

Software Engineering Project 2023-2024

Kitbox : Semester 1 Report

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1. User Stories and Their Priorities

Order Cabinets and Customize Cabinets

1. As a customer, I want to create and customize cabinets so that I can have one that meets my specific needs and preferences. **High Priority.**
2. As a customer, I want the system to provide real-time feedback on my selections, including compatibility and availability, so I can make informed decisions. **High Priority.**
3. As a customer, I need a summary of my order, including price and components, before finalizing it, to ensure it meets my expectations. **High Priority.**
4. As a customer, I want to confirm my order and have the system update stock levels, so I know my order is successfully processed. **High Priority.**

Invoice

1. As a seller, I need to generate accurate invoices for customers, giving the details of their orders, including pricing and taxes. **High Priority.**

Update Price Based on Suppliers' Catalog

1. As a secretary, I need to update prices and the items based on the suppliers' catalog, making sure the most current information is available for stock management and order fulfillment. **Medium Priority.**

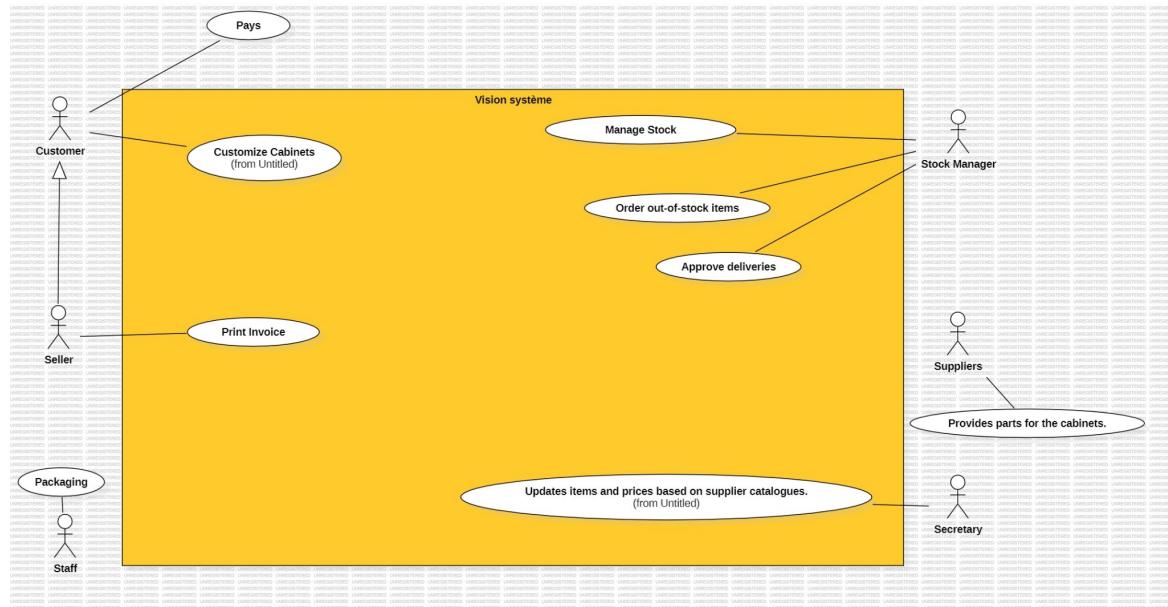
Manage Stock

1. As a stock manager, I need real-time information on stock levels of different parts to manage inventory efficiently and avoid stock-outs or overstocking. **High Priority.**
2. As a stock manager, I want to receive parts from suppliers that meet our quality and quantity standards, maintaining adequate stock levels for ongoing orders. **High Priority.**

