

ER Design Practice
[LatAm] Introduction to Java Development

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Overview

For this exercise the “**Food delivery management system**” was chosen to develop all the points in the practice.

Entities and Attributes

For a food delivery system, we can imagine that it needs to start with a person (customer) contacting the place in charge of doing the deliveries, once the customer and the system agree (order) on what food (product) is going to be deliver, the system can book an available delivery man (deliverer) to purchase the required items in the specified place (restaurant) and deliver them at location specified.

For that, then we will get the followings entities and attributes:

<i>Customers</i>	
FirstName	LastName
Email	Phone
Address	SubscriptionType

<i>Deliverers</i>	
FirstName	LastName
Phone	Vacant
Openshift	Closeshift

Orders	
Customer	Deliverer
Products	PurchaseMode
OrderDate	TotalCost
Address	TotalCost

Products	
Name	ProductType
Weight	Cost

Restaurants	
Name	RestaurantType
OpenHour	CloseHour
Address	

Functions and Use Cases

<i>Title</i>	Customer request food
<i>Primary Actor</i>	Customer
<i>Success Scenario</i>	<ol style="list-style-type: none"> 1. The customer calls the delivery platform 2. The delivery platform checks if the person calling is a customer or a new person 3. The customer informs the delivery platform what food from which restaurant it wants to buy 4. The customer confirms the delivery platform at what address to do the delivery 5. The delivery platform informs the customer the total cost of the service 6. The customer confirms on how to make the purchase (prepaid or upon delivery)
<i>Extensions</i>	<ol style="list-style-type: none"> 3a. The delivery platform informs the customer that the product and/or restaurant are not available 4a. The delivery platform informs the customer that the service is no available at the specified address 5a. The customer doesn't agree with the cost of the service and cancel the purchase
<i>Preconditions</i>	

<i>Title</i>	System creates order
<i>Primary Actor</i>	Delivery platform
<i>Success Scenario</i>	<ol style="list-style-type: none"> 1. The system identifies the customer, the products and calculate the total cost 2. The system check if the customer has a special subscription plan and change the cost accordingly 3. The system finds a deliverer that is available and is close to the specified restaurant 4. The system creates the order and send the relevant information to the deliverer
<i>Extensions</i>	<ol style="list-style-type: none"> 3a. The system can't find a deliverer that is available and is close to the specified restaurant
<i>Preconditions</i>	Customer request food

<i>Title</i>	Deliverer buy's food at restaurant
<i>Primary Actor</i>	Deliverer
<i>Success Scenario</i>	<ol style="list-style-type: none"> 1. The deliverer drives to the specified restaurant location 2. The deliverer checks the order and inform the restaurant about what he wants 3. The deliverer waits if the food wasn't ready 4. The deliverer buys the food and pack it
<i>Extensions</i>	<ol style="list-style-type: none"> 1a.The restaurant is closed to the public 2a.The food requested in the order is not available in the specified restaurant
<i>Preconditions</i>	System creates order

<i>Title</i>	Deliverer transport food
<i>Primary Actor</i>	Deliverer
<i>Success Scenario</i>	<ol style="list-style-type: none"> 1. The deliverer checks where it needs to travel 2. The deliverer checks the best route possible taking into account the vehicle he is using to minimize travel time 3. The deliverer drive and arrive at the location 4. The deliverer informs the client that he arrived at the location
<i>Extensions</i>	3a.The deliverer got lost or suffers an accident and can't arrive to the location
<i>Preconditions</i>	Deliverer buy's food

<i>Title</i>	Deliverer hand over food
<i>Primary Actor</i>	Deliverer
<i>Success Scenario</i>	<ol style="list-style-type: none"> 1. The deliverer hand over the food to the customer 2. The customer checks the food and determine if the delivery was on time 3. The deliverer checks the order to determine if the purchase mode was upon delivery to take the payout from the customer 4. The deliverer hand out a questionnaire to rate the overall service
<i>Extensions</i>	2a.The customer determine that the food delivered wasn't the correct one or the delivery took more time that stipulated
<i>Preconditions</i>	Deliverer transport food

The relations can be summarized as:

- The customer **makes a request** for food and the delivery platform
- The delivery platform **checks with** the restaurant if the food **is available**
- The customer **confirms the term of service** with the delivery platform
- The restaurant **offers different kinds** of products
- The delivery platform **checks if** are deliverers **available in** the zone
- The deliverer **travels to** the restaurant **to buy** food
- The deliverer **transports the food** to the customer
- The deliverer **hands over the food** to the customer
- The customer **rates the service** of the delivery platform

ER diagram

Database ER Diagram

Food delivery management system

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