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FOOD ORDERING SYSTEM

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ABSTRACT— Our proposed system is an online food ordering system that enables ease for the customers. It overcomes the disadvantages of the traditional queueing system. Our proposed system is a medium to order online food hassle free from restaurants as well as mess service. This system improves the method of taking the order from customer. The online food ordering system sets up a food menu online and customers can easily place the order as per their wish. Also with a food menu, customers can easily track the orders. This system also provides a feedback system in which user can rate the food items. Also, the proposed system can recommend hotels, food, based on the ratings given by the user, the hotel staff will be informed for the improvements along with the quality. The payment can be made online or pay-on-delivery system. For more secured ordering separate accounts are maintained for each user by providing them an ID and a password.

Keywords*:* Automated Food Ordering System, Dynamic Database, Management, Internet of Things, Smart Phone.

INTRODUCTION

The online food ordering system sets up a food menu online and customers can easily place the order as per they like. Also with a food menu, online customers can easily track the orders. The management maintains customers database, and improve food delivery service. The Restaurant management systems motivates us to develop the system. There are various facilities provided so that the users of the system will get service effectively. Also, the system considers Restaurants as well as Mess facility to the customers. Again, the idea comes that mostly mess users are person who are shifted for various reason in new cities. So, they are interrelated. Increasing use of smart phones is also considered as a motivation, so that any users of this system get all service on single click. Another motivation can be considered as the system will be designed to avoid users doing fatal errors, users can change their own profile, users can track their food items through GPS, users can provide feedback and recommendations and can give ratings, it will give appropriate feedbacks to Restaurants / Mess service providers. Due to lack of a full fledge application that can fulfill the customer requirements by providing him food from restaurants as well as from mess service, there is a need for the system. This proposed system will be used by the people who keep shifting from cities to cites. As well as, it will be useful for the students studying in different cities. The proposed system will provide the flexibility to the Customers/Users to order from either Restaurants or Mess. It will also provide Recommendations to the customers from the restaurants/mess owners uploaded on a daily basis. In the proposed system, there will be no limitation on the amount of order the customer wants. Also, same application can be used
as a Startup Business for the developers. It will provide real time customers feedback and ratings along with the comments to the restaurants/mess owner. It gives appropriate feedbacks to users, so if there is any error happened, then there will be a feedback dialog toward users. The proposed system is designed to avoid users doing fatal errors and inappropriate action. Scope of proposed system is justifiable because in large amount peoples are shifting to different cities so wide range of people can make a use of proposed system. The system/interface will take input from the user. The major attributes that will give input to the dataset are: name, address, email-Id, mobile no, other personal related values, etc. The output will include user/customer's Order, Bill, Feedback and Payment options. Initially there will be 10 to 12 restaurants and mess services considered inside 2 to 3 areas. The reason why to choose this project is the idea behind project that is to solve problem of people which they are facing when they shift to different city. The system is not only for user but also for provider who provides food service. This system is for making efficient communication between consumer and producer of the food system which will then leads to ideal and effective system.

1.1 PROBLEM STATEMENT

The online food ordering system sets up a food menu online and customers can easily place the order as per they like. Also, the online customers can easily track their orders.The management maintains customer's database, and improve food delivery service.

This system also provides a feedback system in which user can rate the food items. Also, the proposed system can recommend hotels, food, based on the ratings given by the user, the hotel staff will be informed for the improvements along with the quality. The payment can be made online or cash or pay-on-delivery system. For more secured ordering separate accounts are maintained for each user by providing them an ID and a password.

1.2 OBJECTIVES

The management of the information regarding item category, food, delivery address, order, and shopping cart is the system's primary goal. It oversees the management of all customer. shopping cart, and item category information. Since the project was entirely developed on the administrative end. only the administrator is assured access. The goal is to develop an application program to simplify managing the food consumer item category. It keeps note of every delivery address requested.

