



SWE444 Software Construction Laboratory

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FoodCloud

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Introduction

FoodCloud is a web-based system designed to ease and expedite the process of ordering food by acting as a middleman between the customer and the restaurants. We have independent freelance drivers who can choose to deliver a certain order, go to the restaurant, pick up the order and deliver it to the user.

FoodCloud provides a wide variety of restaurants arranged and categorized in a manner that makes the tedious process of finding and choosing a restaurant smooth. Ordering has never been easier, with a few clicks the customer shall enjoy his meal delivered right to his home.

Functional Requirements:

- 1- The user shall be able to register to the system as either a customer or driver.
- 2- The user shall be able to login to the system.
- 3- The admin shall be able to login to the system.
- 4- The customer shall be able to view restaurants.
- 5- The customer shall be able to search for restaurants.
- 6- The admin shall be able to search for restaurants.
- 7- The customer shall be able to filter restaurants based on restaurant type.
- 8- The customer shall be able to view the chosen restaurant's menu.
- 9- The customer shall be able to add items to cart.
- 10- The customer shall be able to remove items from cart.
- 11-The customer shall be able to place an order.
- 12-The customer shall be able to pin his location via Google Maps.
- 13-The customer shall be able to rate a restaurant.
- 14-The customer shall be able to view restaurant's rating.
- 15-The customer shall be able to edit his profile (e.g. name, mobile number).
- 16-The driver shall be able to view available orders.
- 17-The driver shall be able to accept an order.
- 18-The driver shall be able to view the customer's location.
- 19-The driver shall be able to view the customer's desired restaurant location.
- 20-The driver shall be able to update order status.
- 21-The system shall notify the customer when his order status changes.
- 22-The admin shall be able to add restaurant to the database.
- 23-The admin shall be able to remove restaurants from database.
- 24-The admin shall be able to add items to the restaurant's menu.

Non-functional requirement:

Availability

- Average downtime shall not exceed 1 hour per week.

Efficiency

- Response time shall take at most 5 seconds

Integrity

- The system shall not allow the unregistered users to use the system.
- The system shall not allow the customers/drivers to access other user's account.
- The system shall not allow users customers/drivers to edit restaurant.

Interoperability

- The system shall operate correctly with (google maps).

Flexibility

- The features shall be able to be added easily without causing errors.

Use case diagram:

