

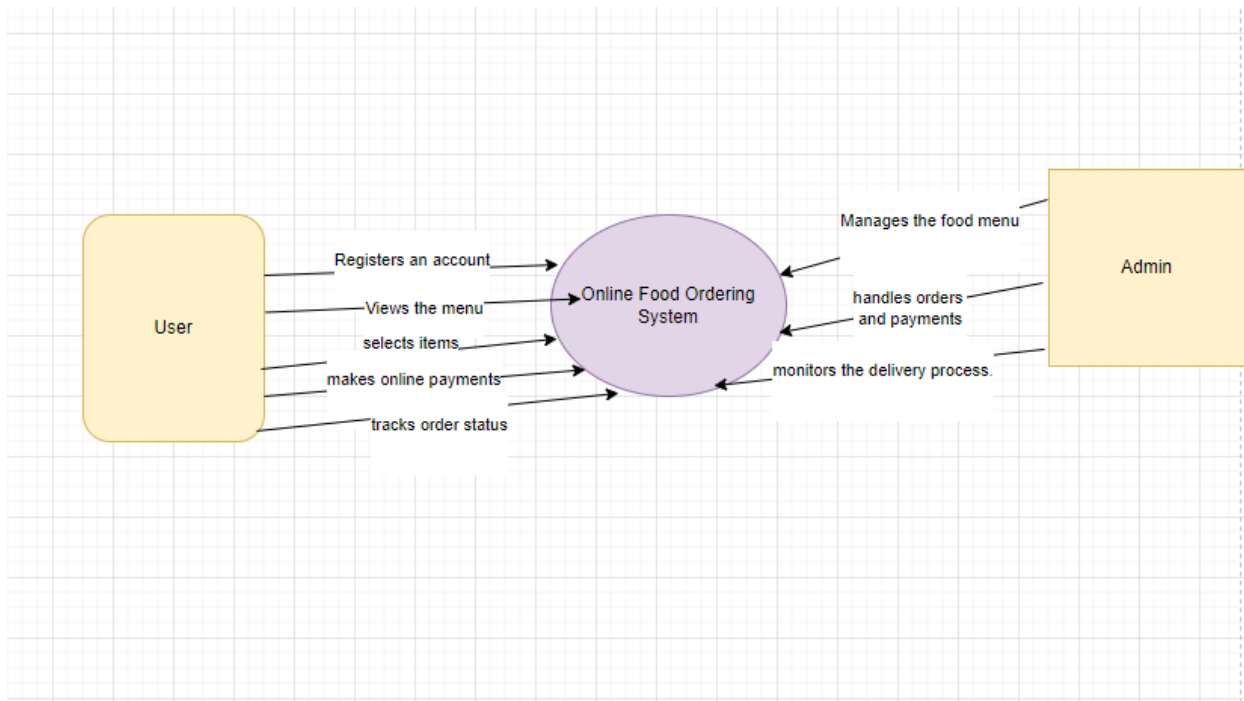
Online Food Ordering System

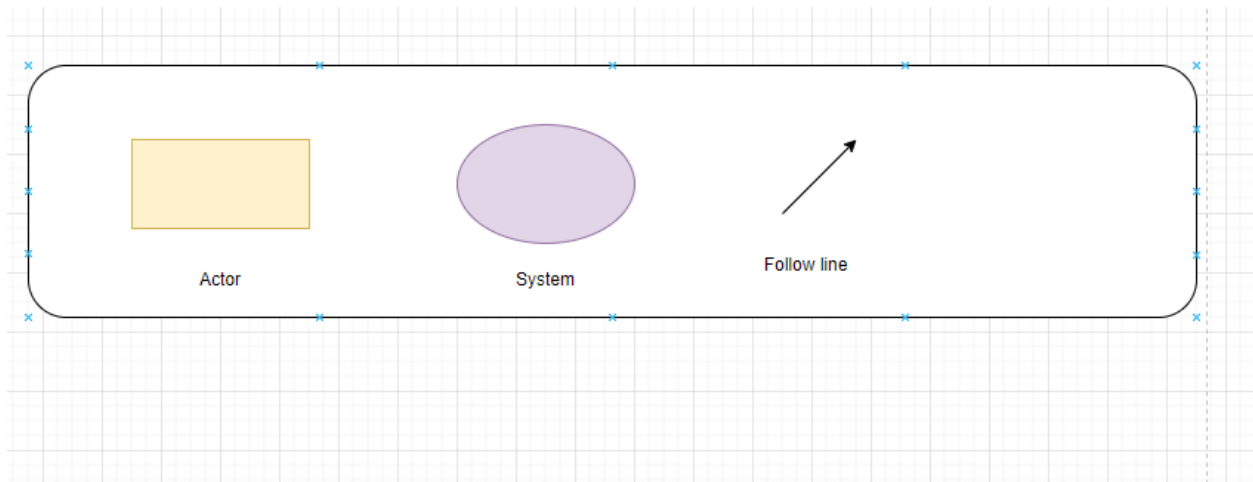
1. Define the Goals of the Project

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





- **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

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|----------------------|---|
| 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 |

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

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| 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

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| 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 |

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| 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 |

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

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| 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 |

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| 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 |

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| 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

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

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| 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 |

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| 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 |

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| 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 |

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

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| 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

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

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

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| ID | TC03 |
| Title | Security Compliance |

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

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

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

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

4) Create C&C

