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Project Name: Malt (Food Ordering Web Application)

Submitted To:

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I confirm that I understand my assessment needs to be submitted online via MST Classroom under the relevant module page before the deadline in order for my proposal to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

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1. Introduction

Malt is a web app for ordering food online from restaurants. With the fast-emerging digital age, the demand for online food ordering has risen rapidly, especially in urban areas. Traditional ways of ordering food are being replaced by efficient, user-friendly platforms that fit modern, fast-paced lifestyles.

This application will fill the gap in the market with a customizable, simple, and locally focused solution. It will enhance the ordering experience of customers and help restaurants expand their reach while optimizing order management. With its modern web technologies, Malt is well-positioned to provide the most user-friendly platform that aligns with the technological landscape and cultural aspects of Nepal.

2. Purpose of the project

The main purpose of this project is to create an easy-to-use web application called Malt for ordering food online. Many people still use traditional methods like phone calls or visiting restaurants to order food, which can be time-consuming and inconvenient. Malt aims to offer a more modern and efficient solution for both customers and restaurants.

The purpose of this project are as follows:

- To develop a web application that simplifies the process of ordering food online for customers.
- To provide a platform for restaurants to manage orders and reach a wider audience.
- To create a user-friendly interface that enhances the overall experience for both customers and restaurants.
- To ensure secure handling of online orders, payments, and customer data.
- To offer features like order tracking, search and filter options, and favorites to improve the user experience.
- To enable restaurants to easily update their menus and manage promotions through a simple dashboard.

3. Intended Use and Users

- The intended use of the application are as follows:

1. **Convenient Food Ordering**: Users can browse menus, view details about dishes, and order food online without needing to visit the restaurant physically.
2. **Efficient Delivery Management**: Helps restaurants streamline order processing and delivery tracking.
3. **Customizable Menus**: Restaurants can manage their menus, add new dishes and update prices.
4. **User Profiles**: Enables users to save preferences, order history, and payment information for a personalized experience.
5. **Secure Transactions**: Supports multiple payment options to allow users to pay securely using various methods like digital wallets and cash on delivery.
6. **Promotions and Discounts**: Restaurants can promote events and discounts to retain customers and attract new ones.
7. **Real-Time Order Tracking**: Provides customers with real-time updates on the status of their orders.

- The intended users of the application are as follows:

1. Customers

Customers are the primary users of food-ordering applications, and their reasons for using these platforms include:

- **Convenience:**
  They can order food from the comfort of their homes or offices without needing to visit the restaurant.
- **Timesaving:**
  The process is faster than physically going to a restaurant, especially with features like saved addresses and payment details.

- **Variety:**
  Access to a wide range of cuisines and restaurants in one place.
- **Order Tracking:**
  Real-time updates on order preparation and delivery status provide transparency.

2. Restaurant Owners/Managers

Restaurant owners use food-ordering applications to expand their customer base and streamline online operations.

- **Increased Reach:**
  They can reach customers who may not be aware of their restaurant.
- **Ease of Management:**
  The platform provides tools for managing menus, orders, and promotions easily.
- **Sales Growth:**
  Online ordering opens up a new revenue channel, especially for delivery and takeout orders.

4. Admins (Platform Owners)

Admins use food-ordering applications to oversee and grow the platform.

- **Revenue Generation:**
  They earn commission from restaurants and delivery fees from customers.
- **Market Expansion:**
  The application enables partnerships with multiple restaurants and attracts more users.
- **Operational Efficiency:**
  Automated workflows reduce the need for manual interventions, making the business scalable.

4. System Features and Requirements

4.1 Functional Requirements

The functional requirements for the application are as follows:

1. User Registration and Login

- **Secure Authentication:** Users can create an account using their email. They can log in securely after registering.
- **Password Reset:** If users forget their password, they can reset it through an easy process, like receiving a link via email.

2. Restaurant Listings

- **Restaurant Information:** The application shows a list of restaurants with important details, like:
    - Name of the restaurant.
    - Location (address or area).

3. Menu Display

- **Detailed Food Menus:** Each restaurant's menu is displayed with:
    - Food items and their descriptions.
    - Prices for each dish.
    - Images to help users decide what to order.

4. Search and Filters

- **Search Option:** Users can search for specific restaurants or dishes by typing keywords.
- **Filter Options:** Users can narrow their search based on:
    - Price range
    - Food Category

5. Order Placement

- **Add-to-Cart:** Users can add multiple food items to a cart for a single order.
- **Order Summary:** Before placing the order, users can review the items they added, along with the total cost.

6. Basic Payment Options

- **Payment Gateways:** The application supports easy payment methods, including:
    - E-Sewa (Digital wallet in Nepal)
    - Cash on delivery for convenience.