Figure 1 shows the use case diagram for the “FoodCloud” system

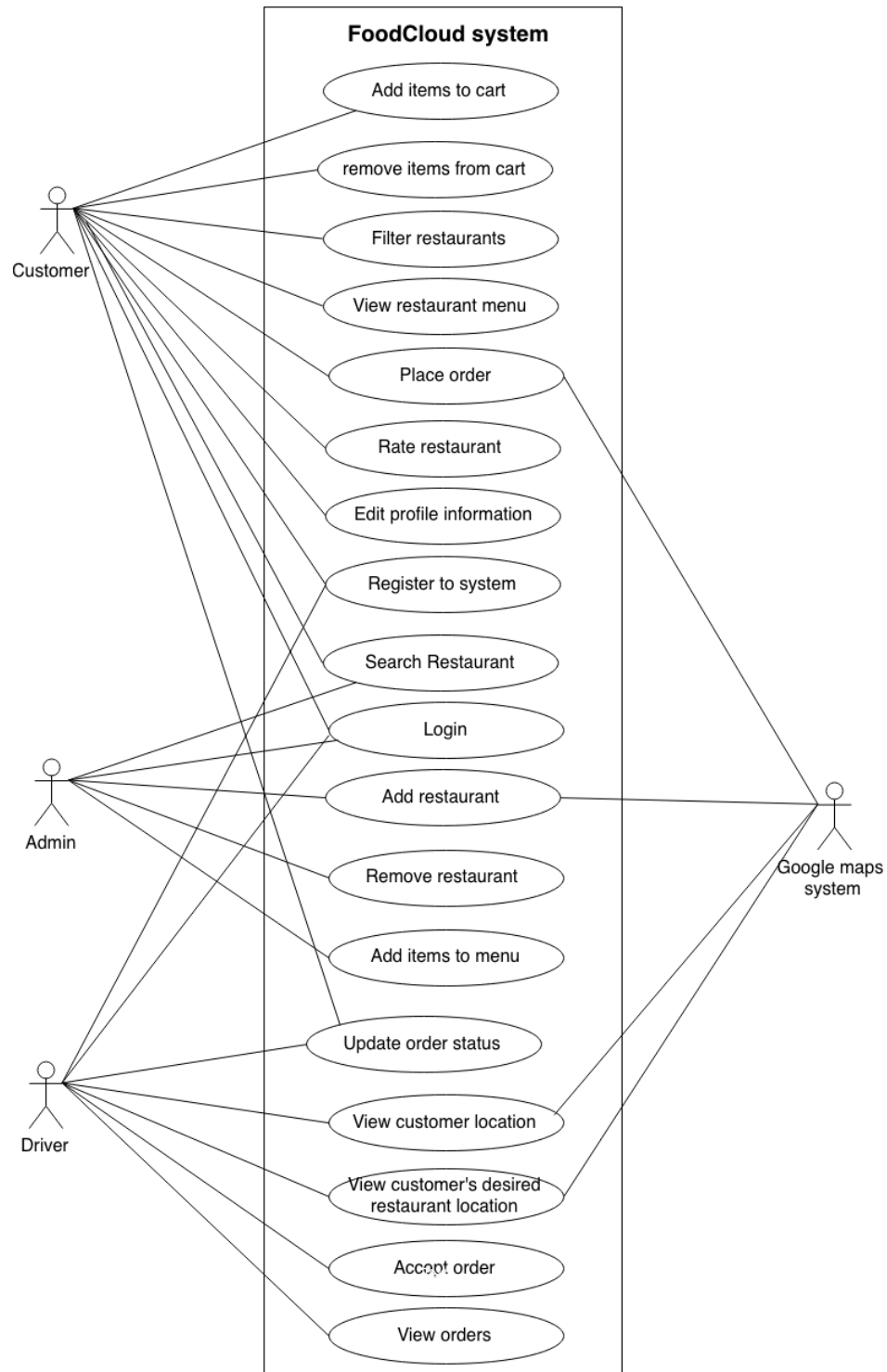


Figure 1: Use case diagram

Implementation Plan

Phase No.	Scenarios
2	1-Register to system. 2-Login. 3-Edit profile information 4-Add restaurant. 5-Delete restaurant.
3	1-View restaurants. 2-Search for restaurant. 3-Sort restaurants. 4-View restaurant menu. 5-Add items in menu.
4	1-Add items from shopping cart. 2-Remove items from shopping cart. 3-Place order. 4-View available orders.
5	1-Accept order 2-View customer's location 3-View customer's desired restaurant 4-Update order status. 5-Notify order status.

Phase 2

Phase 2 implementation plan

Name	Use case
Majed AlQudaibi	1-Register to system.
Abdulaziz Alhowidi	2-Login.
Abdulahman Fantoukh	3-Edit profile information
Mohammad Tashkandi	4-Add restaurant. 5-remove restaurant.

The URL of foodCloud system :

<http://foodcloud.byethost7.com/?i=1>

Admin : admin@fc.com password: admin

Use-case description:

This section is designated to the use case descriptions of the phase 2 of the “FoodCloud” system.

Use case name	Add Restaurant.
Actor	Admin.
Description	The admin has the ability to add to restaurant the database of the system.
Precondition	1- The admin must be connected to the internet. 2- The admin must logged in.
flow of events	1- The admin click on the add restaurant button in his home page. 2- The system ask the admin add or delete restaurant. 3- The admin choose add. 4- The system display the add form. 5- The Admin fill up the form and submit it. 6- The System add the restaurant to the database.
Alternative flow	none.
Post condition	The changes that have been made by admin are saved.
Comments/assumptions	The add form contains the restaurant name, type and location.

