

Online Food Ordering System

1. Objects and Fields

Objects:

1. **Customer**
 - Fields: Name, Email, Phone Number, Address
2. **Restaurant**
 - Fields: Name, Address, Phone Number, Manager (Lookup to User), Menu (Master-Detail to Menu)
3. **Menu**
 - Fields: Name, Description, Category, Price, Availability (Picklist: Available, Out of Stock)
4. **Order**
 - Fields: Order Number (Auto-number), Customer (Lookup to Customer), Restaurant (Lookup to Restaurant), Delivery Address, Order Date, Status (Picklist: Pending, Confirmed, In Progress, Delivered), Total Amount
5. **Order Item**
 - Fields: Order (Master-Detail to Order), Menu Item (Lookup to Menu), Quantity, Unit Price, Total Price
6. **Delivery**
 - Fields: Order (Lookup to Order), Delivery Agent (Lookup to User), Delivery Status (Picklist: Pending Pickup, On the Way, Delivered), Delivery Date-Time

Relationships:

- **Customer to Order:** One-to-Many (Customer can have multiple orders)
- **Restaurant to Menu:** One-to-Many (Restaurant can have multiple menu items)
- **Order to Order Items:** Master-Detail (Each order can have multiple order items)
- **Order to Restaurant:** Lookup (Each order belongs to one restaurant)
- **Order to Customer:** Lookup (Each order belongs to one customer)
- **Delivery to Order:** Lookup (Each delivery is associated with one order)
- **Delivery to Delivery Agent:** Lookup (Each delivery is assigned to one delivery agent)

2. Formula Fields

Example Formula Fields:

- **Order Total Calculation:** Sum of Total Price of all Order Items related to the Order.
- **Delivery Time Calculation:** Calculate the time taken for delivery based on Order Date-Time and Delivery Date-Time.

3. Discount Fields (if applicable)

Discount Fields:

- **Discount Percentage:** Percentage discount applied to the total order amount.

- **Discount Amount:** Fixed amount discount applied to the total order amount.

4. Validation Rules

- **Order Validation Rule:** Ensure that the total order amount is not less than zero.
 - **Delivery Status Validation:** Ensure delivery status transitions in the correct sequence.
1. **Menu Item Validation:**
 - Ensure that the price of a menu item is greater than zero.
 2. **Order Quantity Validation:**
 - Ensure that the quantity of each order item is greater than zero.
 3. **Delivery Address Validation:**
 - Ensure that a delivery address is provided for orders.
 4. **Order Status Transition Validation:**
 - Define rules for order status transitions, ensuring they follow a logical sequence (e.g., Pending → Confirmed → In Progress → Delivered).
 5. **Delivery Date-Time Validation:**
 - Ensure that the delivery date and time are in the future relative to the order date-time.

5. Approval Process Requirements:

1. **Order Approval Process:**

Purpose:

To ensure that all incoming orders are reviewed and approved by the restaurant manager before proceeding with order processing.

Entry Criteria:

- Trigger when an order record is submitted with its Status field set to "Pending".

Steps:

1. **Submission Notification:**
 - Upon submission of an order (Status = Pending), notify the designated restaurant manager for review and approval.
2. **Manager Review:**
 - The restaurant manager reviews the details of the order, including customer details, order items, delivery address, and total amount.
 - The manager can either approve or reject the order based on availability, preparation time, and other operational considerations.
3. **Approval Decision:**
 - **Approval:**
 - If approved, update the Status of the order to "Confirmed".
 - Notify the customer that their order has been confirmed and is being processed.
 - Proceed with order processing, including notifying the kitchen staff for preparation and assigning a delivery agent for delivery.

- **Rejection:**
 - If rejected, update the Status of the order to "Rejected".
 - Notify the customer that their order has been rejected, providing reasons for the rejection (e.g., item unavailability, delivery constraints).
 - Optionally, provide instructions for resubmitting the order or alternatives.
- 4. **Notification and Communication:**
 - **Submission Notification:**
 - Sent to the designated restaurant manager as soon as an order is submitted for approval.
 - **Approval/Rejection Notifications:**
 - Sent to the customer to inform them of the approval or rejection decision.
 - Include detailed information such as expected delivery time (if approved) or reasons for rejection.