Update Stock

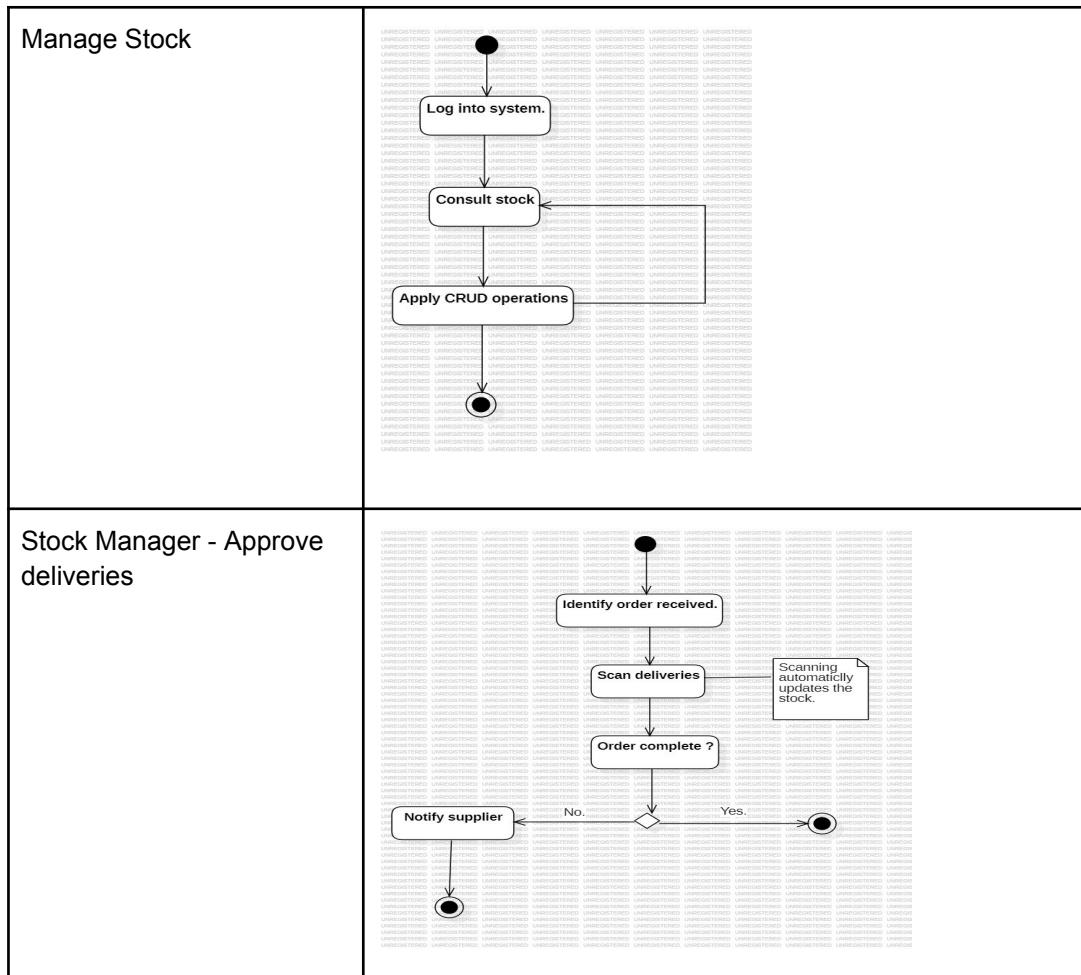
1. As a stock manager, I need to update stock levels in the system based on new deliveries, returns, or order fulfillments, to keep stock data accurate and current. **High Priority.**
2. As a system user, I want to see up-to-date stock levels, ensuring that I have accurate information for order processing and stock management. **High Priority.**

