# Online Food Ordering System

1. Define the Goals of the Project

The main goals of the Online Food Ordering System are:

1. **Automate the Ordering Process**: Replace the existing manual system with an advanced computerized software to store and access data efficiently.
2. **Manage Menu and Orders**: Enable administrators to add, edit, or delete food items and manage orders, including updating the delivery status.
3. **User Account Management**: Allow users to register, log in, and manage their orders easily.
4. **Online Payment**: Provide an online payment option to save time and effort for customers.
5. **Order Tracking**: Allow users to track their orders and view details about their food items.

2. Build the System Context

Actor   System   Follow line
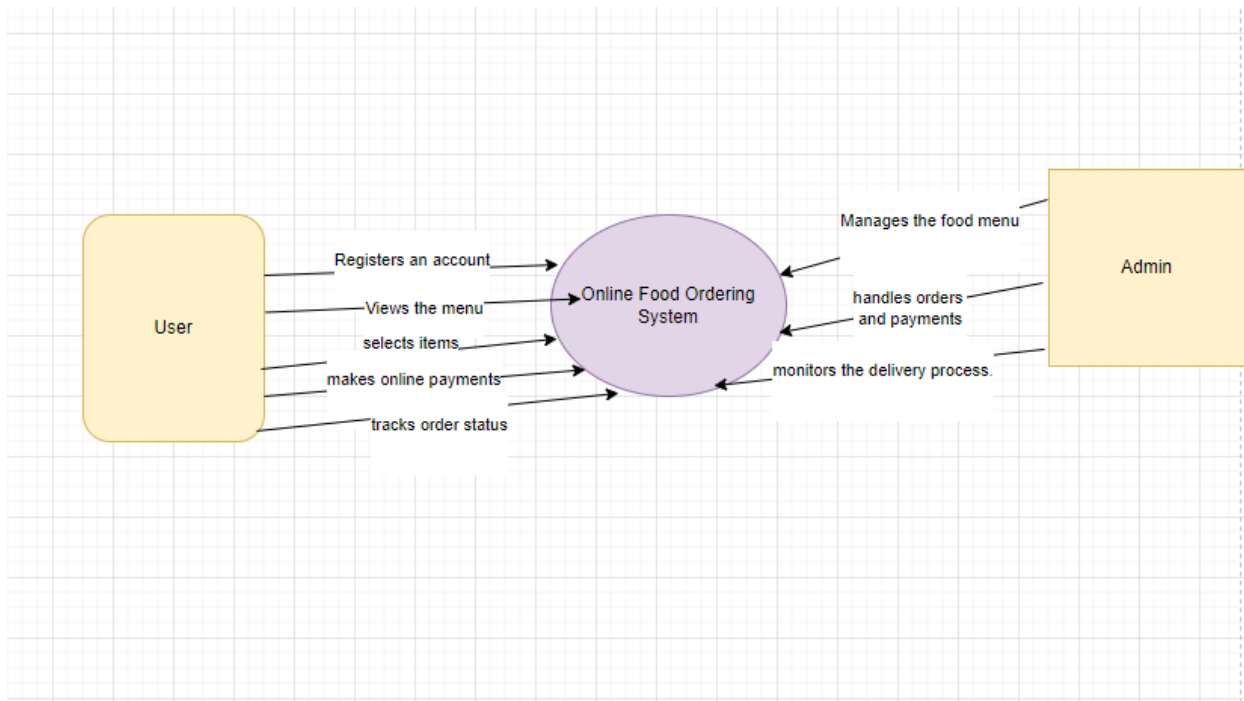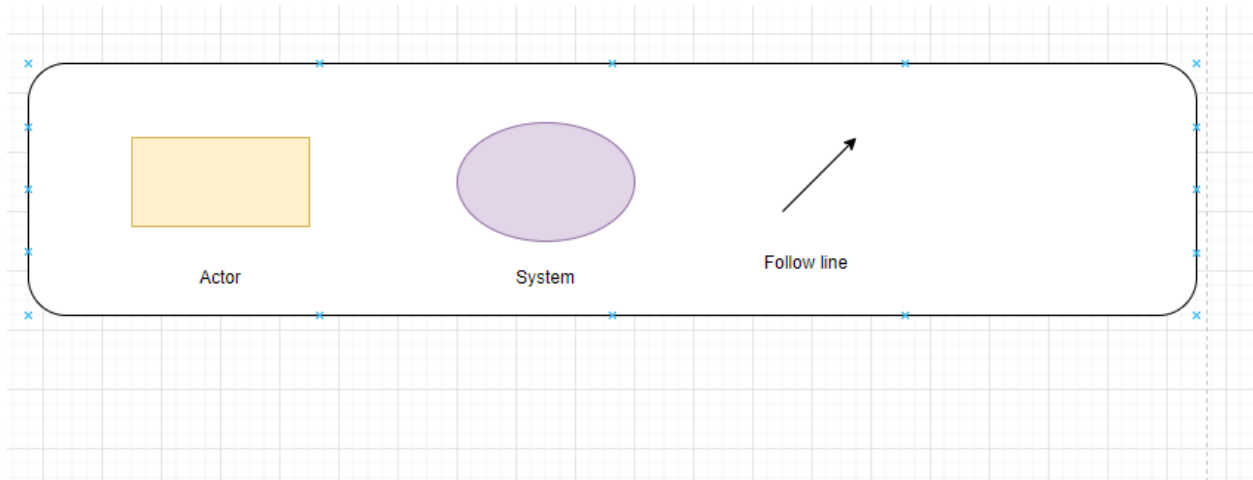
- **User**: Registers an account, views the menu, selects items, makes online payments, and tracks order status.
- **Admin**: Manages the food menu, handles orders and payments, and monitors the delivery process.
- **Interactions Between Components**:
  - The user accesses the website => Selects food items => Places an order => Makes a payment => Receives delivery updates.
  - The admin updates the food menu => Manages orders and tracks payment transactions.