Approval Criteria:

- **Criteria for Approval:**
 - Ensure that all required fields (customer details, delivery address, order items) are complete and accurate.
 - Verify availability of ordered items in the restaurant's inventory or menu.
 - Check for any special instructions or requests from the customer.
- **Rejection Criteria:**
 - Items in the order are unavailable or out of stock.
 - Delivery constraints (e.g., area not serviced, insufficient delivery agents).
 - Payment issues or other operational constraints.

2. New Menu Item Addition

Purpose:

To ensure that any new menu item added by a restaurant manager undergoes review and approval before it becomes available for customers to order.

Entry Criteria:

- Trigger when a new menu item record is created with its Status field set to "Pending Approval".

Steps:

1. **Submission Notification:**
 - Upon submission of a new menu item (Status = Pending Approval), notify the designated approver (typically an admin or a senior restaurant manager).
2. **Approval Decision:**
 - The approver reviews the details of the new menu item, including Name, Description, Category, and Price.
 - The approver can either approve or reject the new menu item.
3. **Approval Actions:**

- **Approval:**
 - If approved, update the Status of the menu item to "Approved".
 - Notify the restaurant manager who submitted the menu item that it has been approved and is now available for ordering.
 - **Rejection:**
 - If rejected, update the Status of the menu item to "Rejected".
 - Notify the restaurant manager of the rejection and provide any necessary feedback or instructions for resubmission.
4. **Process Automation:**
- Automatically lock the menu item record from further edits once it is approved or rejected to prevent unauthorized changes.
 - Log approval/rejection details in the menu item's Chatter feed for audit purposes.

Approval Criteria:

- **Criteria for Approval:**
 - Ensure that the menu item details are complete and accurate.
 - Verify that the price is reasonable and consistent with other menu items of similar categories.
 - Check that the description provides sufficient information for customers.
- **Rejection Criteria:**
 - Incomplete or inaccurate information in the menu item details.
 - Price is deemed inappropriate or inconsistent with the restaurant's pricing strategy.
 - Description lacks clarity or is not suitable for customer understanding.

Notifications:

- **Submission Notification:**
 - Sent to the designated approver as soon as a new menu item is submitted for approval.
- **Approval/Rejection Notifications:**
 - Sent to the restaurant manager who submitted the menu item, informing them of the approval or rejection decision.
 - Include reasons for rejection and guidance for resubmission if applicable.

3. Discount Approval Process (if applicable):

Purpose:

To ensure that any discounts applied to orders are reviewed and approved by a designated approver before being applied to the order total.

Entry Criteria:

- Trigger when a discount record is created or updated with its Status field set to "Pending Approval".

Steps:

1. **Submission Notification:**
 - Upon submission of a discount application (Status = Pending Approval), notify the designated admin or approver for review and approval.
2. **Approver Review:**
 - The designated approver reviews the details of the discount, including discount type (percentage or fixed amount), applicable order criteria, and validity dates.
 - The approver can either approve or reject the discount based on promotional guidelines, profitability considerations, and customer relationship management policies.
3. **Approval Decision:**
 - **Approval:**
 - If approved, update the Status of the discount to "Approved".
 - Apply the discount to the order total as specified (reduce order total by the approved discount amount or percentage).
 - Notify the customer that their order total has been discounted and confirm order processing.
 - **Rejection:**
 - If rejected, update the Status of the discount to "Rejected".
 - Notify the customer that their discount request has been rejected, providing reasons for the rejection.
 - Optionally, provide instructions for resubmitting the discount request or alternative offers.
4. **Notification and Communication:**
 - **Submission Notification:**
 - Sent to the designated admin or approver as soon as a discount application is submitted for approval.
 - **Approval/Rejection Notifications:**
 - Sent to the customer to inform them of the approval or rejection decision.
 - Include detailed information such as the discounted amount (if approved) or reasons for rejection.