Use case name	Remove restaurant
Actor	Admin.
Description	The admin has the ability to delete restaurants from the database of the system.
Precondition	1- The admin must be connected to the internet. 2- The admin must logged in.
flow of events	1-The admin goes to home page. 2-The System displays all restaurants with “delete restaurant” option. 3-The admin selects “delete restaurant”. 4-The system deletes the restaurant from the database.
Alternative flow	none.
Post condition	The changes that have been made by admin are saved.
Comments/assumptions	The add form contains the restaurant name, type and location.

Class diagram :

Figure 2 shows the class diagram for the “FoodCloud” system

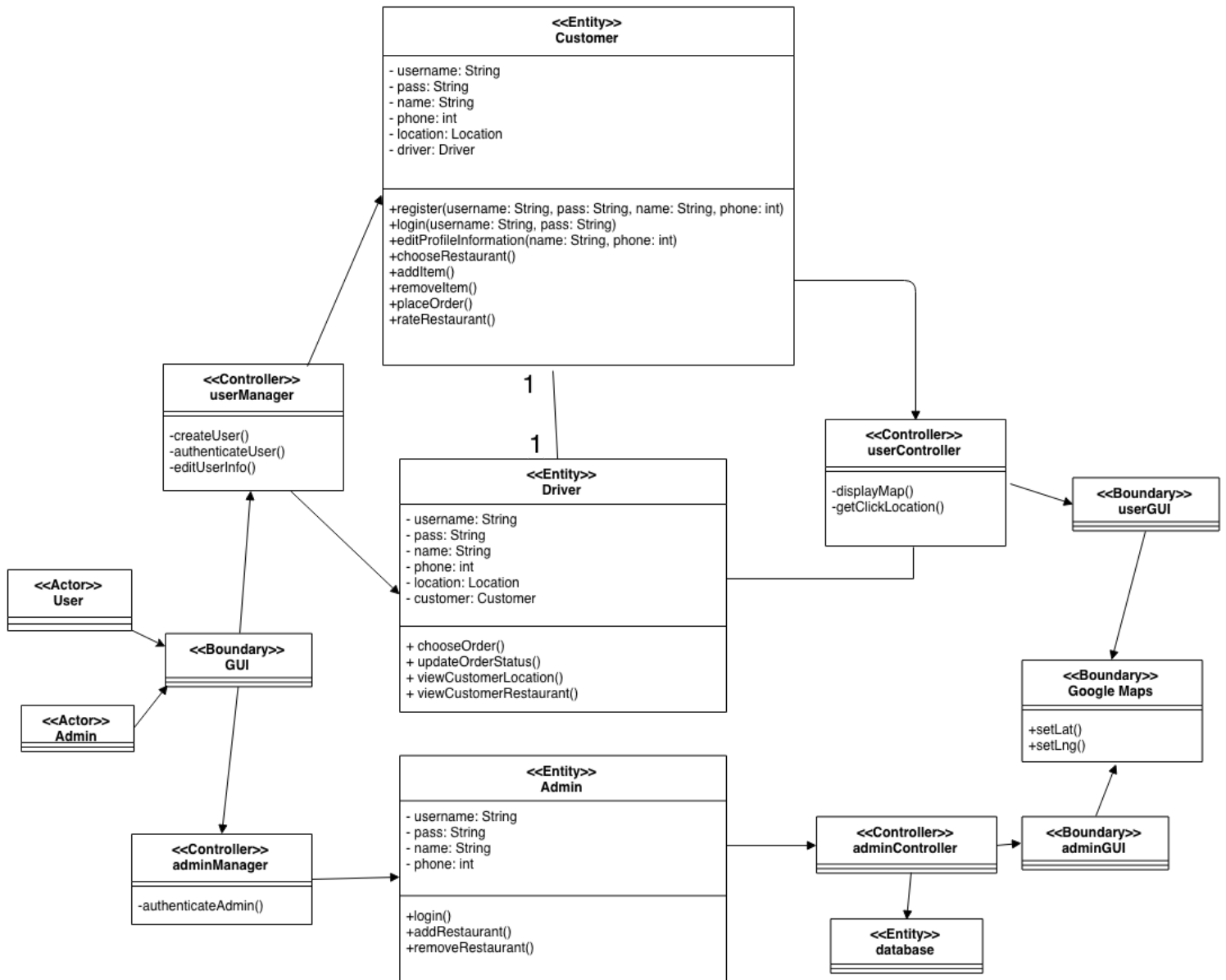


Figure 2: Class diagram

Phase 3

Phase 3 implementation plan

Name	Use case
Majed AlQudaibi	1-View Restaurant Menu.
Abdulaziz Alhowidi	2-Search Restaurant 3-View Restaurants
Abdulrahman Fantoukh	5-Add item to menu
Mohammad Tashkandi	4-filter Restaurant

The URL of foodCloud system :

<http://foodcloud.byethost7.com/?i=1>

Admin : admin@fc.com password: admin

Use-case descriptions:

This section is designated to the use case descriptions of the phase 3 of the “FoodCloud” system.

Use case name	View Restaurant menu.
Actor	Customer
Description	The customer can select restaurant to see the restaurant's menu.
Precondition	1- The customer must be connected to the internet. 2- The customer must be logged in.
flow of events	1- The system display all the restaurant from the database. 2- The customer selects “view menu” for a specific restaurant to view its menu. 3- The system displays all items in the menu
Alternative flow	3- The system displays “no items”
Post condition	All items in the menu are displayed
Comments/assumptions	There are restaurants in the database

Use case name	Search Restaurant.
Actor	Customer
Description	The customer has the ability to search restaurant by the name.