2. Use Case Diagram :

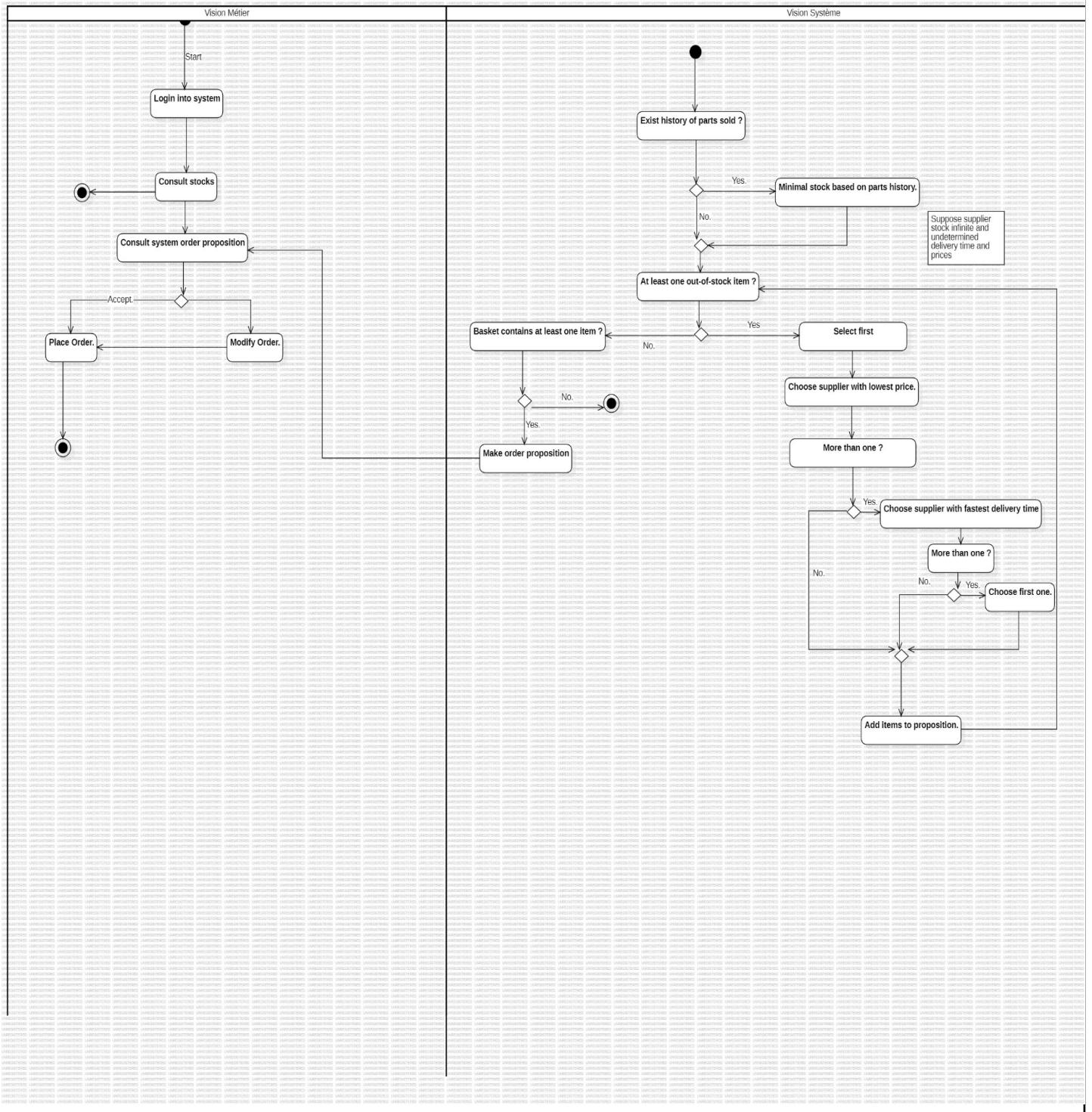


3. Activity diagrams :

3.1 Stock Manager :

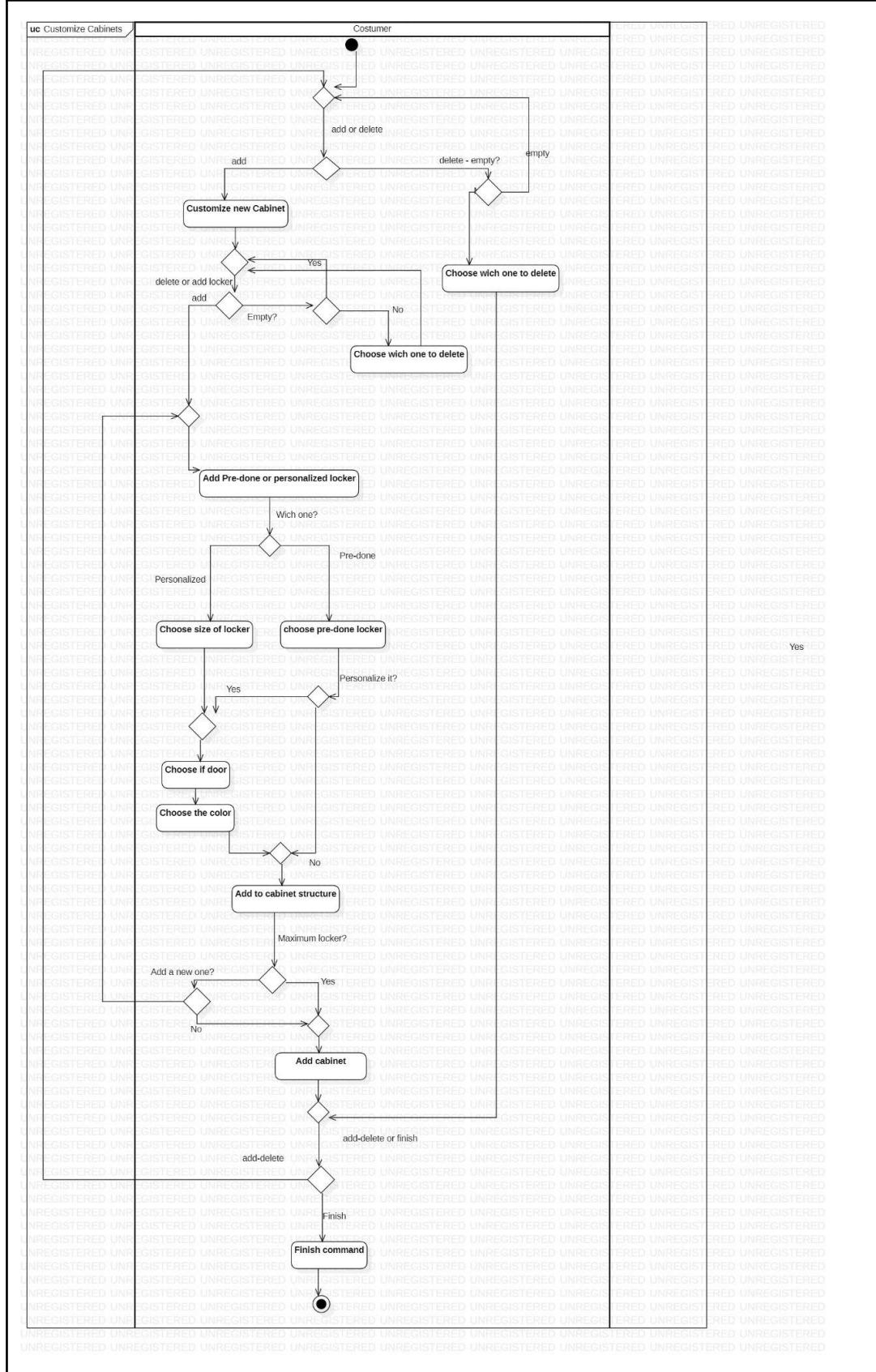


Stock Manager - Order out-of-stock items

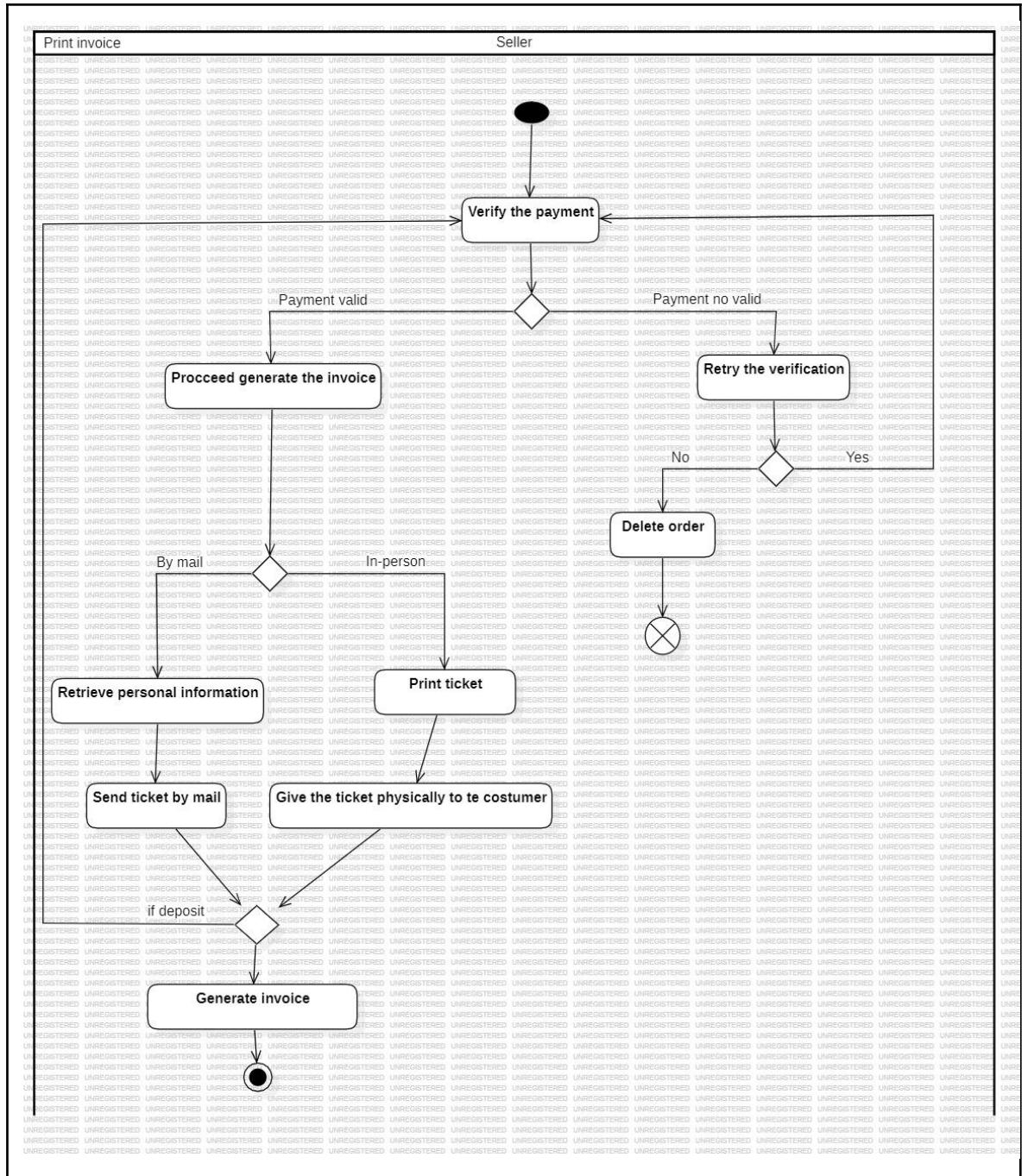


3.2 Seller/Customer :

Customer/Seller - Customize Cabinets

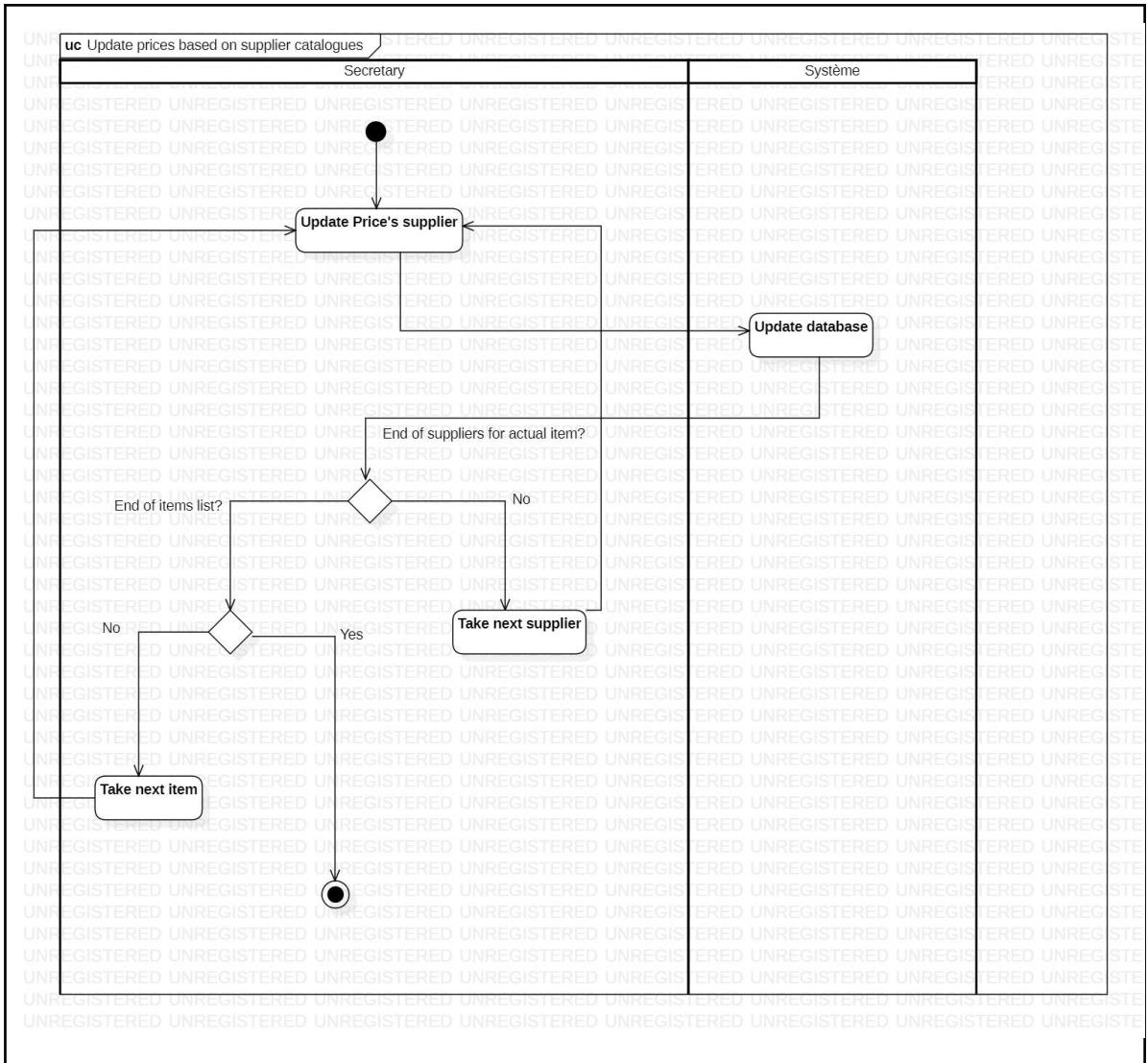


Seller - Print invoice



3.3 - Secretary :

Secretary - Update prices based on supplier catalogues



4. Descriptive sheet of uses cases

1)Customize cabinets

- 1. Case Name: Customize cabinets**
- 2. Actor(s):**
 - Actor: Customer
- 3. Objectives:**
 - To enable customers or sellers to create and customize cabinet orders.
 - To ensure that the ordered cabinets meet the customer's specifications and are compatible.
- 4. Preconditions:**
 - The product catalog and current stock levels are available and up to date.
- 5. Outcome:**
 - A complete and valid order is created.
