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Hotel Palash-Online Food Ordering System

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Abstract : *The Hotel Palash Online Food Ordering System is a web-based application developed to support the digital management of food ordering and table-booking activities at a hotel. The system provides customers with an online interface to register or log in, browse food items, add selected items to a cart, place orders, view bill or order-status information, and submit table-booking requests. A separate owner dashboard supports the review and management of orders and booking records.*

The application uses HTML, CSS and JavaScript for the presentation layer, PHP for server-side processing, and MySQL for data storage. The database maintains customer and owner accounts, menu records, food orders and table-booking requests. Session-based handling supports user access and cart operations, while the PHP application processes the main workflows and communicates with the database.

The project demonstrates the practical application of full-stack web development, database connectivity, authentication, session management and CRUD operations in a small restaurant context. It aims to reduce dependence on manual order recording, improve access to menu information and organize order-related records. The current implementation is intended for academic demonstration and small-scale use; integrated online payment, live delivery tracking and production deployment are considered future enhancements. Keywords: Online food ordering, restaurant management, PHP, MySQL, web application, cart management, table booking..

Keywords: *Online Food Ordering System*

I. INTRODUCTION

The hospitality industry increasingly uses digital technologies to improve customer service and organize routine operations. In a traditional restaurant, customers commonly place orders at the counter, through staff or by telephone. Staff members record the requested items, communicate them to the kitchen and prepare the bill. When order volume increases, manual recording can lead to delays, incorrect entries and difficulty maintaining historical records.

The Hotel Palash Online Food Ordering System provides a browser-based alternative to this process. Customers can access the website, create an account, view menu information, select food items, manage a cart and submit orders. The application also supports table-booking requests and provides pages for viewing bill or order-status information. The owner can use a separate dashboard to review and manage orders and bookings.

The system is developed using HTML, CSS and JavaScript on the front end, PHP for server-side processing and MySQL for persistent data storage. It is organized into customer-facing and owner-facing functions. The project serves as an academic implementation of a database-backed web application and illustrates how common restaurant activities can be represented through structured software modules.

PROBLEM STATEMENT :

Traditional food-ordering methods depend heavily on verbal communication, telephone calls or handwritten records. These methods can make it difficult to maintain accurate order details, provide customers with consistent menu and price information, calculate bills, retrieve previous records and monitor order progress. Some basic websites only display menu information and do not provide complete ordering or booking workflows. Therefore, a web-based system

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is required to organize customer access, menu browsing, cart operations, order submission, billing information and owner-side record management in one application.

OBJECTIVES :

- To provide a simple web-based platform for food ordering and table-booking requests at Hotel Palash.
- To display food items with relevant names, categories, prices and images.
- To support customer registration and login.
- To allow customers to select food items, manage a cart and submit orders.
- To calculate order totals and provide bill or order-status information.
- To enable the owner to review orders and table-booking requests and update their status.
- To maintain user, menu, order and booking records in a MySQL database.

RELATED WORK :

Research and development in online food ordering and restaurant management has examined the use of web applications to improve menu access, order submission and record handling. The references included in the project report cover online food-ordering systems, restaurant-oriented ordering applications, human-computer interaction, machine-learning-related approaches and integrated restaurant management. These works provide a broad context for developing a browser-based application that connects customer interaction with restaurant-side processing.

The project report identifies manual ordering and limited menu-only websites as common approaches in small restaurant environments. Manual methods require staff to record and coordinate customer requests, while basic informational websites may not provide customer accounts, cart operations, order records or booking management. A database-backed web application can combine these functions and provide a more organized workflow.

The Hotel Palash system applies established web technologies—HTML, CSS, JavaScript, PHP and MySQL—to a small hotel use case. Its contribution in this academic project is the integration of customer registration, menu access, cart operations, order submission, bill/status viewing, table booking and ownerside management within a single application. The cited references are reproduced from the final project report; their bibliographic details should be checked against the original publications before journal submission.

PROPOSED SYSTEM :

The proposed system combines customer and owner functions in a single web application. Customers can register or log in, browse menu items, add items to a cart, submit an order and access bill or status information. They can also submit table-booking details. The owner dashboard provides access to relevant order and booking records and supports status management. MySQL is used to store the main application records, while PHP processes requests from the browser.

METHODOLOGY :

• Development Methodology

The development approach follows a sequence of requirement identification, technology selection, system design, implementation and functional verification. First, the main activities of customers and the owner are identified. The application is then divided into modules and a database structure is prepared for accounts, menu items, orders and table bookings. The interface is developed using HTML, CSS and JavaScript. PHP pages process user actions and interact with MySQL. Finally, the modules are to be tested for input validation, database operations, data consistency and expected page behaviour.