2.LITERATURE SURVEY

In [1] an automated food ordering system is proposed which will keep track of user orders smartly. Basically, they implemented a food ordering system for different type of restaurants in which user will make order or make custom food by one click only. By means of android application for Tablet PCs this system was implemented. The front end was developed using JAVA, Android and at the backend MySQL database was used.

In [2] Customer using a Smartphone is considered as a basic assumption for the system. When the customer approach to the restaurant, the saved order can be confirmed by touching the Smartphone. The list of selected preordered items shall be shown on the kitchen screen, and when confirmed, order slip shall be printed for further order processing. The solution provides easy and convenient way to select pre-order transaction form customers.

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

In [4] an application of integration of hotel management systems by web services technology is presented. Ordering System Kitchen Order Ticket (KOT), Billing System, Customer Relationship Management system (CRM) are held together by the Digital Hotel Management. Add or expand of hotel software system in any size of hotel chains environment was possible with this solution.

In [5] research work aims to design and develop a wireless food ordering system in the restaurant. Technical operations of Wireless Ordering System (WOS) including systems architecture, function, limitations and recommendations were presented in this system. It was believed that with the increasing use of handheld device such as PDAs in restaurants, pervasive application will become an important. tool for restaurants to improve the management aspect by minimizing human errors and by providing higher quality customer service.

In [6] along with customer feedback for a restaurant a design and execution of wireless food ordering system was carried out. It enables restaurant owners to setup the system in wireless environment and update menu presentations easily. Smart phone has been integrated in the customizable wireless food ordering system with real-time customer feedback implementation to facilitate real-time communication between restaurant owners and customers.

3.METHODOLOGY

3.1 Complete Visualization Model

Complete Visualization of Online Food Ordering System. An easy-to-use table management system will also be included in a good restaurant reservation setup. This enables restaurants to see their restaurant hour by hour and receive reservations through a variety of ways.

3.2 Hardware Requirement

Processor: 1.6GHz or Faster
Disk space: 4GB of Available Hard Disk
RAM: 2GB
Graphics-DirectX 9- capable Video Card
Display 1024 x 768 or Higher Resolution

3.3 Software Requirement Operating System:
For server infrastructure: Linux distributions (e.g., Ubuntu, CentOS) or Windows Server
For client devices: Windows, macOS, Linux, Android, iOS
Web Server: Apache HTTP Server. Nginx, or Microsoft Internet Information Services (IIS) for hosting the web application
Database Management System (DBMS): MySQL, PostgreSQL, or SQLite for storing and managing application data.
Backend Framework: Django: A high-level Python web framework for rapid development of web applications with built-in features like ORM, authentication, and URL routing
Frontend Technologies: HTML5, CSS3, JavaScript (ES6+), and responsive design frameworks (e.g. Bootstrap, Materialize) for building the user interface of the web application Vue.js. React, or Angular for developing dynamic and interactive frontend components (optional)
Version Control: Git for managing source code repositories, collaboration, and version control Integrated Development Environment (IDE): PyCharm, Visual Studio Code, or Sublime Text for Python development
Android Studio or Xcode for mobile app development.

3.4 Tools and Technique

3.4.1 Django

Django is a versatile web framework known for its efficiency in creating robust and maintainable web applications. Developed in Python, Django promotes rapid development through its "batteries-included approach, offering a wide range of built-in features such as authentication, URL routing, and database management. Its adherence to the Model-View-Template (MVT) architectural pattern enhances code organization and scalability. Additionally, Django prioritizes security with built-in protections against common web vulnerabilities and a robust authentication system. Its objectrelational mapping (ORM) layer simplifies database interactions, while its vibrant community provides extensive support, documentation, and third- party packages. Overall, Django is valued for its simplicity, security, and thriving ecosystem, making it a preferred choice for developers tackling web development projects of any size or complexity.

3.4.2 MySQL

MySQL Workbench is a comprehensive visual tool for DBAs, database architects, and developers. Data modelling. SQL creation, and extensive administrative tools for server configuration, user management, backup, and other tasks are all provided by MySQL Workbench. There are versions of MySQL Workbench for Windows, Linux, and Mac OS.