  This ensures users have multiple ways to pay for their order.

7. Order Confirmation

- **Instant Notification:** After placing an order, users immediately get a confirmation:
    - Inside the app (e.g., "Your order is confirmed").
    - Via email or SMS with order details.

8. User Profile Management

- **Profile Editing:** Users can update their personal information, such as name or phone number.
- **Address Management:** Add or change saved delivery addresses.
- **Payment Methods:** Save preferred payment options for faster checkout.

9. Responsive Design

- Optimized for both desktop and mobile devices.

10. Order Tracking

- Live status updates (e.g., order accepted, preparing, out for delivery, delivered).

11. Add to Favorites

- Users can save their favorite restaurants for quick access.

12. Promote events or offers

- Restaurants can promote their special events and offers.

13. Restaurant Dashboard

- Dedicated panel for restaurant owners to manage menus and orders.

4.2 Non-Functional Requirements

The non-functional requirements for the application are as follows:

1. **Response Time**:
   The application web pages should load within 3 seconds for a seamless user experience and search results must be displayed within 2 second.
2. **Access Control**:
   Only authorized admins should be allowed to manage restaurants and menus. Regular users should not have access to these controls.
3. **Data Storage**:
   The application should securely store information about users, restaurants, menus, orders, and payments, ensuring no data is lost.
4. **Feature Updates**:
   The application must be designed so that adding new features or improving existing ones can be done easily without breaking the current functionality.
5. **Performance**:
   Pages should load quickly, with minimal delay, even on slower internet connections or mobile networks.
6. **Security**:
   User data, including payment details, passwords, and personal information, must be protected with proper encryption and secure coding practices.

7. **Cross-Platform Compatibility**:
   The application should work smoothly on different devices (e.g., smartphones, tablets, desktops) and operating systems like Android, iOS, and Windows.
8. **Error Handling**:
   The app should show clear error messages if something goes wrong, like failed payments or network issues, without crashing.
9. **Version Control**: All code changes must be tracked and managed using a version control system (e.g., Git) to ensure efficient future collaboration, rollback options, and proper history tracking.
10. **Database Optimization**: The database should be designed and optimized for quick data retrieval and minimal latency, even when handling large datasets or complex queries.
11. **Code Quality**: The codebase should follow clean coding principles, be well-documented, and stick to standard guidelines to make it maintainable, readable, and error-free.

5. Review of similar applications

The following are the similar applications that are comparable to the one I aim to develop:

- **Foodmandu**

Figure 1: Foodmandu logo

Foodmandu is a **food delivery application** primarily operating in **Nepal**. It is a popular platform that connects customers with restaurants, enabling them to order food online and have it delivered to their doorsteps.

Application Link: https://foodmandu.com/

- **Pokhara Food Delivery**

Figure 3: Pokhara Food Delivery logo

The **Pokhara Food Delivery** application is a local **food delivery service** operating primarily in **Pokhara, Nepal**. It is designed to connect residents and visitors in Pokhara with nearby restaurants, providing them with a convenient way to order and enjoy food at their location.

Application link: https://apps.pokharafooddelivery.com/

- **Bhojdeals**

Figure 5: Bhojdeals logo

Bhojdeals is a **food delivery application** that operates primarily in **Nepal**, targeting cities like Kathmandu and Pokhara. It is unique in combining food delivery services with special discounts and offers.

Application link: https://www.bhojdeals.com/

- **FoodMood**

Figure 7: Foodmood logo

The **FoodMood** application is a **food delivery platform** operating primarily in **Nepal**, providing users with a convenient way to order food online from local restaurants. Its features focus on improving the food ordering experience by offering a wide variety of cuisines.

Application Link: https://foodmood.com.np/

6. Comparison with similar applications

Table 1: Comparison with similar applications

Features	**Malt** (My Application)	**Food Mandu**	**Food Mood**	**Bhoj Deals**	**Pokhara Food Delivery**
User Registration & Login	Yes	Yes	Yes	Yes	Yes
Food Image	Yes	No	No	No	No
Restaurant Listings	Yes	Yes	Yes	Yes	Yes
Food Description	Yes	Yes	No	No	No
Search and Filters	Yes	Yes	Limited	Yes	No
Add to Cart Functionality	Yes	Yes	Yes	No	Yes
Order Summary	Yes	Yes	Yes	Yes	Limited
Order Confirmation	Yes	Yes	Yes	Yes	Yes
Order Tracking	Yes	Yes	No	No	No
Favorites Feature	Yes	No	No	No	No
Promote Offers/Events	Yes	Yes	No	Yes	No
Responsive Design	Yes	Yes	Yes	Limited	Yes
Live Notifications	Yes	Yes	Yes	Limited	No