Precondition	1- The customer must be connected to the internet. 2- The customer must be sign in to his/her account. 3- The system's contents must be updated so the search results will be correct as possible.
flow of events	1- The customer enters search terms in the search field. 2- The system searches for restaurant in the database. 3- The system displays all restaurant matching terms.
Alternative flow	None
Post condition	The results that have been showed up after searched must be classified as user's wishes.
Comments/assumptions	None.

Use case name	Filter Restaurant.
Actor	Customer
Description	The customer can filter the restaurants based on their type
Precondition	1- The customer must be connected to the internet. 2- The customer must logged in. 3- The customer must be in Home page.
flow of events	1- The customer selects the “filter” option. 2- The system displays list of types of restaurant to filter by. 3- The customer selects desired option and clicks on filter button. 4- The system displays all restaurants meeting customer’s criteria.
Alternative flow	None
Post condition	All available restaurants matching the user’s criteria are displayed
Comments/assumptions	None

Use case name	Add item to menu.
Actor	Admin
Description	The admin can add an item to a specific restaurant
Precondition	1- The admin must be connected to the internet. 2- The admin must logged in.
flow of events	1- The admin selects the “Add Item to Menu” option 2- The system displays a form that requires the restaurant name, the item’s name and price. 3- The admin enters required information and submit. 5- The system checks entered information. 6- The system stores item in database.
Alternative flow	5- The system displays an error message.
Post condition	The item is stored in the database.
Comments/assumptions	None

Database schema:

Figure 3 shows the Entity relation model (ER diagram)