3.4.3 HTML

Hypertext Markup Language (HTML) is the industry-standard markup language for developing web apps and pages. It is one of three foundational technologies underpinning the World Wide Web, along with JavaScript and Cascading Style Sheets (CSS). HTML. documents are downloaded from a web server or local storage by web browsers, who then turn them into multimedia web pages. HTML originally featured cues for the document's design and semantically explains the structure of a web page. The foundation of HTML pages are HTML components. Images and other objects, like

interactive forms, may be embedded within the produced page using HTML techniques. By indicating structural semantics for text elements like headings, paragraphs, lists, links, quotations, and other objects, HTML offers a way to generate structured texts.

3.4.4 Bootstrap

Bootstrap is a front-end framework that is open-source and free to use while creating websites and web apps. It includes optional JavaScript extensions along with HTML and CSS-based design templates for navigation, buttons, forms, buttons, and other interface elements. It only addresses front-end development, unlike many web frameworks.

3.4.5 Visual Studio

Sublime Text is a commercial cross-platform source code editor that utilizes the Python programming language (API). Numerous programming and markup languages are supported natively, and users can add features through plugins, which are often developed and maintained by the local community under free-software licenses.

3.4.6 Git hub

GitHub is a Git-based version control hosting service on the internet. Code is where it is most frequently utilized. It has all of Git's distributed version control and source code management (SCM) features in addition to a few extras. Every project can benefit from access control and a variety of collaborative tools, including wikis, task management, issue tracking, and feature requests. Both private repositories and free accounts, which are frequently used to host open- source software projects, are available on GitHub.

3.4.7 Java Script

JavaScript often abbreviated as JS, is an interpreted, high-level programming language. Additionally, it is a dynamic, weakly typed, prototype-based, and multi-paradigm language. One of the three fundamental technologies of the World Wide Web, together with HTML and CSS, is JavaScript. JavaScript is a crucial component of online applications because it makes web pages interactive. The vast majority of websites make use of it, and every significant web browser has an engine specifically designed to run JavaScript.

3.4.8 CSS

Cascading Style Sheets (CSS) is a language for creating style sheets that describe how a document produced in a markup language like HTML will look. The World Wide Web's foundational technologies, along with HTML and JavaScript, include CSS.

Layout, colour, and font may all be separated from content and presentation using CSS. By describing the pertinent CSS in a separate CSS file, this separation can make content more accessible, give definition presentation features greater freedom and control, allow numerous web pages to share formatting, and reduce complexity and repetition in structural content.

4. RESULT & DISCUSSION

The final output is a complete web based Online Food Ordering System, which can be used in any kind of grocery shop or restaurant. This Online Food Ordering System can help to manage the Shops more effectively, efficiently and smoothly. This is more secured and there will be speedy and well-ordered authentication procedure for the maintenance of records. At present time, in this technology-based world, people like and wants everything to be smooth and efficient through the use of data and information. In this perspective, our Online Food Ordering System can be an ideal platform for the users. Its user-friendly interface can help the Customers to find his/her desired menu item and place order with a few clicks. Customers can easily place an online order by browsing the menu options, pick what they want sitting at home. And can also receive their food in a short period of time.

5.CONCLUSION & FUTURE WORK

Food Ordering System is a web-based technology that aids the grocery shops in carrying out tasks effectively and efficiently. It aids in managing cash flow for managers. Managers can view analytics data to assess company growth. The manager can control orders andemployee schedules by using this

