

MODERN APPLICATION DEVELOPMENT

JAVA SPRING BOOT

VITEATZ - FOOD ORDERING SYSTEM



TEAM MEMBERS:

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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.

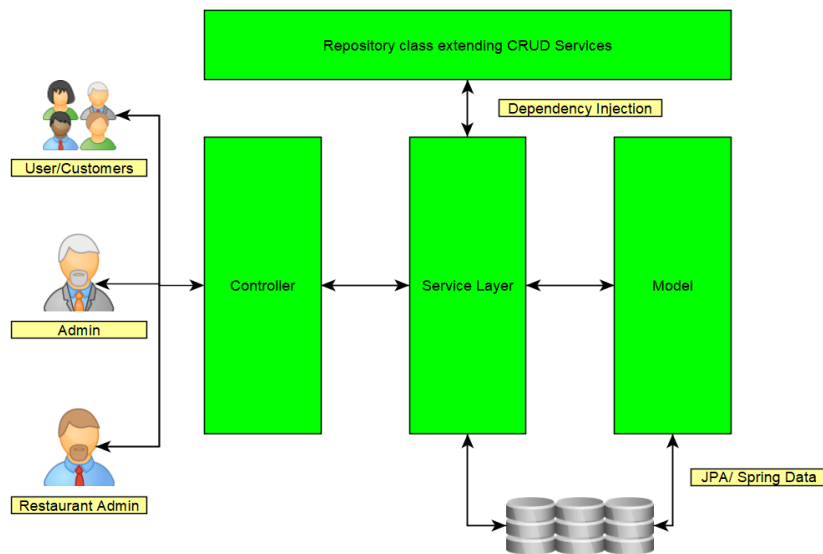
2. LITERATURE SURVEY:

S.NO	TITLE	AUTHOR	ABSTRACT	TOOLS/ METHODOLOGY
1.	Netfood: A Software System for Food Ordering and Delivery	Cristina-Edina Domokos, Károly Simon	The Netfood project aims to develop a delivery-oriented order management system that allows users to order from multiple restaurants simultaneously and helps the work of the delivery personnel in tracking the orders. There are many applications for food ordering from local restaurants in particular cities. Some systems support group orders too, but these are usually restaurant-oriented: an order can only contain items requested from a single restaurant. This model works well where the delivery can be solved separately by the restaurants, but there are settlements (e.g., small towns) where multiple restaurants are working together with the same delivery company.	The Android Software Development Kit, Gradle build system, Retrofit
2.	Live Event Food Service	Shraddha Barve , Bhavik Sakhiya	software where any person sitting at the Live Event can order food online any hustle. The food ordered will directly be brought to the person's seat. The process consists of a customer choosing the food of their	Android Studio, Php MyAdmin

			choice, scanning the menu items, choosing an item, and finally choosing for pick-up or delivery. Payment is then administered by paying with a credit card or debit card through the app or website or in cash at the restaurant when going to pick up. The website and app inform the customer of the food quality, duration of food preparation, and when the food is ready for pick-up or the amount of time it will take for delivery	
3.	Online Food Ordering System	Abhishek Singh, Salma Pathan	It gives information needed in making order to customer. The Food website application made for restaurant and mess can help restaurant and mess in receiving orders and modifying its data and it is also made for admin so that it helps admin in controlling all the Food system.	Android SDK,GPS,WLAN devices
4.	Automated Food Ordering System with Real-Time Customer Feedback	Shweta Shashikant Tanpure, Madhura M. Joshi	implementation of automated food ordering system with real time customer feedback (AOS-RTF) for restaurants. This system, implements wireless data access to servers. The android application on user's mobile will have all the menu details. The order details from customer's mobile are wirelessly updated in central database and subsequently sent to kitchen and cashier respectively. The restaurant owner can manage the menu modifications easily. The wireless application on mobile devices provides a means of convenience, improving efficiency and accuracy for restaurants by saving time, reducing human errors and real-time customer feedback. T	(AOS-RTF). It is a wireless food ordering system using android devices,
5.	Implementing Customizable Online Food Ordering System Using Web Based Application	Varsha Chavan, Priya Jadhav, Snehal Korade	"Food Pre-Order System using Web Based Application" in which customer can be able to create the order before they approach the restaurant. Customer using Smartphone. When the customer approach to the restaurant, the saved order can be confirmed by touching the Smartphone.	Global System of Mobile communication, User tablet, SMS integration,

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://localhost.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 analysed:

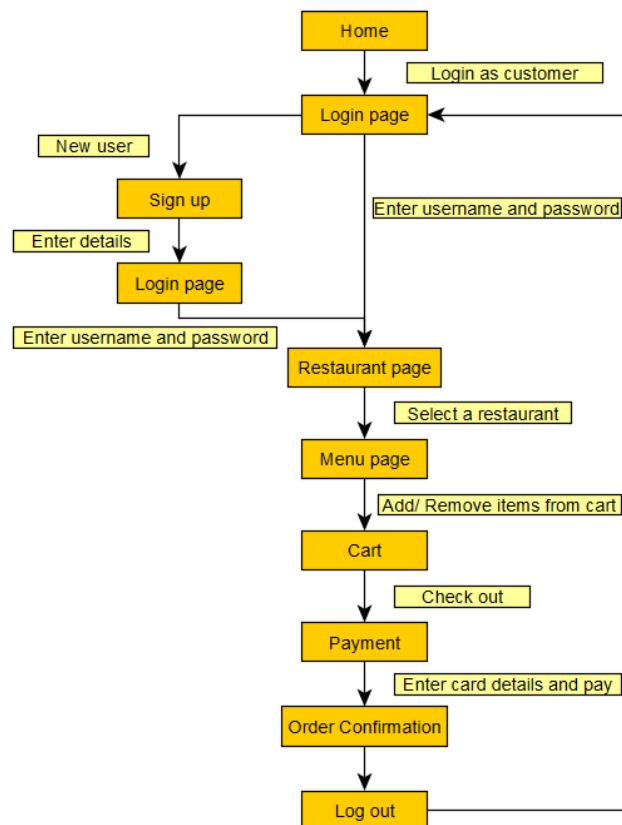
- **User Requirements:** A thorough analysis of the user requirements was conducted to understand the needs and expectations of the university students, restaurant administrators, and other stakeholders. This involved gathering feedback through surveys, interviews, and discussions to identify the key 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.

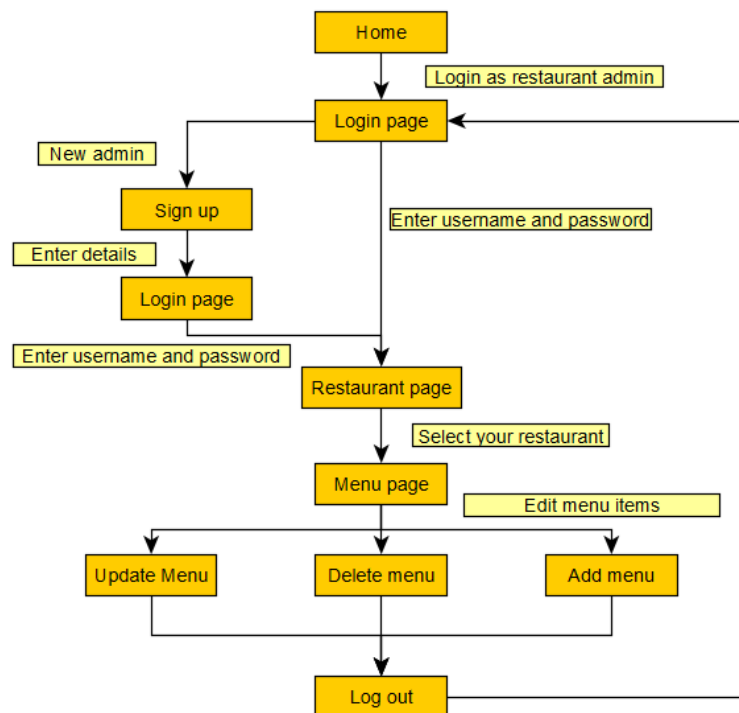
By conducting these analyses and investigations, the development team was able to gain valuable insights into the system's requirements, feasibility, security, performance, usability, and integration aspects. This facilitated the development of a robust, efficient, and user-friendly food ordering solution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

5. FLOWCHART:

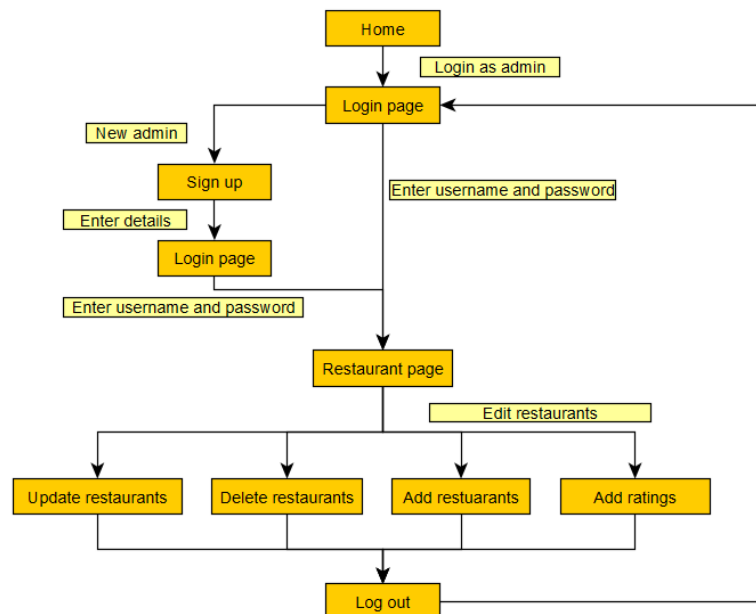
USER / CUSTOMER:



RESTAURANT ADMIN:

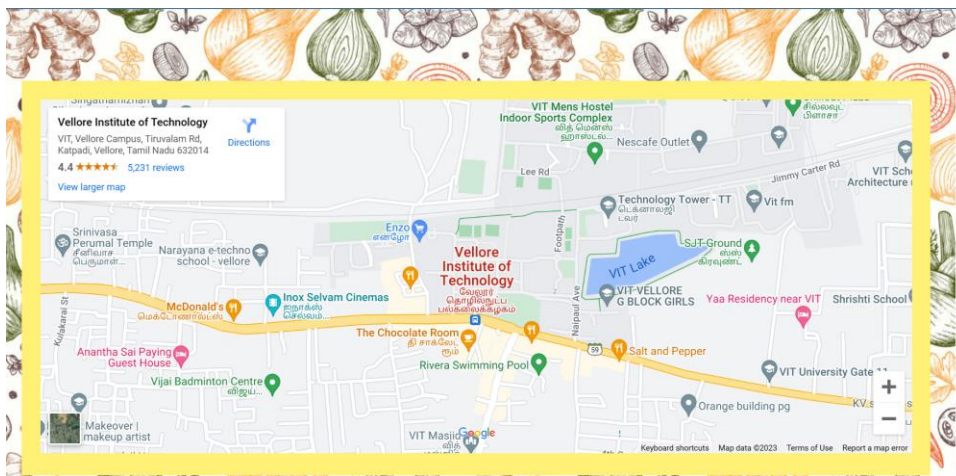


ADMIN PAGE:

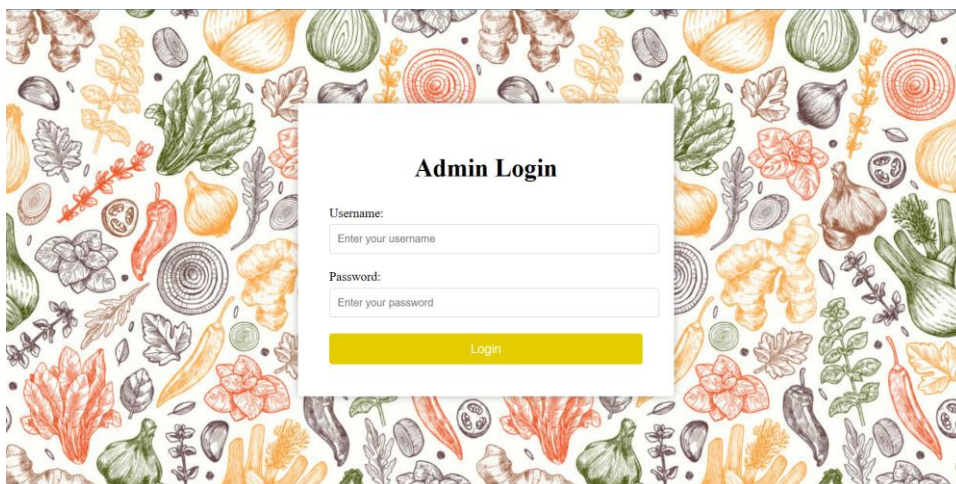


6. RESULT:

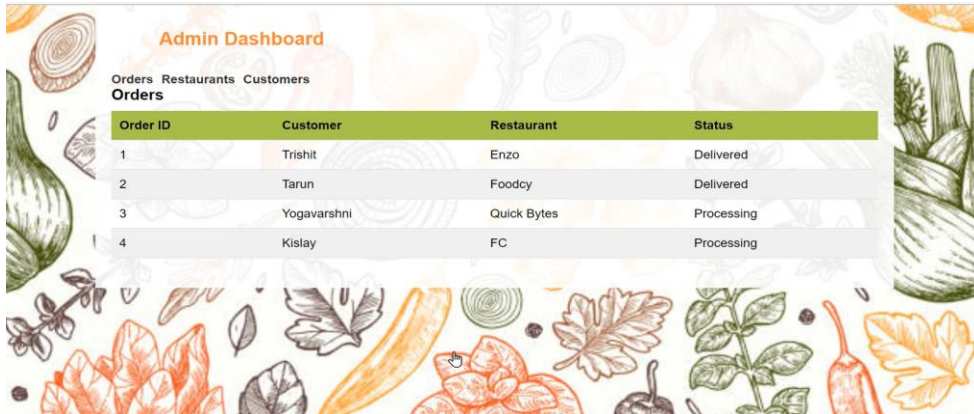
Index.html:



ADMIN:

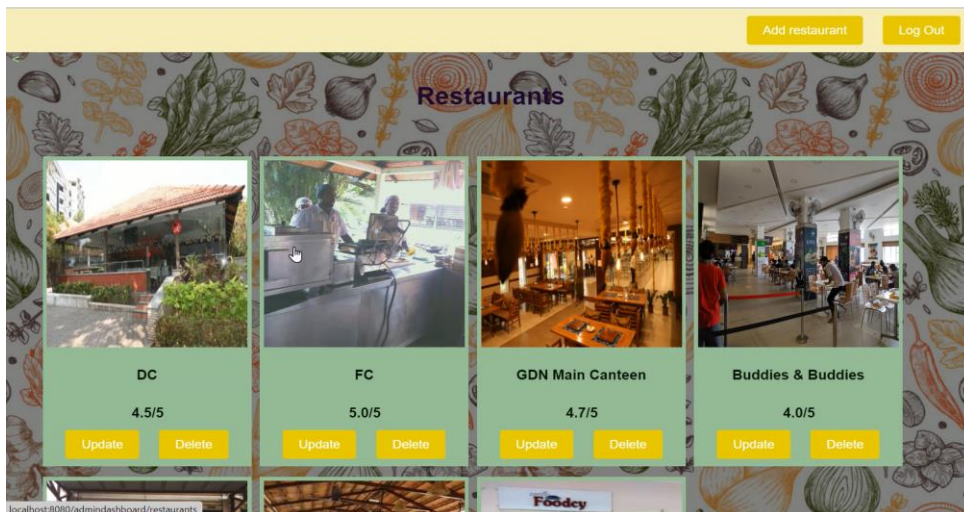


ADMIN DASHBOARD:

A screenshot of an Admin Dashboard with a vegetable-themed background. It features a navigation bar with 'Orders', 'Restaurants', and 'Customers'. The 'Orders' section is active, displaying a table with 4 rows of order data. The table has columns for Order ID, Customer, Restaurant, and Status.

Order ID	Customer	Restaurant	Status
1	Trishit	Enzo	Delivered
2	Tarun	Foodcy	Delivered
3	Yogavarshni	Quick Bytes	Processing
4	Kislay	FC	Processing

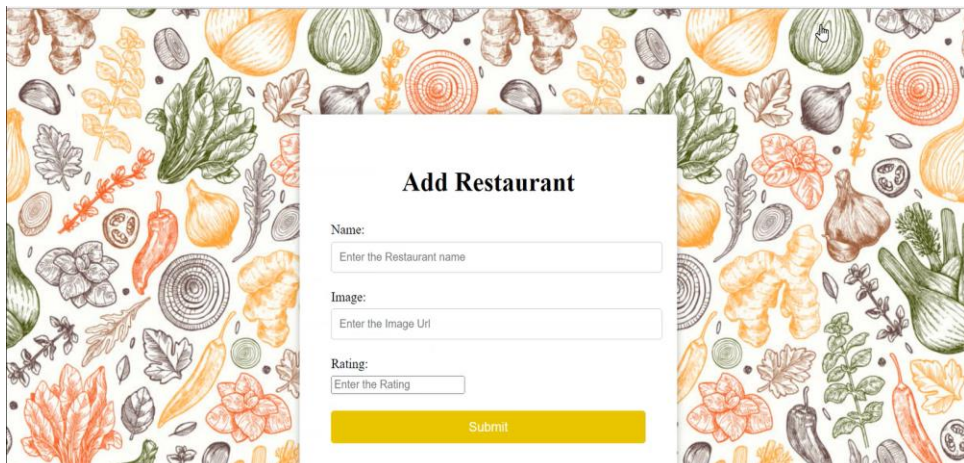
RESTAURANTS:

A screenshot of the Restaurants section in the admin dashboard. It shows a grid of restaurant cards with images, names, ratings, and 'Update'/'Delete' buttons. The background is a vegetable-themed pattern. At the top right, there are 'Add restaurant' and 'Log Out' buttons.

Restaurants

Image	Name	Rating	Update	Delete
	DC	4.5/5	Update	Delete
	FC	5.0/5	Update	Delete
	GDN Main Canteen	4.7/5	Update	Delete
	Buddies & Buddies	4.0/5	Update	Delete

ADD RESTAURANT:

A screenshot of the 'Add Restaurant' form. It has a vegetable-themed background and a white form box. The form includes fields for Name, Image (with a URL placeholder), and Rating, followed by a Submit button.

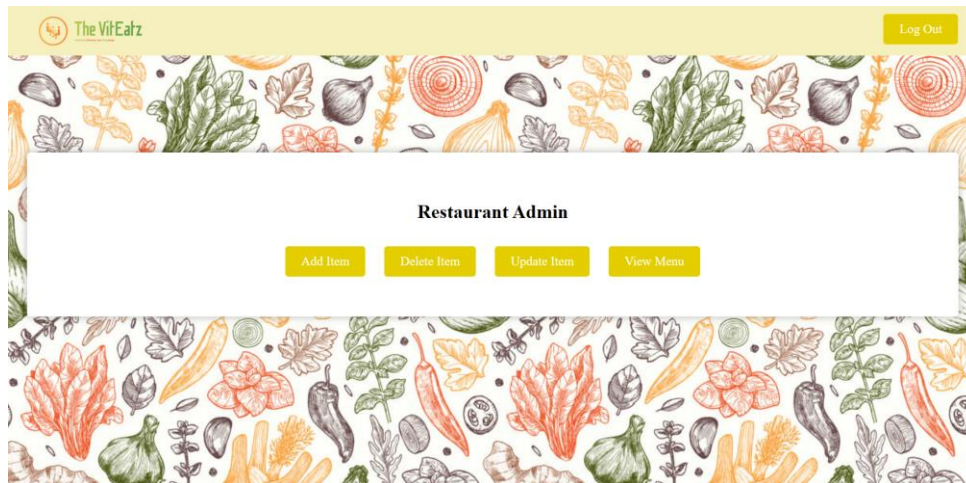
Add Restaurant

Name:

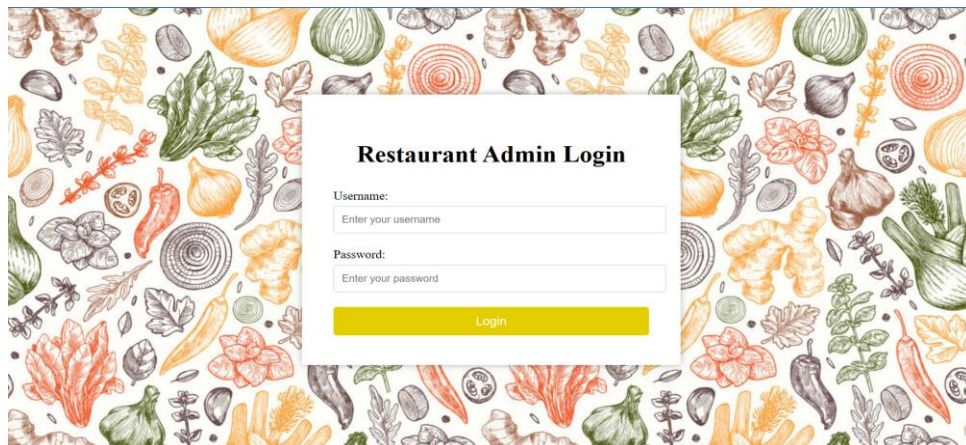
Image:

Rating:

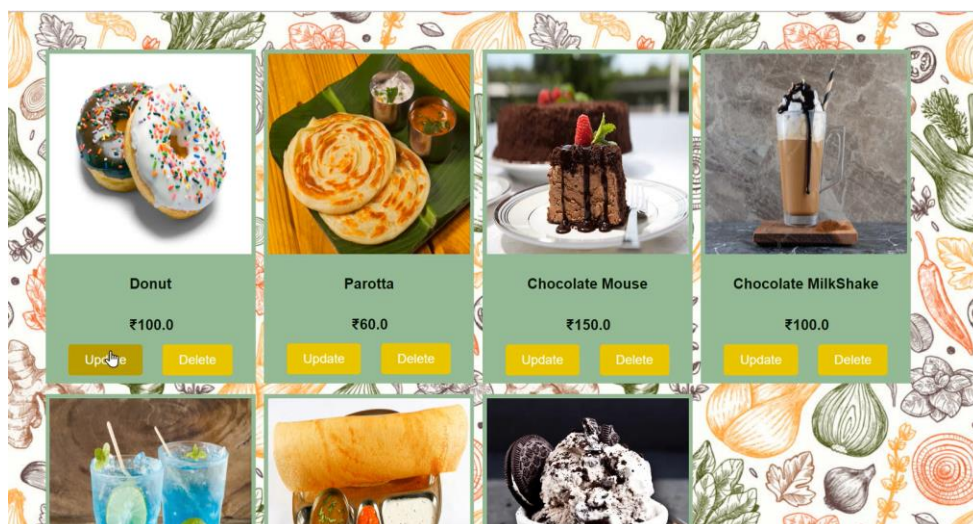
RESTAURANT ADMIN:



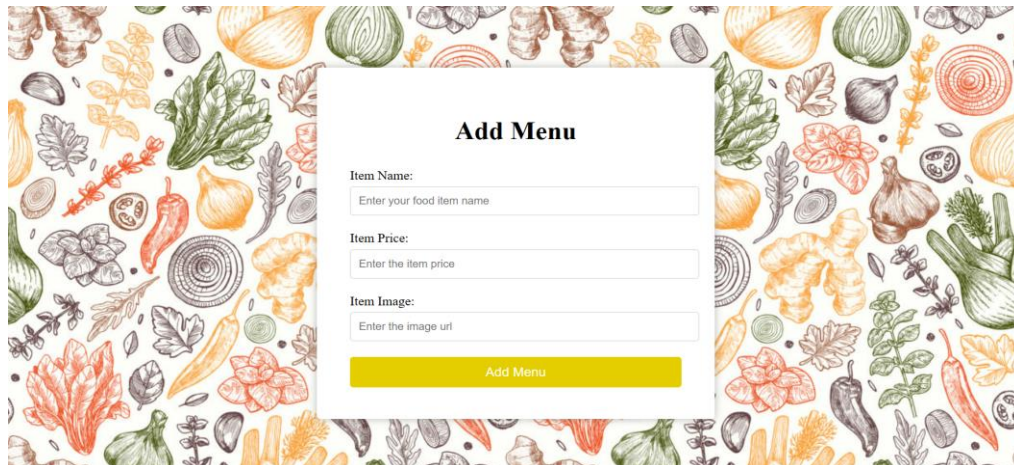
LOGIN:



EDIT RESTAURANT MENU:



ADD MENU OPTION:



Add Menu

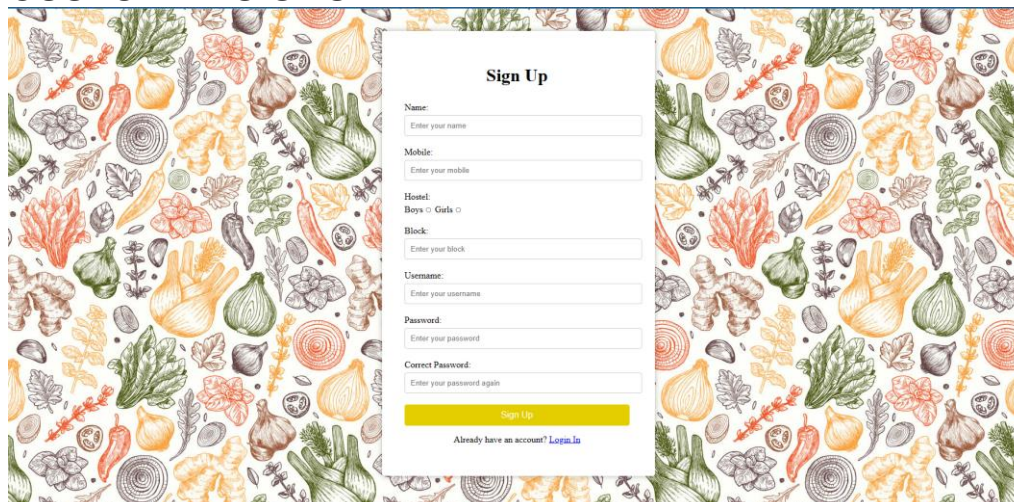
Item Name:

Item Price:

Item Image:

[Add Menu](#)

CUSTOMER SIGNUP:



Sign Up

Name:

Mobile:

Gender:
Boys ☐ Girls ☐

Block:

Username:

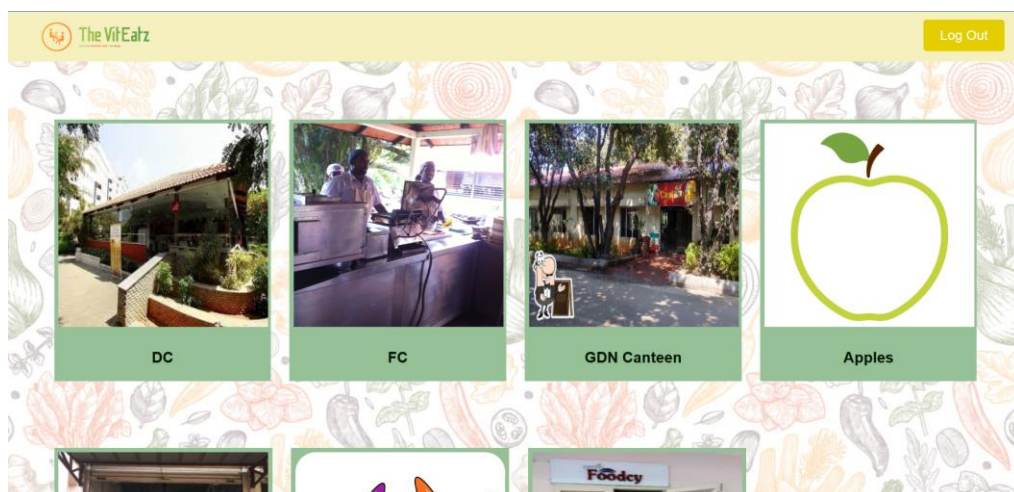
Password:

Confirm Password:

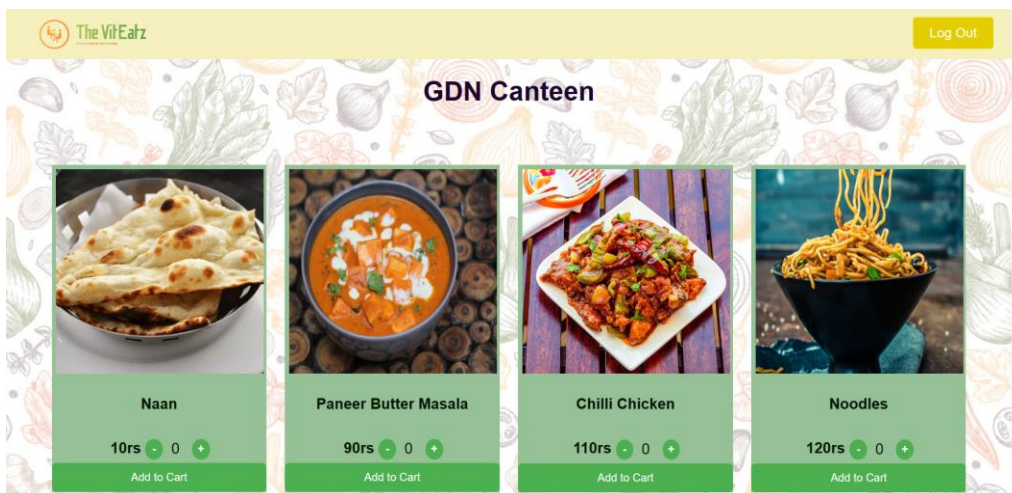
[Sign Up](#)

