MODERN APPLICATION DEVELOPMENT

JAVA SPRING BOOT

VITEATZ - FOOD ORDERING SYSTEM

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1. INTRODUCTION:

1.1 OVERVIEW:

Viteatz is a web-based food ordering system explicitly designed for a university environment. It provides a convenient platform for university students to browse and order food from various restaurants located within the university campus. The system facilitates the delivery of food orders directly to the students' hostels, ensuring quick and efficient service. Viteatz is exclusively available to the students of the university, offering a seamless and tailored food ordering experience.

1.2 PURPOSE:

The Viteatz - Food Ordering System offers several benefits and achieves the following objectives:

- **Convenience and Efficiency:** The system simplifies the process of food ordering for university students. It eliminates the need for students to physically visit restaurants or make phone calls to place orders. By providing an online platform, Viteatz streamlines the entire ordering process, saving time and effort for students.

- **Wide Restaurant Selection:** The system offers a variety of restaurants within the university campus. Students can explore different cuisines and menus, providing them with a diverse range of options. This enhances the dining experience and caters to individual preferences.

- **Seamless Ordering Experience:** Viteatz provides a user-friendly interface that allows students to browse menus, add items to their carts, customize orders, and select delivery options. The system calculates the total order amount, including taxes and delivery charges, ensuring transparency and accuracy.

- **Timely Delivery:** The system enables students to select their respective hostels or residential areas for delivery. Viteatz ensures prompt and efficient delivery of food orders to students' hostels. This eliminates the hassle of students leaving their premises to collect their meals.

- **Improved Communication and Transparency:** Viteatz enhances communication between students, restaurants, and delivery personnel. Real-time updates on order status keep students informed about the progress of their orders, ensuring transparency and reducing uncertainty.

Overall, using Viteatz improves the food ordering experience for university students by offering convenience, choice, efficiency, and personalized features. It promotes a seamless and hassle-free process, ultimately enhancing student satisfaction and ensuring the timely delivery of meals directly to their hostels.

3.   THEORETICAL ANALYSIS:

3.1 BLOCK DIAGRAM:
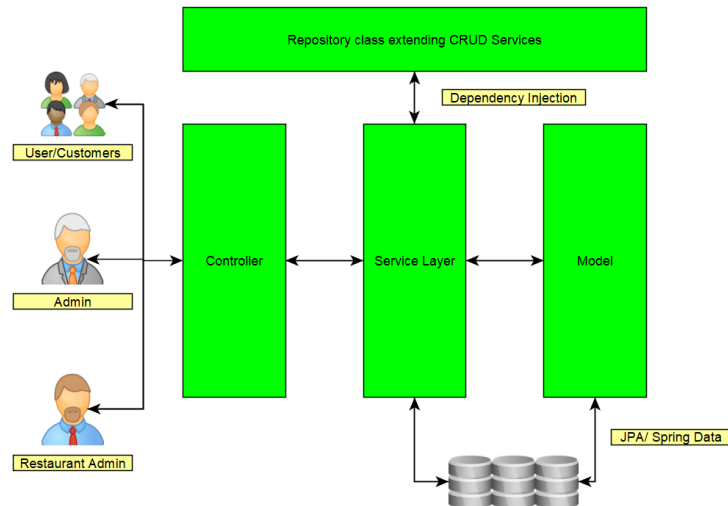
3.2 HARDWARE DESIGNING:

- **CPU**: A multi-core processor with adequate processing power.
- **8GB of RAM:** Sufficient RAM to handle database operations

3.3 SOFTWARE DESIGNING:

- **Java Development Kit (JDK):** JDK is required to compile and run Java applications, providing the necessary tools and libraries. Download and install the latest JDK version from Oracle's website.
  Download JDK:
  https://www.oracle.com/java/technologies/javase-jdk11-downloads.html

- **Integrated Development Environment (IDE):** An IDE offers a comprehensive development environment for writing, debugging, and managing code. IntelliJ IDEA, Eclipse, or Visual Studio Code are popular choices for Java development.
  Eclipse: https://www.eclipse.org/downloads/

Visual Studio Code: https://code.visualstudio.com/download

- **Spring Boot:** Spring Boot simplifies Java application development by providing predefined configurations, automatic dependency management, and a streamlined development experience. Use the Spring tool suite to create a Spring Boot project.