 - An order summary is provided to the customer for confirmation.
- 6. Case Limitations:**
 - The maximum number of lockers that can be assembled is 7.
- 7. Flow: Steps Followed by the Normal Process:**
 1. The user initiates the order creation process.
 2. The user selects the number of lockers and their specific dimensions and features (color, doors, etc.).
 3. The user reviews the order summary, which includes a list of components and total cost.
 4. The user confirms the order.
- 8. Alternative Flow:**
 - **Stock Unavailability:** If a selected component is not available in stock, the seller notifies the user and offers the option for partial payment and later collection.
 - **Compatibility Issue:** If the user selects incompatible components, the system alerts the user and suggests modifications

2) Print invoice

- 1. Case Name: Print invoice**
- 2. Actor(s):**
 - Actor: Seller
- 3. Objectives:**
 - To ensure the invoice accurately reflects the details of the order, including price, components, and quantities.
- 4. Preconditions:**

- The order must have been created, customized, and confirmed by the customer.
- The customer must have completed the payment or the deposit for the order.
- The secretary must have up-to-date pricing and other information.

5. Outcome:

- A detailed invoice is generated and provided to the customer.
- The invoice includes order details, pricing and total amount.

6. Case Limitations:

- The accuracy of the invoice depends on the correctness of the order and payment details.

7. Flow: Steps Followed by the Normal Process:

1. The customer completes the payment for the order.
2. The seller calculates the total cost, including any taxes or applicable discounts.
3. An invoice is generated, displaying all relevant information in a structured format.
4. The seller provides the invoice to the customer.

8. Alternative Flow:

1. If there is not all the stock, the customer can make a deposit.
2. The seller generates an invoice with the amount paid.
3. The customer will return to pay the rest and the seller generates an invoice again with the total amount and all components.

3) Update items and prices based on supplier catalogs

1. Case Name: Update items and prices based on supplier catalogs

2. Actor(s):

- Actor: Secretary

3. Objectives:

- To update the prices, delivery times of parts from different suppliers and add new components in the system.
- To ensure the system reflects the most current and accurate supplier information for optimal decision-making in stock management and order fulfillment.

4. Preconditions:

- The secretary has access to the latest supplier catalogs or price lists.
- The secretary is authorized to access and update supplier information in the system.