system. The full complement is a online food ordering system.It provides access to the Online Order platform, third-party connectors software, and comprehensive CRM solution,which together cover a sizable portion of your restaurant's requirements. They are not the outdated hardware and software sets for restaurants that were previously offered. They are the hottest things around, smooth, manageable, inexpensive, and quick.In the "Online Food Ordering Project," we made every effort to meet all the demands of the restaurant/shops. Because it is straightforward and adaptable, the project is successful. The biggest benefit of my project is that it draws plenty of users because of its simplicity. A novice user may operate it with ease. Any type of restaurant can utilize oursoftware. The system handles the transaction andstoresthe data produced. These data will be used to create reportsthat assist the restaurant managerin making wise business decisions. For example, the manager can decide whether more waiters, delivery men, delivery carts, and cooks are needed based on how many clients will be present during a specific time period. When this project is finished, all security concerns will be resolved. Additionally, a quick and secure authentication process will be used for record maintenance. Because it automatically pulls information about a consumer from the database on subsequent visits, data entry is quick and easy. As a result, our program will undoubtedly succeed in replacing the antiquated manual way of storing secure information. The work plan also specifies the specific front end and backend characteristics of the technology being used in the project. Future project goals and its scope have been elaborated.

6.REFERENCE

[1] Kirti Bandage, Tejas Shinde, Dheeraj Ingale, Neeraj Solanki, Reshma Totara ,"A Proposed System for Touchpad Based Food Ordering System Using Android Application", International Journal of Advanced Research in Computer Science Technology (IJARCST 2015).

[2] Varsha Chavan, Priya Jadhav, Snehal Korade, Priyanka Teli, "Implementing Customizable Online Food Ordering System Using Web Based Application", International Journal of InnovativeScience, Engineering Technology (IJISET) 2015.

[3] Resham Shinde, Priyanka Thakare, Neha Dhomne, Sushmita Sarkar, "Design and Implementation of Digital dining in Restaurants using Android", International Journal of AdvanceResearch in Computer Science and Management Studies 2014.

[4] Ashutosh Bhargave, Niranjan Jadhav, Apurva Joshi, Prachi Oke, S. R Lahane, "Digital Ordering System for Restaurant Using Android", International Journal of Scientific and ResearchPublications 2013.

[5] Khairunnisa K., Ayob J., Mohd. Helmy A. Wahab, M. Erdi Ayob, M. Izwan Ayob, M. Afif Ayob, "The Application of Wireless Food Ordering System" MASAUM Journal of Computing 2009.

[6] Noor Azah Samsudin, Shamsul Kamal Ahmad Khalid, Mohd Fikry Akmal Mohd Kohar, Zulkifli Rabu, Mohd Nor Ihkasan, "A customizable wireless food ordering system with real time customer feedback", IEEE Symposium on Wireless Technology and Applications (ISWTA) 2011.

[7] Serhat Murat Alagoza, Haluk Hekimoglub, "A study on tam: analysis of customer attitudes inonline food ordering system", Elsevier Ltd. 2012.

[8] Patel Krishna, Patel Palak, Raj Nirali, Patel Lalit, "Automated Food Ordering System", International Journal of Engineering Research and Development (IJERD) 2015.

[9] Mayur D. Jakhete, Piyush C. Mankar, "Implementation of Smart Restaurant with e- menu Card," International Journal of Computer Applications 2015 of Smart Restaurant with emenu Card," International Journal of Computer Applications.

[10] Abhishek Singh, Adithya R. Vaishnav Kanade, Prof. Salma Pathan, FOOD ORDERING SYSTEM," International Research Journal of Engineering and Technology (IRJET) 2018.

[11] Gleditsch, N. P., Pinker, S., Thayer, B. A., Levy, J. S., & Thompson, W. R. (2013). The forum:

[12] Data Analysis. International Data Analysis Review, 15(3), 396-419.

[13] Google for problem solving.

[14] https://www.slideshare.net/

[15] Database Programming with JDBC and Java by O'Reilly

[16] Head First Java 2nd Edition
[17] http://www.jdbc-tutorial.com/
[18] Java and Software Design Concepts by Apress
[19] https://www.tutorialspoint.com/java/http://www.javatpoint.com/java-tutorial
[20] https://docs.oracle.com/javase/tutorial/
[21] http://www.wampserver.com/en/
[22] http://www.JSP.net/
[23] http://www.tutorialspoint.com/mysql/
[24] httpd.apache.org/docs/2.0/misc/tutorials.html