Approval Criteria:

- **Criteria for Approval:**
 - Ensure that the discount complies with promotional guidelines and profitability thresholds.
 - Verify that the discount is applied to eligible orders based on specified criteria (e.g., order amount, specific products).
 - Check validity dates to ensure the discount is applied within the intended promotional period.
- **Rejection Criteria:**
 - Discount does not meet promotional guidelines or profitability thresholds.
 - Incorrect or incomplete information provided in the discount application.
 - Discount criteria (e.g., order amount thresholds) are not met by the customer's order.

6. Screen Flow Requirement

1. User Login and Signup Flow

Login Screen

- **Fields:**
 - Email
 - Password
- **Actions:**
 - Validate credentials against Customer records.
 - Redirect to Order Creation Flow upon successful login.

Signup Screen

- **Fields:**
 - Name
 - Email
 - Phone
 - Address
 - Password
- **Actions:**
 - Create new Customer (Contact) record upon submission.
 - Redirect to Order Creation Flow after successful signup.

2 Order Creation Flow

Order Details Screen

- **Fields:**
 - Delivery/Pickup Date
- **Actions:**
 - Validate date (not in the past).
 - Proceed to Menu Selection Screen.

Menu Selection Screen

- **Purpose:** Allow customers to select menu items for their order.
- **Dynamic Choices:**
 - Display available menu items with checkboxes for selection.
- **Actions:**
 - Add selected items to order.

Order Review Screen

- **Purpose:** Review selected items and confirm order details.
- **Display:**
 - Selected items with quantities and total amount.
- **Actions:**
 - Confirm order and proceed to Confirmation Screen.

Order Confirmation Screen

- **Display:**
 - Confirmation message with order number.
- **Actions:**
 - Finalize order creation and redirect to dashboard or order status screen.

7. Record-Triggered Flow Requirements

Send Email Notification on Order Status Change

Trigger

- **Event:** When Order Status changes to "Delivered".

Flow Actions

- **Retrieve Customer Email:** Get email from related Customer (Contact) record.
- **Compose Email:** Create an email template with order details and delivery confirmation.
- **Send Email:** Trigger email notification to the customer.

Update Inventory on Order Completion

Trigger

- **Event:** When Order Status changes to "Delivered".

Flow Actions

- **Retrieve Order Items:** Get details of all Order Items associated with the Order.
- **Update Inventory:** Deduct corresponding Menu Item quantities from Inventory records.

Update Customer Loyalty Points

Trigger

- **Event:** When an Order is created or updated.

Flow Actions

- **Retrieve Customer:** Get the Customer (Contact) associated with the Order.
- **Calculate Points:** Based on the Total Amount of the Order, calculate loyalty points earned (e.g., points per dollar spent).
- **Update Customer Record:** Increment the Customer's loyalty points field.

Assign Delivery Personnel

Trigger

- **Event:** When an Order Status changes to "In Progress".

Flow Actions

- **Retrieve Order Details:** Fetch the Order record.
- **Query Available Delivery Personnel:** Search for available delivery personnel based on criteria like location and availability.
- **Assign Delivery Personnel:** Update the Order record with the selected delivery personnel.

Notify Kitchen Staff for Order Preparation

Trigger

- **Event:** When an Order Status changes to "New" or "In Progress".

Flow Actions

- **Retrieve Order Items:** Fetch all Order Items associated with the Order.
- **Identify Kitchen Staff:** Determine which kitchen staff or department needs to be notified (e.g., based on item categories).
- **Send Notification:** Trigger an alert or notification to kitchen staff with order details.

Handle Order Cancellations

Trigger

- **Event:** When an Order Status changes to "Cancelled".

Flow Actions

- **Retrieve Order Details:** Fetch the Order record and related Order Items.
- **Process Cancellation:** Update inventory levels for cancelled items, release allocated resources (like delivery personnel), and handle refunds if applicable.

Reports and Dashboards Requirements

1. Report Requirements

1.1 Sales Summary Report

Purpose

- Provide an overview of sales performance over a specified period.