5. Outcome:

- Supplier prices and delivery times in the system are current and accurate.

6. Case Limitations:

- The accuracy of updates depends on the timeliness and correctness of the information provided by suppliers.

7. Flow: Steps Followed by the Normal Process:

1. The secretary regularly checks updated price lists or delivery time information from suppliers.
2. The secretary logs into the system and accesses the supplier information update section.
3. The secretary enters or updates the prices and delivery times for each supplier's parts.
4. The secretary validates the entered data
5. The updated information is now used by the system for future stock management and order fulfillment decisions.

8. Alternative Flow:

- **System Unavailability:** If the system is down or unavailable, the secretary notes the updates and enters them once the system is back online

4) Order low-stock items

1. Case Name: Order low-stock items

2. Actor(s):

- Actor: Stock manager

3. Objectives:

- To replenish stock for items that are low in inventory or out of stock.
- To maintain minimum stock levels for each item, considering current orders and reserved components.

4. Preconditions:

- The system has accurate, up-to-date information on current stock levels and historical sales data.
- The stock manager has access to supplier information, including lead times and availability.

5. Outcome:

- Efficient replenishment of stock levels, avoiding stock outs.
- Optimal maintenance of minimum stock levels, taking into account existing orders and reservations.

6. Case Limitations:

- Dependence on the accuracy of the system's inventory and order data.
- Potential delays from suppliers affecting stock replenishment.

7. Flow: Steps Followed by the Normal Process:

1. The stock manager regularly reviews inventory data, including stock levels, reserved components, and placed orders.
2. If replenishment is needed, the stock manager evaluates which items need ordering based on current and future requirements.

3. The stock manager selects suppliers based on cost, quality, and delivery time, considering the current stock and business needs.
4. Upon arrival of new stock, the stock manager oversees the update of inventory records and ensures that new supplies are accounted for and reserved components are managed.

8. Alternative Flow:

- If a supplier is unable to fulfill an order on time, the stock manager seeks alternative suppliers or adjusts the inventory strategy accordingly.

5) Manage stock

1. Case Name: Manage stock

2. Actor(s):

- Actor: Stock manager

3. Objectives:

- To monitor and adjust inventory levels, order new stock, and manage existing stock based on sales trends, forecasts, and current business needs.

4. Preconditions:

- The stock manager has access to current and accurate inventory records.

5. Outcome:

- Stock levels are efficiently managed to minimize shortages and overages.
- Efficient management of inventory, reducing the risk of stock-outs or overstocking.

6. Case Limitations:

- It depends on the orders placed by the Stock Manager.

7. Flow: Steps Followed by the Normal Process:

1. The stock manager regularly reviews inventory levels, sales data, and forecasts.
2. The stock manager accesses the stock management section.
3. The stock manager queries the stock level of a specific part.
4. For items needing replenishment, the stock manager selects suppliers and places orders.

8. Alternative Flow:

- **Incorrect Stock Entry:** If an incorrect stock update is entered, the system allows for correction, either immediately or through a subsequent update.