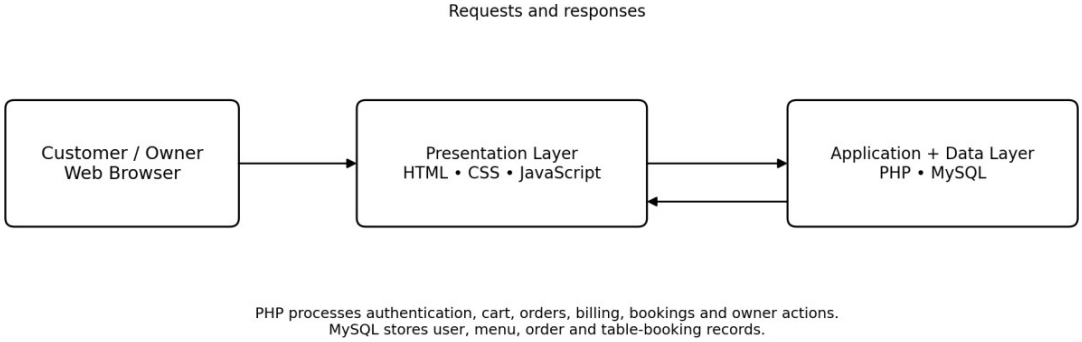
1. Requirement identification: determine customer and owner activities and the information required by each module.
2. System design: define the presentation, application and database layers, page flow and database tables.
3. Implementation: develop the web pages, PHP processing logic, session-based cart and database operations.

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4. Verification: test registration, login, menu access, cart operations, order submission, booking submission and owner-side status updates.

• Proposed System Architecture

The application can be represented as three logical layers. The presentation layer runs in the user's browser and displays pages and forms using HTML, CSS and JavaScript. The application layer uses PHP to process registration, login, session management, cart actions, order submission, booking requests and owner operations. The database layer uses MySQL to store user accounts, menu items, orders and table-booking records. The supplied implementation uses PHP pages for the major functions rather than a separate API service.



• List of Modules-

List of Modules and Their Purpose

Sr. No.	Module	Purpose
1	Welcome / Home	Provides the entry point to the Hotel Palash website and navigation to the application.
2	Registration and Login	Creates user accounts and authenticates customers or the owner.
3	Food Menu	Displays available food items and their categories, prices and images.
4	Cart Management	Allows customers to review selected items and calculate the order total.
5	Order Processing	Accepts a submitted order and stores the relevant order information.
6	Bill and Order Status	Provides pages through which customers can view bill or order-related status information.
7	Table Booking	Collects customer name, phone, date, time, guest count and request details.
8	Owner Dashboard	Allows the owner to review orders and bookings and manage their statuses.

• Database Design

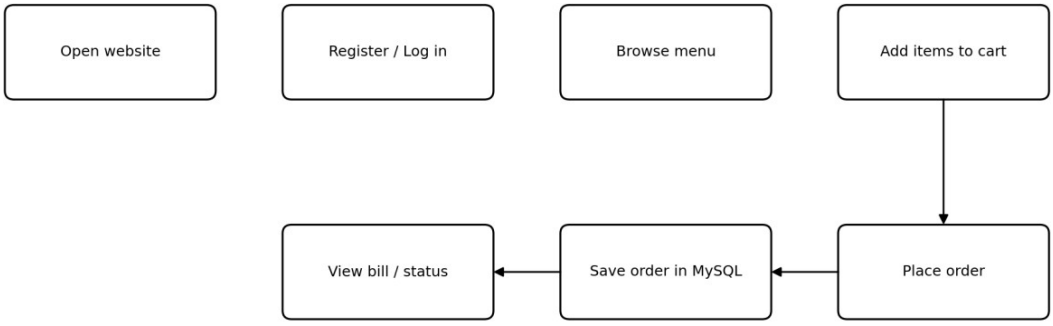
The supplied SQL script creates the database hotel_palash_db and the four tables summarized below. The fields listed are based on the final project report.

Table	Important fields	Purpose
users	id, name, email, username, password, role, created_at	Stores customer and owner accounts.
menu	id, name, category, price, image	Stores food menu items.
orders	id, user_id, items, total, status, created_at	Stores submitted food orders.
table_bookings	id, customer_name, phone, booking_date, booking_time, guests, table_no, status	Stores table-booking requests.