Components

- Total Sales Amount by Day/Week/Month.
- Breakdown of sales by Menu Item Category.
- Comparison of sales performance against previous periods.

1.2 Customer Order History Report

Purpose

- Show a history of orders for each customer.

Components

- List of orders placed by each customer.
- Order Status (e.g., Delivered, In Progress).
- Total Amount per Order.

1.3 Inventory Management Report

Purpose

- Monitor inventory levels and track usage.

Components

- Current inventory levels for each Menu Item.
- Quantity sold/delivered over a specific period.
- Low-stock alerts for proactive inventory management.

1.4 Customer Feedback Analysis Report

Purpose

- Analyse customer feedback and satisfaction ratings.

Components

- Feedback ratings (e.g., stars, ratings).
- Comments or notes from customers.
- Trends in feedback over time.

2. Dashboard Requirements

2.1 Sales Dashboard

Components

- **Total Sales:** Display total sales amount and trends.
- **Sales by Category:** Charts showing sales distribution by Menu Item categories.
- **Top Selling Items:** List of top-selling Menu Items.

2.2 Operational Dashboard

Components

- **Order Status Overview:** Graphical representation of order status (e.g., new, in progress, delivered).

- **Delivery Performance:** Metrics like average delivery time and on-time delivery percentage.
- **Inventory Status:** Visualize current inventory levels and alerts for low-stock items.

2.3 Customer Dashboard

Components

- **Customer Order History:** Charts showing order history and total spend per customer.
- **Customer Feedback:** Aggregate customer satisfaction ratings and feedback trends.

2.4 Executive Dashboard

Components

- **Key Performance Indicators (KPIs):** Highlight important metrics such as total sales, customer satisfaction score, and average order value.
- **Financial Overview:** Graphical representation of revenue trends and profitability metrics.
- **Operational Insights:** Insights into operational efficiency and resource allocation.

Data Sharing, Roles, Profiles, and Record Access Requirements

1. Customer (Contact) Object

Data Sharing Requirement

- **Requirement:** Customer data should be accessible only to authorized personnel for customer service and marketing purposes.

Roles and Profiles

- **Roles:** Define roles such as Customer Support Representative, Sales Manager, and Marketing Specialist.
- **Profiles:** Assign profiles with appropriate permissions based on role responsibilities (e.g., view, edit customer details).

Record Access

- **Sharing Rules:** Create sharing rules to allow specific roles (e.g., Customer Support) to access customer records based on criteria like account ownership or record criteria.
- **Field-Level Security:** Restrict access to sensitive fields (e.g., payment information) based on user profiles.

2. Order Object

Data Sharing Requirement

- **Requirement:** Orders should be accessible to sales, operations, and customer service teams based on their roles and responsibilities.

Roles and Profiles

- **Roles:** Define roles such as Sales Representative, Operations Manager, and Customer Service Agent.
- **Profiles:** Configure profiles with permissions to create, view, and update orders based on role requirements.

Record Access

- **Organization-Wide Defaults:** Set default sharing settings to private or public read-only based on business needs.
- **Role Hierarchy:** Use role hierarchies to grant broader access to records owned by subordinate roles (e.g., allow managers to access orders owned by their team members).
- **Manual Sharing:** Allow manual sharing for specific order records that require additional access permissions.

3. Menu Item Object

Data Sharing Requirement

- **Requirement:** Menu items should be accessible to kitchen staff, inventory managers, and marketing teams for updating, inventory management, and promotional activities.

Roles and Profiles

- **Roles:** Define roles such as Kitchen Staff, Inventory Manager, and Marketing Coordinator.
- **Profiles:** Assign profiles with appropriate permissions to manage menu items, update prices, and create promotional campaigns.

Record Access

- **Permission Sets:** Create permission sets to grant additional permissions (e.g., modify menu items) beyond the profile settings based on specific job functions.
- **Criteria-Based Sharing Rules:** Use criteria-based sharing rules to share menu items with specific roles or users based on attributes like item category or location.