3. Use Case Specification (UC)

Use Case Entities

ID	E01
Title	User
Description	Allows new users to register an account with essential details...
Provides Assumptions	Assumes the user has internet access and valid credentials
Requires Assumptions	Requires the user to have a registered account
Identified Use Cases	UC01: User Registration , UC02: Menu Browsing , UC03: Order Payment

ID	E02
Title	Admin
Description	A system administrator responsible for managing the platform

Provides Assumptions	Assumes the admin has authorized credentials
Requires Assumptions	Requires admin privileges and authentication
Identified Use Cases	UC04: Manage Orders , UC05: Add/Edit/Delete Food Items

Operational Use Cases

ID	UC01
Title	User Registration
Description	Allows users to create a new account
Entities Involved	E01: User
Preconditions	User has internet access
Primary Flow	User submits details, system validates and stores them
Postconditions	User account created successfully
Alternate Flows	Error if email is already registered

ID	UC02
Title	Menu Browsing
Description	Users browse through the food items and categories
Entities Involved	E01: User
Preconditions	Food items are already added by admin
Primary Flow	User browses menu, selects food items
Postconditions	Selected items added to the cart
Alternate Flows	Error if no items are available

ID	UC03
Title	Order Payment
Description	Processes online payment for selected items
Entities Involved	E01: User
Preconditions	User has valid payment method

Primary Flow	User selects payment method, processes payment, and confirms order
Postconditions	Order confirmation received, payment processed
Alternate Flows	Payment declined, retry with different method

ID	UC04
Title	Manage Orders
Description	Admin manages food orders and tracks their status
Entities Involved	E02: Admin
Preconditions	Orders are placed by users
Primary Flow	Admin views orders, updates status to "Delivered"
Postconditions	Order status updated successfully
Alternate Flows	Error in updating status

ID	UC05
Title	Add/Edit/Delete Food Items
Description	Admin manages food items in the system
Entities Involved	E02: Admin
Preconditions	Admin is authenticated and authorized
Primary Flow	Admin adds/edits/deletes food items
Postconditions	Food item list updated
Alternate Flows	Error due to invalid input

Quality Attribute Scenarios

ID	QA01
Title	System Availability
Quality Attribute	Reliability
Stakeholder Role	User, Admin
Source(s) of Stimulus	System crash or downtime

Stimulus	User tries to access the website
Relevant Environment Conditions	Normal operating conditions
Architectural Elements	Database, Web Server
System Response	System remains accessible
Response Measure(s)	Less than 5 minutes downtime per month
Associated Risks	Server overload, server crash

ID	QA02
Title	Order Processing Speed
Quality Attribute	Performance
Stakeholder Role	User
Source(s) of Stimulus	Large number of orders being placed
Stimulus	User places an order
Relevant Environment Conditions	High traffic on the system
Architectural Elements	Database, Payment Gateway
System Response	Order processed within 10 seconds
Response Measure(s)	Response time within 5-10 seconds
Associated Risks	Slow response due to high load

ID	QA03
Title	Data Security
Quality Attribute	Security
Stakeholder Role	User, Admin
Source(s) of Stimulus	Unauthorized access attempts
Stimulus	Hacker tries to access user data
Relevant Environment Conditions	System under attack
Architectural Elements	Firewall, Authentication Mechanism

System Response	Prevent unauthorized access
Response Measure(s)	Zero successful data breaches
Associated Risks	Data theft, unauthorized access

ID	QA04
Title	Payment Processing
Quality Attribute	Performance, Availability
Stakeholder Role	User, Payment Processor
Source(s) of Stimulus	User submits payment information
Stimulus	User clicks on payment button
Relevant Environment Conditions	Network connectivity issues
Architectural Elements	Payment Gateway, Database
System Response	Payment processed or declined promptly
Response Measure(s)	Response within 5 seconds
Associated Risks	Failed payment due to network issues

Technical Constraints

ID	TC01
Title	System Infrastructure
Description	Requires high-availability server and reliable database with low latency

ID	TC02
Title	Payment Gateway Integration
Description	Must support integration with various payment gateways (PayPal, Stripe, etc.)

ID	TC03
Title	Security Compliance

Description	Must comply with data protection standards like GDPR, PCI-DSS

Business Constraints

ID	BC01
Title	Budget Limitations
Description	The system must be developed within a specific budget allocated

ID	BC02
Title	Time-to-Market
Description	The system must be delivered within 6 months to meet market demands

ID	BC03
Title	Support for Multiple Languages
Description	The system should support English and one other language for wider adoption

4) Create C&C