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• **System Workflow**

The customer ordering workflow begins when a customer opens the website and registers or logs in. The customer browses the menu, selects items and adds them to the cart. After reviewing the cart, the customer submits the order. The application stores the order information in MySQL and provides bill or status information. In the table-booking workflow, the customer submits booking details, which are stored for owner review. The owner logs in to the dashboard, reviews incoming orders or booking requests and updates their status.



Owner workflow: log in → review orders / bookings → update status.

• **Algorithms**

1) Algorithm 1: Customer Registration

5. Read the registration form values.
6. Validate the required fields and password confirmation.
7. Check whether the email address or username already exists.
8. Hash the password and insert the customer record into the database.
9. Display success or error feedback.

2) Algorithm 2: Cart and Order Submission

10. Add the selected menu item to the session cart.
11. Retrieve the corresponding menu records and calculate the total.
12. Allow the customer to remove items or clear the cart.
13. On submission, verify that the customer is logged in and the cart is not empty.
14. Save the order with its initial Pending status, clear the cart and redirect to the status page.

3) Algorithm 3: Table Booking

15. Read the customer name, phone number, date, time, guest count and request details.
16. Validate the submitted booking information.
17. Process the booking request and insert the record into the database.
18. Display the response to the customer.

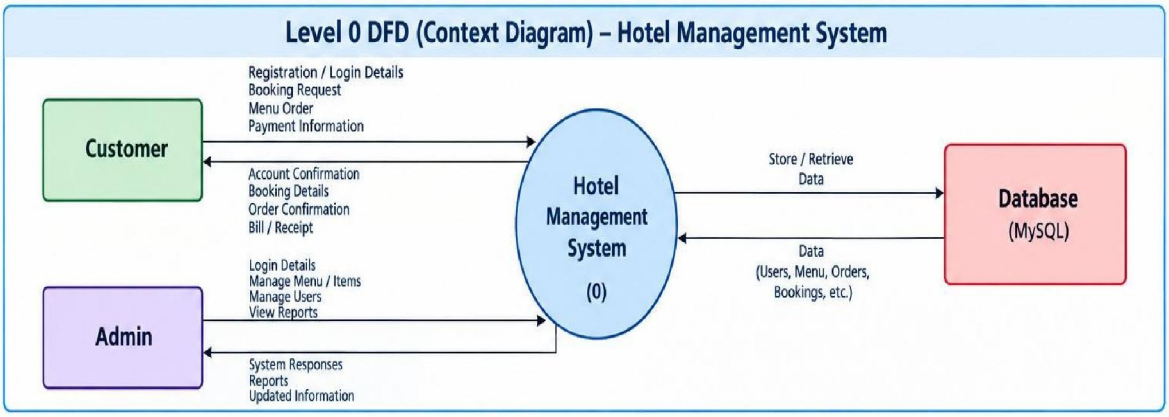
4) Algorithm 4: Owner Management

19. Retrieve order and booking records for the owner dashboard.
20. Display the records and their current statuses.
21. Receive the owner's selected status action.
22. Update the corresponding database record.

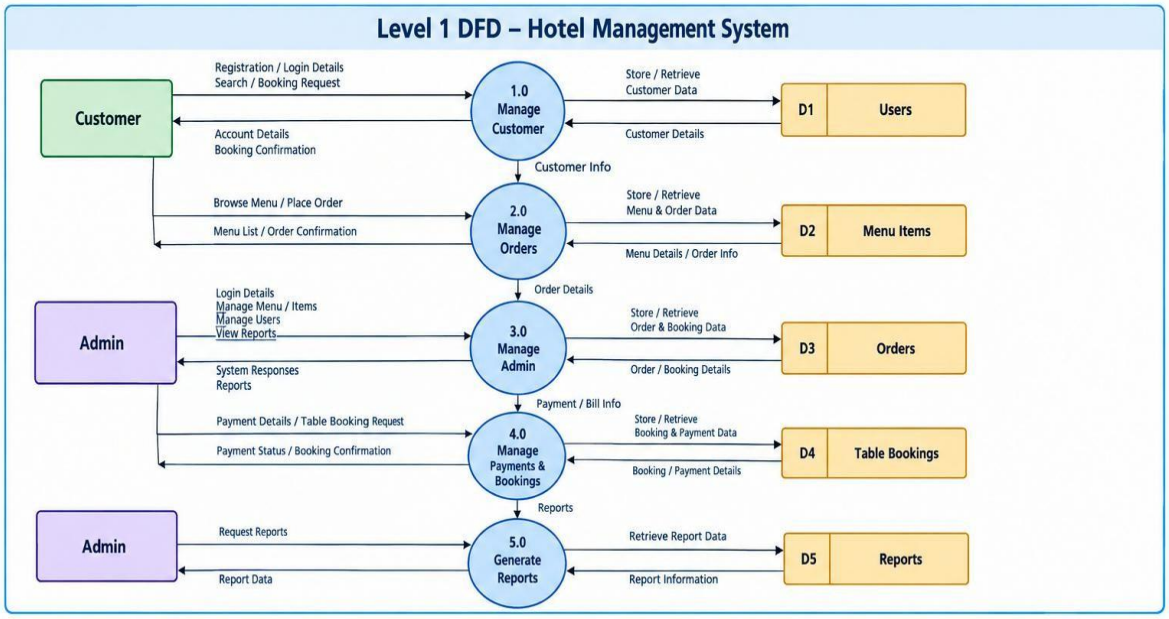
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Dataflow Diagram