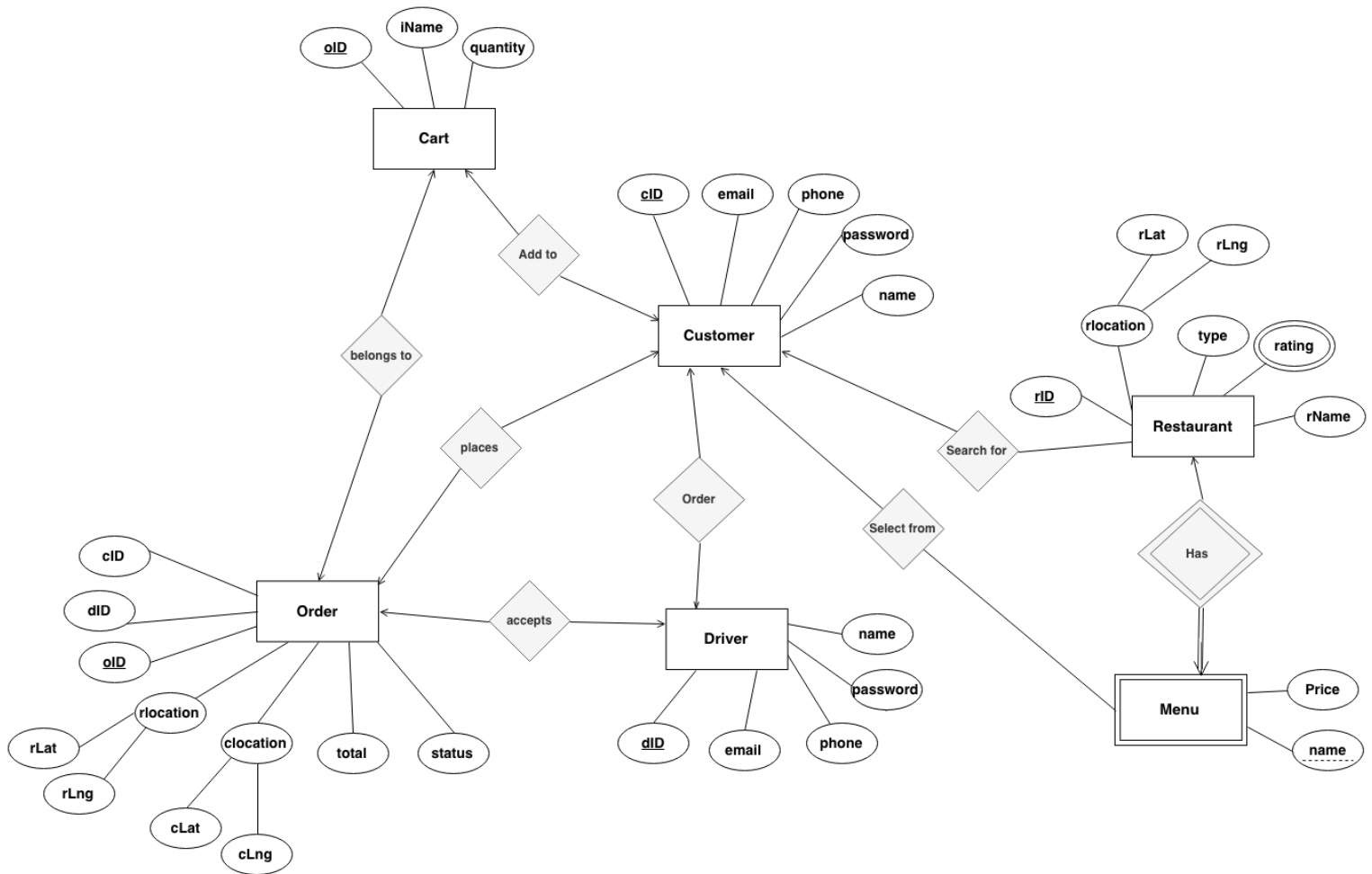


Figure 3: ER diagram

Phase 4

Phase 4 implementation plan

Name	Use case
Majed AlQudaibi	1-Place an order
Abdulaziz Alhowidi	2-View available orders
Abdulrahman Fantoukh	3-Add item to shopping cart
Mohammad Tashkandi	4-Remove item from shopping cart

Use-case description:

This section is designated to the use case descriptions of the phase 4 of the “FoodCloud” system.