  STS Download:
  https://download.springsource.com/release/STS4/4.19.0.RELEASE/dist/e4.28/spring-tool-suite-4-4.19.0.RELEASE-e4.28.0-win32.win32.x86_64.self-extracting.jar

- **XAMPP:** XAMPP is a cross-platform software package that includes Apache HTTP Server, MySQL database, PHP, and Perl. It provides an easy-to-use solution for setting up a local development environment for web applications.

  Xampp Download:
  https://sourceforge.net/projects/xampp/files/XAMPP%20Windows/8.2.4/xampp-windows-x64-8.2.4-0-VS16-installer.exe

- **PhpMyAdmin:** phpMyAdmin is a web-based database management tool for MySQL. It allows users to interact with MySQL databases through a graphical user interface, making it easy to manage and manipulate database structures and data.

  PhpMyAdmin localhost: https://locallhost.me/phpmyadmin

4.   EXPERIMENTAL INVESTIGATIONS:

During the development of the Viteatz Food Ordering System, several analyses and investigations were conducted to ensure a robust and effective solution. Here are some key areas that were analyzed:

- **User Requirements:** A thorough analysis of the user requirements was conducted to understand the needs and expectations of the university students, restaurant administrators, and other stakeholders. This

involved gathering feedback through surveys, interviews, and discussions to identify the key features, functionalities, and user experience considerations.

- **Technical Feasibility:** An analysis of the technical feasibility was performed to determine the suitability of the chosen technologies (Java Spring Boot, HTML, MySQL, PHPMyAdmin, CSS, JS) for implementing the desired functionalities. This involved assessing the compatibility, scalability, and performance aspects of the selected technologies.

- **Database Design:** A comprehensive analysis of the database design was carried out to ensure efficient storage and retrieval of data. This involved identifying the entities, relationships, and attributes relevant to the system, and designing an appropriate database schema. The analysis also included considerations for data integrity, normalization, and indexing.

- **Performance Analysis:** Performance analysis was performed to assess the system's responsiveness and scalability. This involved conducting load testing and stress testing to determine how the system performs under various levels of user traffic and data loads. The analysis helped identify potential bottlenecks and optimize system performance.

- **Usability Testing:** Usability testing was conducted to evaluate the user-friendliness and intuitiveness of the system's interface. This involved gathering feedback from a group of representative users and incorporating their suggestions to improve the user experience. The analysis focused on aspects such as navigation, menu browsing, ordering process, and feedback mechanisms.

- **Integration Analysis:** An analysis of integration requirements was performed to ensure seamless communication between different system components. This involved assessing the integration of the front-end and back-end systems, database connectivity, and any external APIs or services required for functionality like payment processing or delivery tracking.

By conducting these analyses and investigations, the development team was able to gain valuable insights into the system's requirements, feasibility, security, performance, usability, and integration aspects. This facilitated the development of a robust, efficient, and user-friendly food ordering solution that meets the specific needs of the university community.
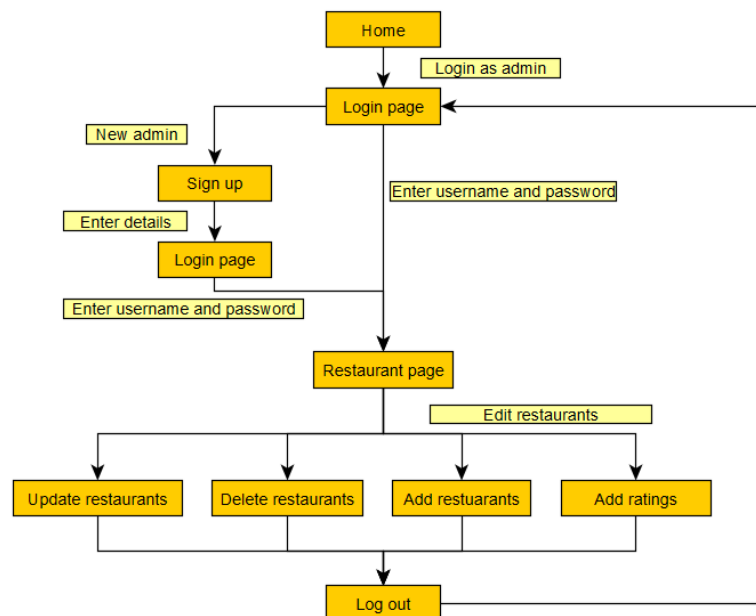
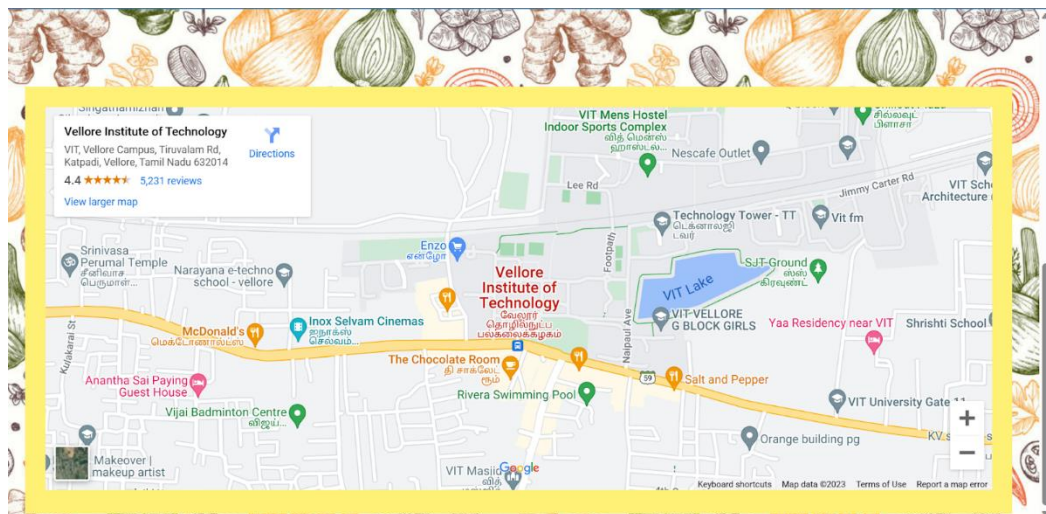## 5. FLOWCHART:

USER / CUSTOMER:
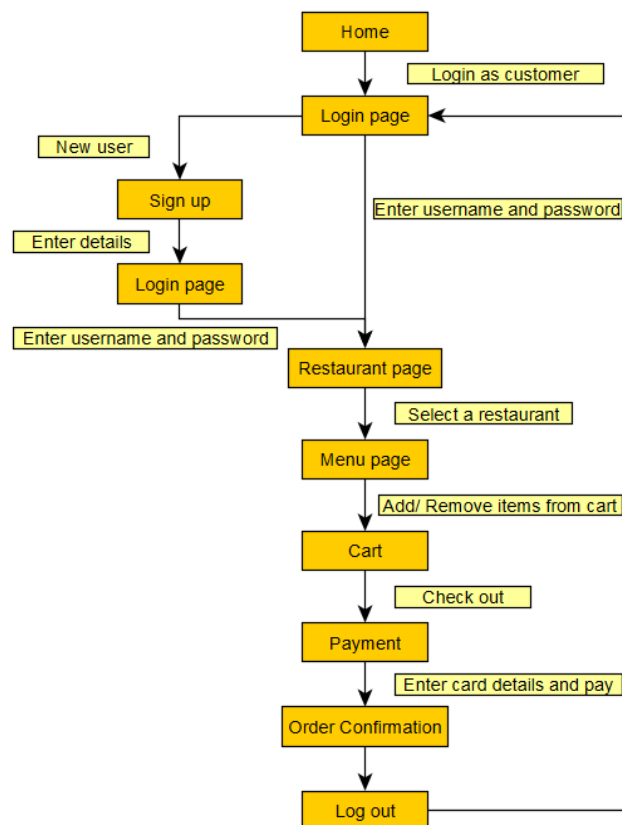
RESTAURANT ADMIN:
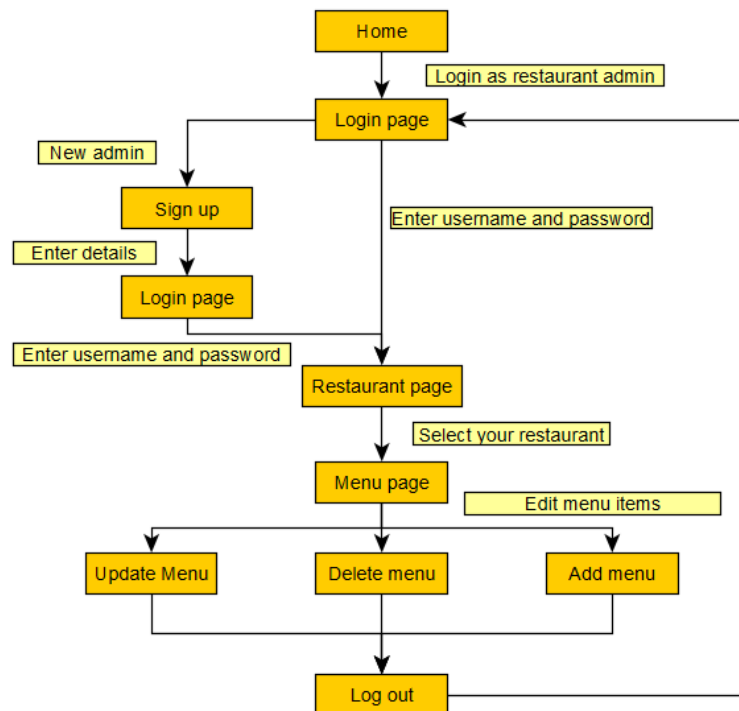
ADMIN PAGE:

6.   RESULT:

Index.html:

ADMIN:

ADMIN DASHBOARD:

RESTAURANTS:

ADD RESTAURANT:

RESTAURANT ADMIN:

LOGIN:

EDIT RESTAURANT MENU:
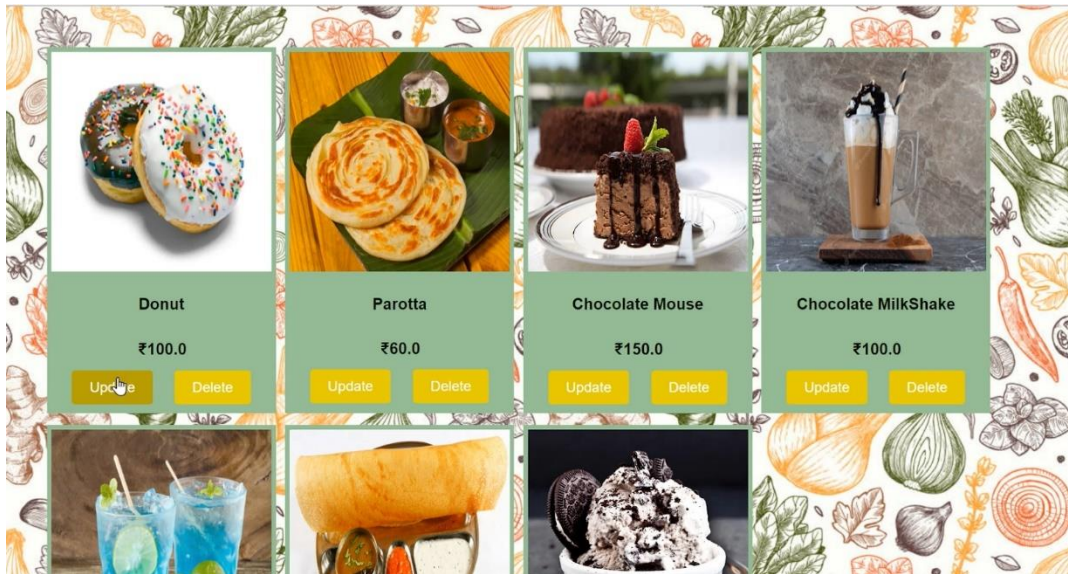
ADD MENU OPTION:

Add Menu

Item Name:

Enter your food item name

Item Price:

Enter the item price

Item Image:

Enter the image url
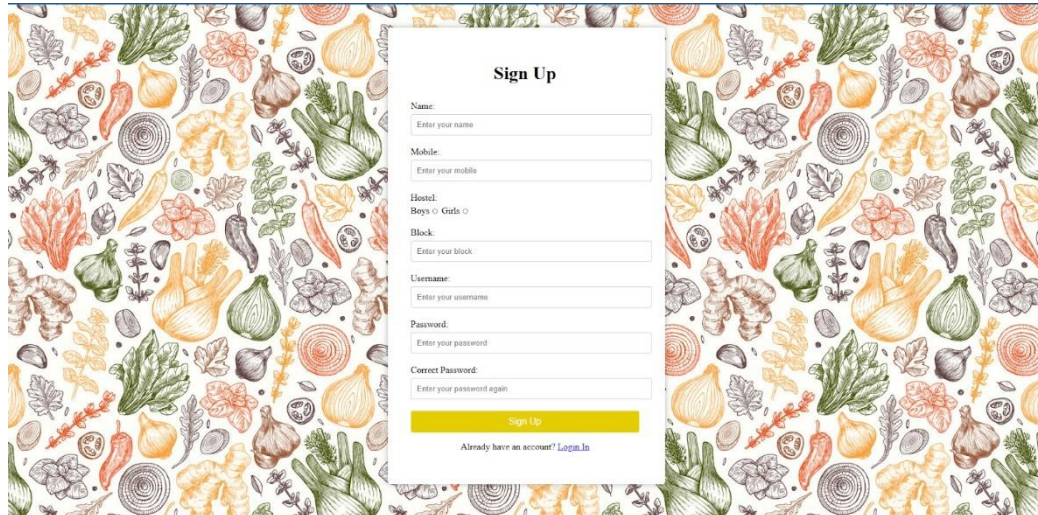
Add Menu

CUSTOMER:

SIGNUP:

RESTAURANTS:
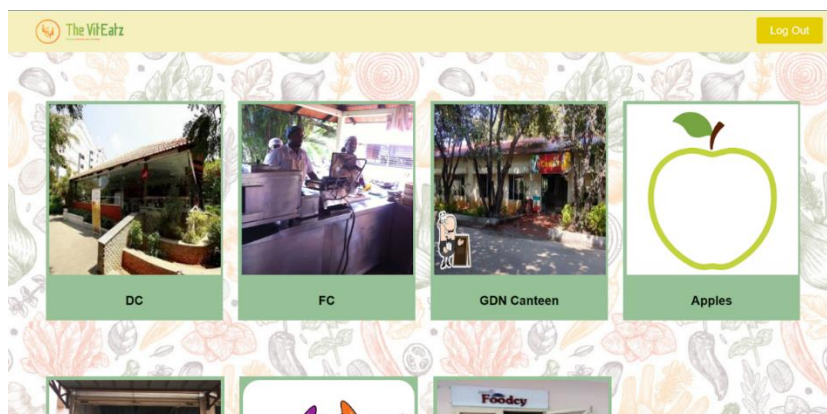
MENU:
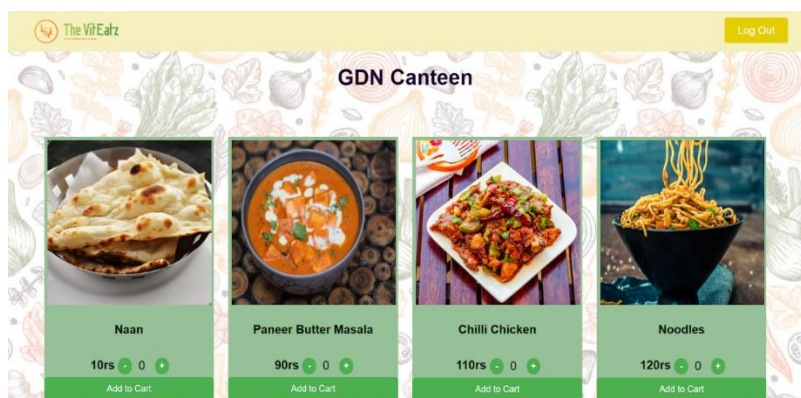
CART:

Chicken Biriyani

150rs **-** 1 **+**

Add to Cart

Cart

Paneer Butter Masala - 2 x 90rs - 180rs [Remove]
Naan - 9 x 10rs - 90rs [Remove]
Chicken Biriyani - 1 x 150rs - 150rs [Remove]

Check Out

PAYMENT:

Payment

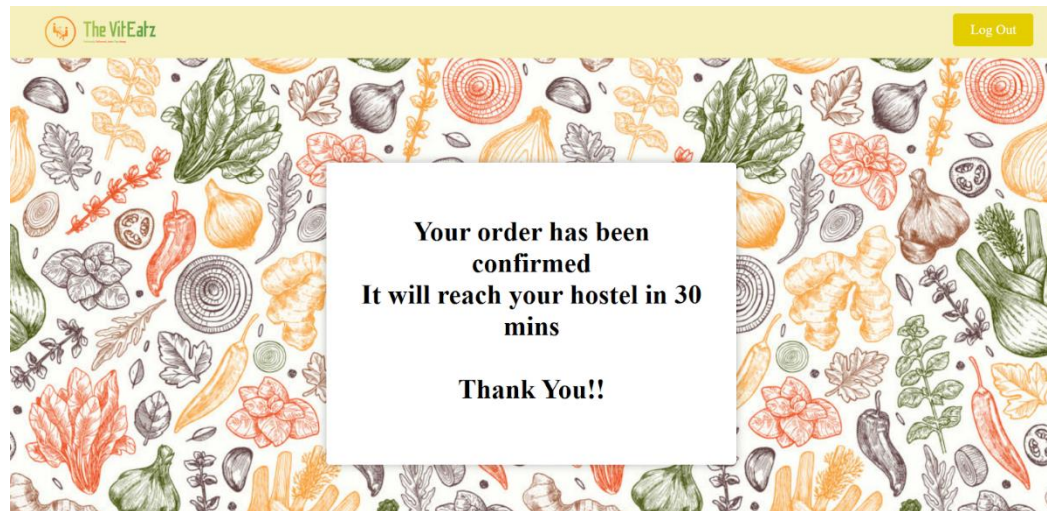Card Number

1234 5678 9012 3456

Expiry Date

MM/YY

CVV

123

Pay Now

ORDER CONFIRMED:

CONCLUSIONS:

In conclusion, the development of the Viteatz food ordering system for university students has proven to be a valuable and efficient solution. By utilizing technologies such as Java SpringBoot, HTML, MySQL, PHPMyAdmin, CSS, and JavaScript, we have successfully implemented a user-friendly platform that connects students with various restaurants within the university campus. The system allows restaurant admins to manage their menus, while customers can easily browse and place orders for delivery to their hostels.

The advantages of the Viteatz system include improved convenience and accessibility for students, streamlined menu management for restaurant admins, and efficient delivery to the hostels. The system promotes a seamless ordering experience and reduces manual processes for both customers and restaurants. Additionally, the integration of MySQL and PHPMyAdmin ensures secure storage of customer, admin, and restaurant admin credentials.

However, it is important to consider some potential limitations of the system. Overall, the Viteatz food ordering system demonstrates the effective utilization of modern technologies to enhance the food ordering experience within a university campus. It caters specifically to the needs of students, providing them with a convenient and efficient platform to satisfy their food cravings. With

further enhancements and adaptations, this system can serve as a foundation for future innovations in the realm of campus food delivery systems

FUTURE SCOPES:

- **Real-time order tracking:** Develop a feature that allows students to track their orders in real time, providing them with updates on the status of their delivery and estimated time of arrival.

- **Password encryption:** Encrypt the stakeholder's password using a strong encryption algorithm.

- **Mobile application development:** Create dedicated mobile applications for iOS and Android platforms to enhance the user experience and accessibility of the food ordering system.

- **Integration with university systems:** Integrate the Viteatz system with existing university systems such as student IDs or university accounts for streamlined authentication and seamless user experience.

- **Social media integration:** Integrate the food ordering system with social media platforms to enable users to share their food orders, leave reviews, and engage with the system through social media channels, enhancing brand visibility and customer engagement.

- **Expansion to other universities or locations:** Once the system is successfully implemented in one university, consider expanding to other universities or locations, targeting a larger user base and increasing the reach of the food ordering system.

- **Loyalty and rewards program:** Implement a loyalty program to incentivize customers and encourage repeat orders. Offer rewards, discounts, or exclusive deals to loyal customers to enhance customer retention.

BIBLIOGRAPHY:

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- https://www.researchgate.net/profile/Roshan-Adithya/publication/321844341_Online_Food_Ordering_System/links/611df9431ca20f6f8630b883/Online-Food-Ordering-System.pdf

- https://youtu.be/vtPkZShrvXQ

- https://d1wqtxts1xzle7.cloudfront.net/40272220/food_order-libre.pdf?1448226915=&response-content-disposition=inline%3B+filename%3DFood_order.pdf&Expires=1688159242&Signature=gY~ipweU6BU-iXyVSAyLL8nd4256DrCMYLhwQtAW3bRFuP4awEDgJUgcBlqssg0iYv4MGkM7KtyiALx8m7APQRsWkB0GivhALhqkeJTBuFyVJFLGCo5PXxrjOK55ChlkRG0OBR24mR3jEcW~Cn8Livy8QHVs4657IvVxITFnF5DKPWSmnzlaoeeli8lSp4ZF3OXYf6k1TIO3NgrTxuy4XNEhL8ICwnyRcAnXYKK6EWLiwxVfj4KjAx1Nmej4f3OvLBKd4inBlu5G6JJUEER2EXfXC-iKtHqvgtuG20TfWJSYO2alxjZf--xjghujzF660~ZOeyfnHVxlRt5scp~dOw__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

- https://youtu.be/DrKA56M1NRs

- https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=b115d85b90d36c5e7bac6fe5c6607635a705c19a