• DFD LEVEL 0 –



• DFD LEVEL 1 –



• Hardware and Software Requirements

The final report specifies a baseline development setup consisting of a dual-core processor or better, at least 4 GB RAM, approximately 20 GB of free storage, a monitor, keyboard and mouse. The software environment includes Windows 10/11 or a compatible operating system, XAMPP/Apache, PHP, MySQL, phpMyAdmin, Visual Studio Code and a modern web browser. These are baseline requirements for local development and may vary according to the operating system and installed tools.

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• Installation and Execution

1. Copy the hotel_management project folder into the XAMPP htdocs directory.
2. Start Apache and MySQL from the XAMPP Control Panel.
3. Open phpMyAdmin and import the hotel_palash_db.sql database script.
4. Check the database connection settings in db.php and update local credentials if required.
5. Open the local setup-check page and review the setup checks.
6. Open the project in a browser using the local host address.

The final report also advises removing or restricting the setup-check page before any public deployment and changing demonstration credentials before real use.

• Functional Result Analysis

The final project report describes the following functional areas in the developed application. The statements below summarize the documented modules and intended behaviour; they should not be interpreted as measured performance results or as evidence of formal user testing.

• User interface: web pages provide access to food-ordering and table-booking functions.
• Registration and login: customer and owner access is supported through account-related modules; validation and authentication should be verified through testing.
• Food menu: menu pages are designed to display food items for customer selection.
• Shopping cart: customers can review selected food items before submitting an order.
• Order management: order information is processed and stored in the MySQL database.
• Bill and order status: pages provide access to bill-related and order-status information.
• Table booking: customers can submit booking details for restaurant tables.
• Owner dashboard: the owner can access and manage relevant order and booking information.
• Database management: MySQL maintains user, menu, order and table-booking records.

LIMITATIONS AND FUTURE SCOPE:

Limitations :

The current application is intended for local academic demonstration and small-scale use. Its practical use depends on correct configuration of the PHP and MySQL environment and the accuracy of user-entered information. The final report does not establish an integrated online payment gateway, live delivery tracking, SMS notifications or production hosting. The application should be fully tested and security-reviewed before it is used beyond a local demonstration. Database normalization and reporting can also be improved as the system grows.

Future Scope :

• Integrate a trusted online payment gateway.
• Provide real-time order status updates and customer notifications.
• Normalize order and order-item records to support improved reporting.
• Further refine the mobile-responsive interface and develop a dedicated mobile application.
• Add sales summaries and menu analytics for the owner.
• Provide QR-code access to the digital menu.
• Introduce automated table-booking reminders.
• Strengthen access control, audit logging, HTTPS configuration and security validation.
• Deploy the application to a managed hosting environment with backup and monitoring.

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II. CONCLUSION

The Hotel Palash Online Food Ordering System demonstrates how a web-based application can support food ordering and table-booking activities in a hotel. The project combines HTML, CSS and JavaScript for the user interface, PHP for server-side processing and MySQL for data storage. Its documented modules support customer registration and login, menu browsing, cart management, order submission, bill and status viewing, table-booking requests and owner-side management. By organizing these activities through a single application, the system provides a practical alternative to fragmented manual records and demonstrates the use of full-stack web development concepts in a real-world context. The project forms a foundation for further improvements such as online payments, real-time notifications, mobile access, enhanced reporting and stronger deployment security. Comprehensive functional and security testing is recommended before production use.

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