Already have an account? [Login](#)

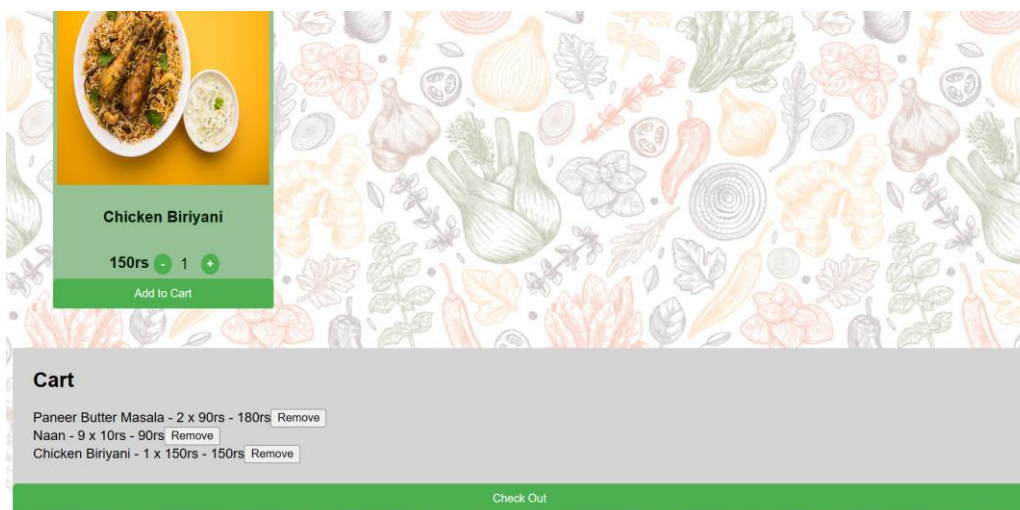
RESTAURANTS:



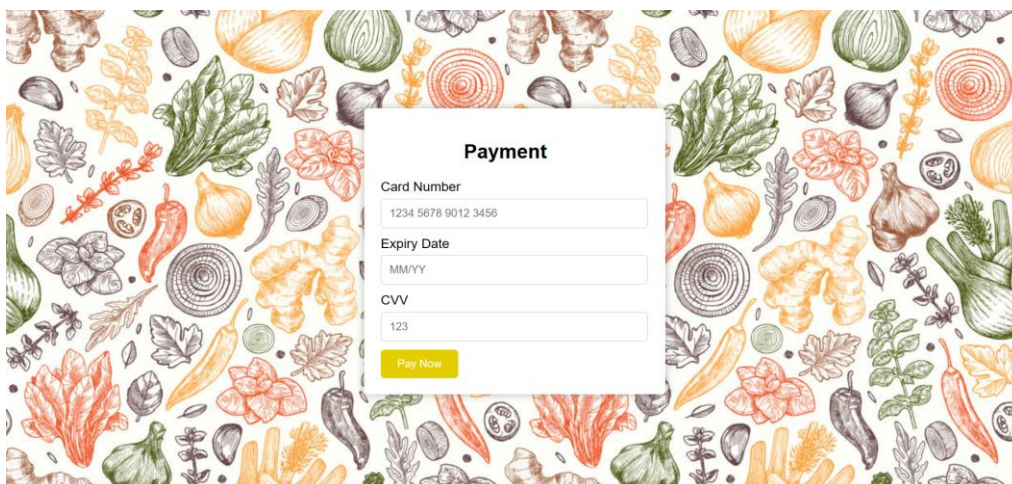
MENU:



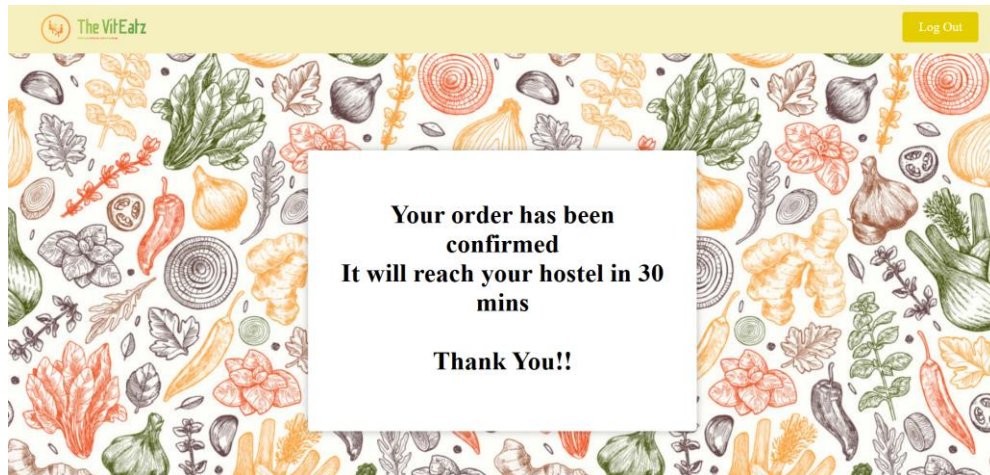
CART:



PAYMENT:



ORDER CONFIRMED:



7. ADVANTAGES:

- **Increased Convenience:** The system provides a convenient way for university students to order food from a variety of restaurants within the campus. Students can browse menus, place orders, and have the food delivered directly to their hostels, saving them time and effort.
- **Streamlined Menu Management:** Restaurant admins can easily manage their menus through the system. They can add, modify, or remove items, ensuring that the menu is always up-to-date for customers to choose from.
- **Enhanced Accessibility:** By utilizing an online platform, the system enhances accessibility for students. They can access the system from their computers or mobile devices, making it convenient for them to place orders at any time.
- **Efficient Delivery:** The system enables efficient delivery of food to the hostels, ensuring that students receive their orders promptly. This helps to improve customer satisfaction and creates a positive user experience.
- **Secure Credential Storage:** The use of MySQL and PHPMyAdmin ensures secure storage of customer, admin, and restaurant admin credentials. This helps protect sensitive information and maintains the confidentiality of user accounts.

8. DISADVANTAGES:

- **Internet Connectivity Dependency:** The system relies on Internet connectivity for students to access the platform and place orders. In areas with poor network coverage or during internet outages, students may need help in using the system.

- **No real-time order tracking:** There is no 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.
- **No password encryption:** The system doesn't encrypt the stakeholder's password and stores them as plain text.
- **No mobile application development:** No dedicated mobile applications for iOS and Android platforms to enhance the user experience and accessibility of the food ordering system. The user needs to open the website to use the system.
- **Technical Challenges:** Like any software system, the Viteatz system may encounter technical issues or bugs that require regular maintenance and updates. This can require dedicated resources and expertise to address and resolve such issues in a timely manner.

9. APPLICATIONS:

The Viteatz Food Ordering System has various applications and can benefit different stakeholders involved. Here are some key applications of the system:

- **University Students:** The primary users of the system are university students. They can use the system to conveniently order food from a variety of restaurants within the campus. The system saves them time and effort by providing an easy-to-use platform for browsing menus, placing orders, and having the food delivered to their hostels. It enhances their dining experience and provides them with a wide range of food options to choose from.
- **Restaurant Administrators:** The system allows restaurant administrators to manage their menus and offerings. They can add, edit, and remove items from the menu, update prices, and provide special offers or promotions. It provides them with a centralized platform to showcase their menus and attract more customers. The system also helps them streamline order management and improve efficiency in food preparation and delivery.
- **University Administration:** The Viteatz system can be beneficial to the university administration as it enhances the overall campus dining experience. Providing students with a convenient food ordering solution, it helps improve student satisfaction and well-being. It also promotes the participation of on-campus restaurants and supports the local food ecosystem within the university.
- **Delivery Personnel:** The system facilitates food delivery to the students' hostels. Delivery personnel can use the system to receive order details, track deliveries, and ensure timely and accurate delivery of food. It optimizes the delivery process, increases efficiency, and improves customer satisfaction.
- **System Administrators:** The system administrators are responsible for managing the overall functionality, security, and maintenance of the Viteatz platform. They ensure the smooth operation of the system, handle user account management,

monitor system performance, and address technical issues or updates. System administrators play a vital role in ensuring the reliability and stability of the system.

Overall, the Viteatz Food Ordering System serves as a comprehensive solution for university students, restaurant administrators, and other stakeholders involved. It streamlines the food ordering process, enhances convenience, improves efficiency, and contributes to a positive dining experience within the university community.

10. 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 Spring Boot, 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.

11. 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.

12. BIBLIOGRAPHY:

- https://edu.codespring.ro/wp-content/uploads/2019/06/NetFood_SISY_2018.pdf
- <http://www.ijssred.com/volume3/issue2/IJSRED-V3I2P32.pdf>
- 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://youtu.be/DrKA56M1NRs>
- <https://ijarcce.com/wp-content/uploads/2021/05/IJARCCE.2021.10433.pdf>
- <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=b115d85b90d36c5e7bac6fe5c6607635a705c19a>

13. DEMO VIDEO LINK:

- https://drive.google.com/file/d/1MH6-Zp_hjIOITsB2iAPcN0DrSWvRfejl/view?usp=sharing