Assignment # 10

Team 10

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Problem Statement

- Use Case Diagram
  - Develop a use case diagram that contains at least 5 core functions of the food delivery drone. Show at least one inclusion and one extension. Identify and define the actors. Note that the drone should be able to use multiple means to travel the actors. Note that the drone should be able to use multiple means to travel to its location (fly, drive on roadway, transit via water). It should also be able to handle payment for the food if payment has not been already made. (Completed)
  - Develop 2 of the use cases (from your team use case diagram) in text form, detailing items such as the pre and post conditions, main success scenario (primary flow). Justify why this is a complete use case.
- Requirement Diagram
  - Develop requirement diagrams for a subset of your team's requirements (at least 6 requirements) for the food delivery drone system.
  - Show an example of the containment, derive, refine, satisfy, verify, copy, and trace relationships to other model elements. Show examples where you demonstrate the three different ways of representing the relationships (directly, compartment, and callout). You may create more than one requirement diagram to illustrate the relationships.
  - Show the requirements for your food delivery drone system using requirements tables. In one table show the decomposition of at least one requirement. In another show either satisfy or derive dependency relationships.

Use Case Diagram - Actors

Customer
This is the individual who is utilizing the drone delivery service to get food

Drone Operator
This is the individual who is able to do some of the drone movement mechanisms available

Senior Drone Operator
This is the individual who is able to do all of the drone movement mechanisms available

<<Actor>>
Authentication System

Responsible for ensuring that the user's credentials are valid within the relevant databases and servers

<<Actor>>
ID Verification System

Responsible for verifying the identity of the person attempting to utilize the system

