user clicks. The data captured through the user keystrokes and clicks are received by specific modules on the system and relayed to the back-end of the system for processing. Input is collected using the following page modules:

1. Index: This is used to capture preliminary user navigation information and preference information which gives the system a method of personalizing the page for the user on the next visit.

2. Admn\_login.php: This is used to capture information about the administrative personnel who controls content and display on the system.

5.3 CONTEXT DIAGRAM

This is a brief structure which depicts the environment in which a software system and helps in communicating about what lies outside the system boundary.

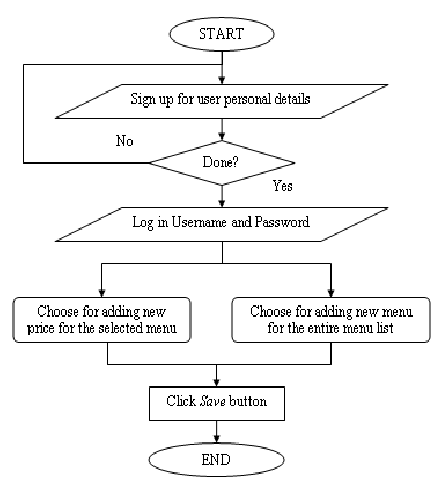
5.4 DATA FLOW DIAGRAM

It is a two-dimensional diagram that explains how data is processed and transferred in a system. The graphical depiction identifies each source of data and how it interacts with other data sources to reach a common output.

Administrator module:

Functionalities provided:

* Create usernames and passwords
* View/ edit / delete user accounts



Customer module

Functionalities provided:

* View product’s list
* Register
* Place orders

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Main Menu

About Us

Fast Food

Login

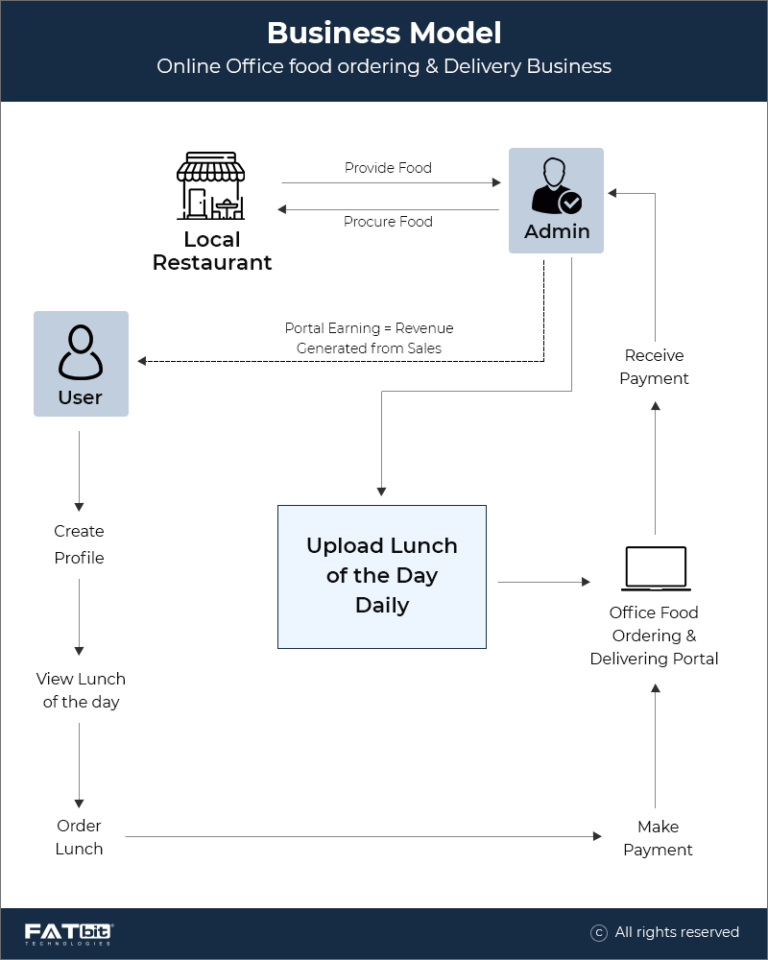
Home

Contact us

Manager module

Functionalities provided:

* Create product categories and functionalities
* Edit / delete product categories and descriptions
* View and manage orders and sales report



5.5 USER REQUIREMENTS

The system will be designed to be user friendly. The user friendly and interactive interfaces design helps to achieve this by enabling customers to easily browse through the menus place orders with just a few clicks and also allows restaurant employees to quickly go through the orders as they are placed and produce the necessary items with minimal delay and confusion. The system will be simple to use.

5.6 FUNCTIONAL REQUIREMENTS

Functional requirements define the capabilities and functions that a system must be able to perform successfully. The functional requirements of this online ordering system include:

* The system shall enable the customer to view the products menu, create an account, login to the system and place an order.
* customer shall specify whether the order is to be picked up or delivered.
* system shall display the food items ordered, the individual food item price sand the payment amount calculated.
* system shall prompt customer to confirm the meal order.
* system shall provide visual confirmation of the order place me
* The system shall enable the manager to view, create, edit and delete food category and descriptions
* The system shall allow confirmation of pending orders.
* system shall allow generation of sales report for the orders made.
* system shall allow the manager to update additional information (description, photo, ingredients etc.) for a given food item.
* system shall allow the manager to update price for a given food item.

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5.7 NON-FUNCTIONAL REQUIREMENTS

A non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. Some of the non-functional requirements include:

* They should be sufficient network bandwidth
* Backup- provision for data backup
* Maintainability- easy to maintain
* Performance/ response time- fast response
* Usability by target user community- easy to use
* Expandability- needs to be future proof or upgradable
* Safety- should be safe to use5.4

5.8 SYSTEM REQUIREMENTS

Computer system is made up of units that are put together to work as one in order to achieve a common goal. The requirements for the implementation of the new system are:

* The Hardware
* The Software

5.9 SOFTWARE REQUIREMENTS

* Operating system: Windows XP / windows 7
* : My SQL
* Tool: Dreamweaver
* Antivirus software
* Backup & Data Recovery software

5.10 HARDWARE REQUIREMENTS

* Processor: Intel dual core or above
* Processor Speed:1.0GHZ or above
* RAM:1 GB RAM or above
* Hard Disk: 20 GB hard disk or above
* Printer for printing reports
* Uninterruptible power supply to ensure a constant access of data.
* flash disk (At least 2GB)