Use case name	Add item to shopping cart
Actor	Customer.
Description	The customer has the ability to add items to his shopping cart.
Precondition	1- The customer must be connected to the internet. 2- The customer must logged in.
flow of events	1- The customer goes to desired restaurant’s page 2- The system displays all items in its menu 3- The customer selects “add to cart” option 4- The system adds that item to his cart
Alternative flow	none.
Post condition	The items are added to the customer’s cart.
Comments/assumptions	The “add to cart” option will be represented as icons indicating its purpose

Use case name	Remove item from shopping cart
Actor	Customer.
Description	The customer has the ability to remove items from his shopping cart.
Precondition	1- The customer must be connected to the internet. 2- The customer must logged in.
flow of events	1- The customer selects “view cart” option 2- The system displays items that are currently in his cart 3- The customer selects “delete item” option 4- The system removes the selected item from customer's cart
Alternative flow	2-the system displays there is no items in cart
Post condition	The items are removed from the customer’s cart.
Comments/assumptions	The “delete item” and “view cart” option will be represented as icons indicating its purpose

Use case name	Place an order
Actor	Customer.
Description	The customer will review his cart and be able to add or delete items from it, as well as input the delivery location.
Precondition	1- The customer must be connected to the internet. 2- The customer must logged in.
flow of events	1- The customer select the “view cart” option. 2- The system will display his cart and a map for the user to input the desired delivery address 3- The customer inputs his location on the map 4- The customer selects the “Place order” option
Alternative flow	3a- The customer deletes items from his cart 3b- The customer selects “Place order” option
Post condition	The order is placed and is posted on the driver’s homepage.
Comments/assumptions	The customer doesn’t have to add or deletes items from his cart, but he must input a delivery location

Phase 5

Phase 4 implementation plan

Name	Use case
Majed AlQudaibi	1-Accept order
Abdulaziz Alhowidi	2-View customer's location 3-View customer's desired restaurant
Abdulrahman Fantoukh	4-Update order status.
Mohammad Tashkandi	5-Notify order status.

Use-case description:

This section is designated to the use case descriptions of the phase 4 of the “FoodCloud” system.

Use case name	Accept order
Actor	Driver
Description	Driver accepts orders from customers to deliver it.
Precondition	1- The driver must be connected to the internet. 2- The driver must logged in. 3- List of orders are displayed.
flow of events	1- The driver chooses accept order in the homepage. 2- The system displays the order details.
Alternative flow	None.
Post condition	Order has been accepted and driver in order delivery status page.
Comments/assumptions	None.

Use case name	View customer's location
Actor	Driver.
Description	Driver views the customer location.
Precondition	1- The driver must be connected to the internet. 2- The driver must logged in. 3- List of orders are displayed. 4-The driver had accepted an order.
flow of events	1- The driver choose to update order status. 2- The system displays the customer's location.
Alternative flow	None.
Post condition	driver see the customer's location
Comments/assumptions	None.

Use case name	View customer's desired restaurant
Actor	Driver.
Description	Driver views the customer's desired restaurant location.
Precondition	1- The driver must be connected to the internet. 2- The driver must logged in. 3- List of orders are displayed.
flow of events	1-The driver accept order. 2- The system displays the customer's desired restaurant location.
Alternative flow	None.
Post condition	driver see customer's desired restaurant
Comments/assumptions	None.

Use case name	Update order status.
Actor	driver
Description	the driver updates the order status
Precondition	1- The driver must be connected to the internet. 2- The driver must logged in. 3- Order details are displayed. 4-The driver had accepted an order.
flow of events	1- The customer choose to update order status. 2- The system updates the odred status.
Alternative flow	None
Post condition	None
Comments/assumptions	order status is one of the following(accepted,delivering,delivered)