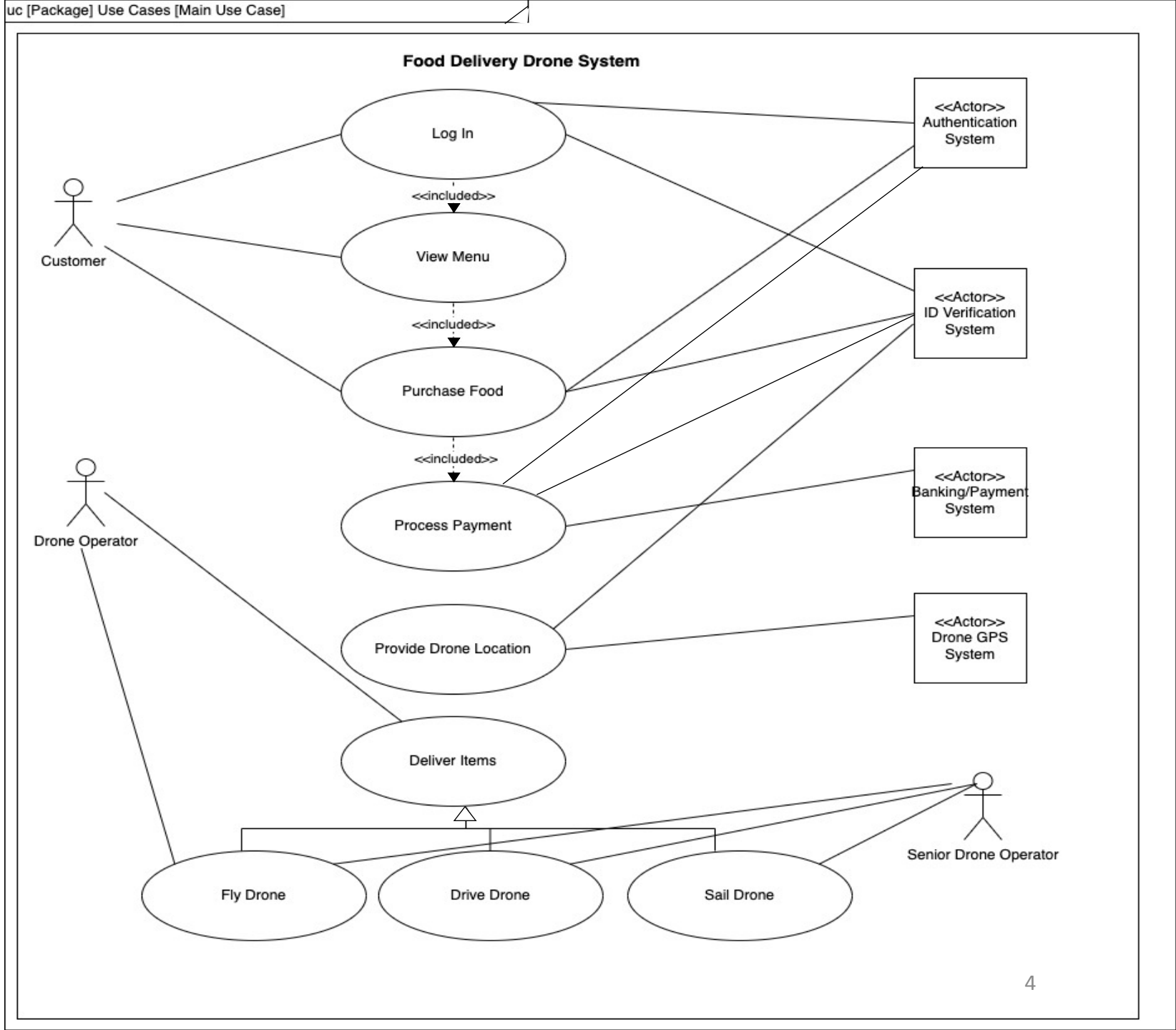
<<Actor>>
Banking/Payment System

Allows for the customer's payments to be processed and approved through their registered bank/credit account

<<Actor>>
Drone GPS System

Tracks and relays the location of the drone while delivering and picking up customer orders

Use Case Diagram



Text Form Development of 2 Use Cases

Use Case 1 – Log In

Pre-Conditions: In order for the user to log in, the system must first be on and operational, and the autentification and ID systems must be operational

Post-Conditions: After logging in, the system should be able to pull up user delivery adress, purchase history, and payment info

Main Success Scenario: User inputs credentials, system recognizes them, system pulls up the menu itesm, cutomer inouts order, payment is processed, the drone operator commenced delivering the food though all necessary methods, and the user. Gets their meal.

This is a complete use case because is includes the required flow or steps required for sucsessful execution of the log in and subsequent activities

Use Case 2 - Process Payment

Pre-Conditions: To process payment, the payment system must be operational, the user must sucessfully log in, and they must have chosen a menu item

Post-Conditions: Following the payment process the payment system must have received the payment and the order must be confirmened and exceducted by the operatio

Main Success Scenario: This is a complete use case because is includes the required flow or steps required for sucsessful execution of the log in and subsequent activities

Requirement Diagram

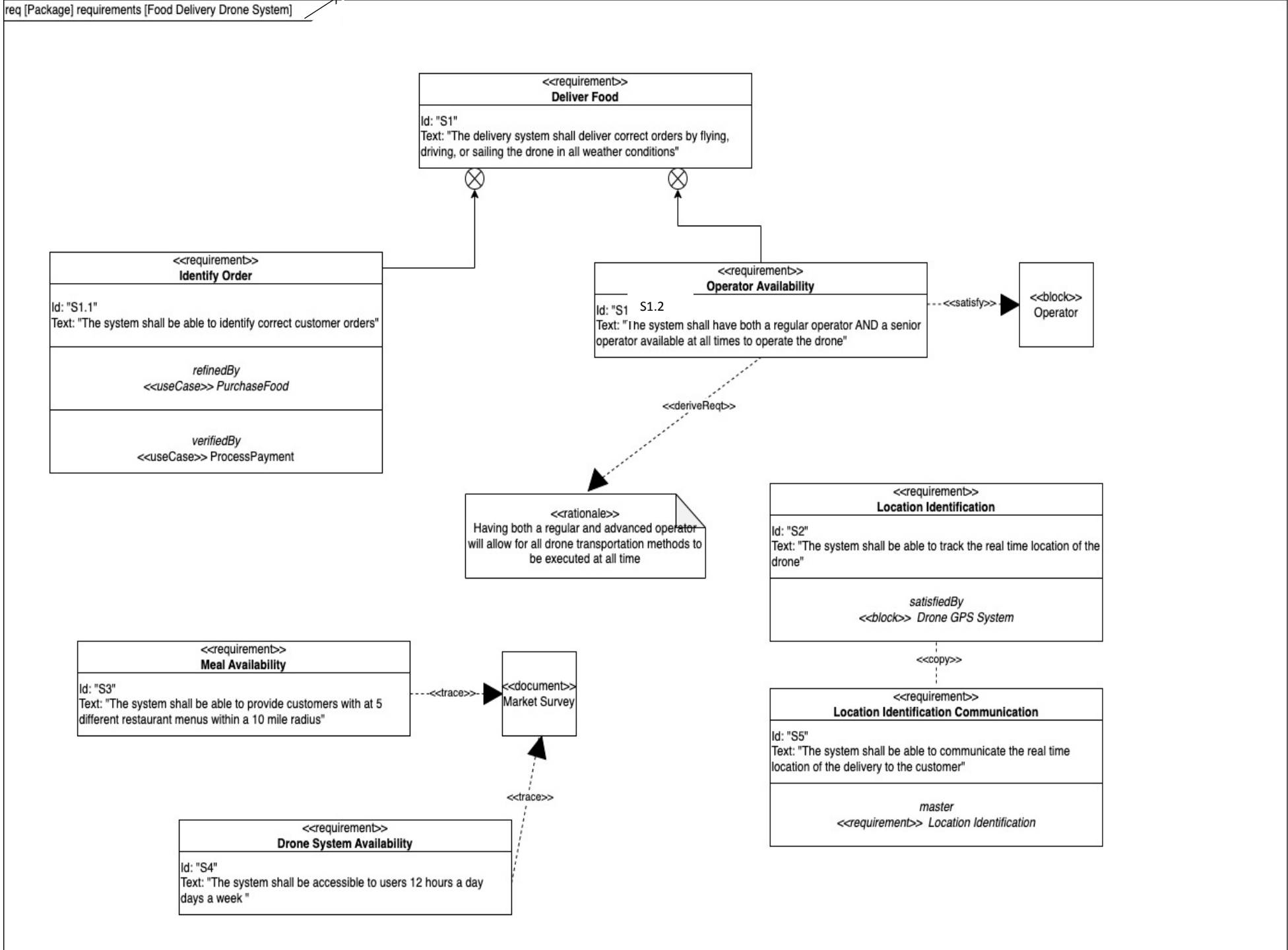


table [Package] Food Delivery System

ID	Name	Text
S1	Deliver Food	The delivery system shall deliver correct orders by flying, driving, or sailing the drone in all weather conditions
S1.1	Identify Order	The system shall be able to identify correct customer orders
S1.2	Operator Availability	The system shall always have both a regular operator AND a senior operator available to operate the drone
S2	Location Identification	The system shall be able to track the real time location of the drone
S3	Meal Availability	The system shall be able to provide customers with at 5 different restaurant menus within a 10 mile radius
S4	Drone System Availability	The system shall be accessible to users 12 hours a day days a week
S5	Location Identification Communication	The system shall be able to communicate the real time location of the delivery to the customer

table [Package] Food Delivery System

ID	Name	id	name	Rationale/Satisfy/Derive
S1	Deliver Food			The delivery system shall deliver correct orders by flying, driving, or sailing the drone in all weather conditions
S1.1	Identify Order			
S1.2	Operator Availability		rationale/derive	Having both a regular and advanced operator will allow for all drone transportation methods to be executed at all time (rational)
			Operator	(satisfy) will be able to deliver the food
S2	Location Identification			The system shall be able to track the real time location of the drone
S3	Meal Availability		Market Survey	Will allow system to know user preferences (trace)
S4	Drone System Availability		Market Survey	Will allow system to know user preferences (trace)
S5	Location Identification Communication			The system shall be able to communicate the real time location of the delivery to the customer

table [Package] Food Delivery System

ID	Name	id	Decomposition	Text
S1	Deliver Food	S1.1	Identify Order	The system shall be able to identify correct customer orders
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The End

Thank you

Any Questions?