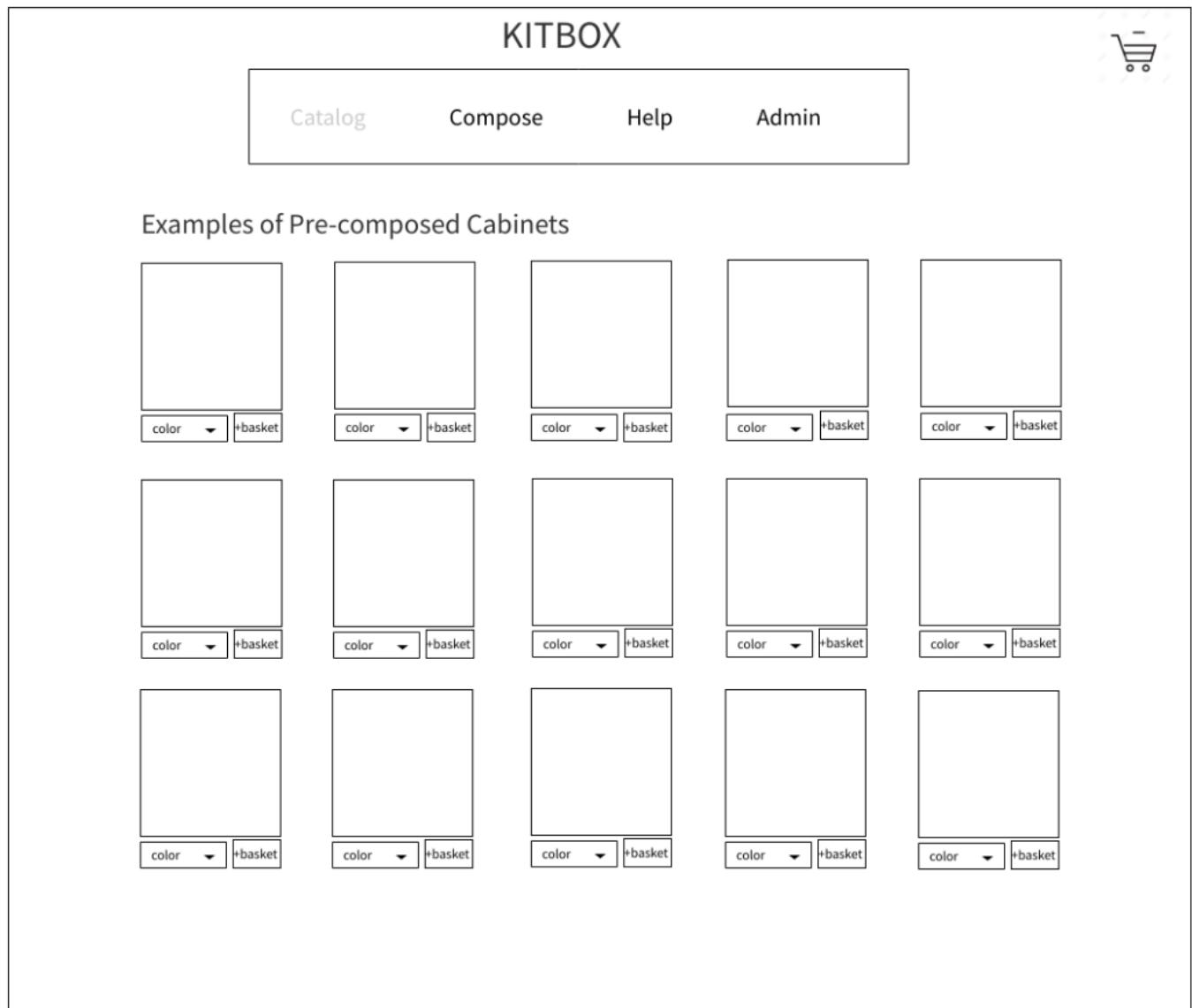
- **Stock Discrepancy:** If a discrepancy is noticed between the physical stock and the system records, a physical inventory check is initiated to rectify the difference.

6) Approve deliveries

- 1. Case Name: Approve deliveries**
- 2. Actor(s):**
 - Actor: Stock manager
- 3. Objectives:**
 - Ensure that all supplier deliveries are accurately recorded in the system.
 - Maintain an accurate and up-to-date inventory of stored items.
- 4. Preconditions:**
 - The stock manager is authenticated and has access to the system.
 - An order has been placed and is ready to be received.
- 5. Outcome:**
 - All items from the order are accurately updated in the stock.
 - In case of deficiencies in the delivery, the system notifies the stock manager of missing items.
- 6. Case Limitations:**
 - The use case assumes that all orders to be received are correctly recorded in the system before reception.
- 7. Flow: Steps Followed by the Normal Process:**
 1. The stock manager identifies the order to be received.
 2. They scan all items in the order.
 3. If all items are present, the stock is updated with the correct quantities.
 4. If some items are missing, the stock is updated with the present items, and a notification is generated for the missing items.
- 8. Alternative Flow:**
If the stock manager encounters issues with scanning items, an error-handling process is triggered to resolve the problem.

4. User Interfaces:

4.1 Catalog



4.2 Compose

KITBOX

[Catalog](#) [Compose](#) [Help](#) [Admin](#)



Cabinets



color +basket

color +basket

color +basket

color +basket

color +basket

Compose your Cabinet

Number of boxes:

Choose the dimensions of your lockers

Do you want doors in your cabinet ?

Boxe 1:

with door without door

Choose the color of your panels

Choose the color of the angle irons

Choose the height your lockers

Choose the color of your doors

Boxe 2

with door without door

Choose the color of your panels

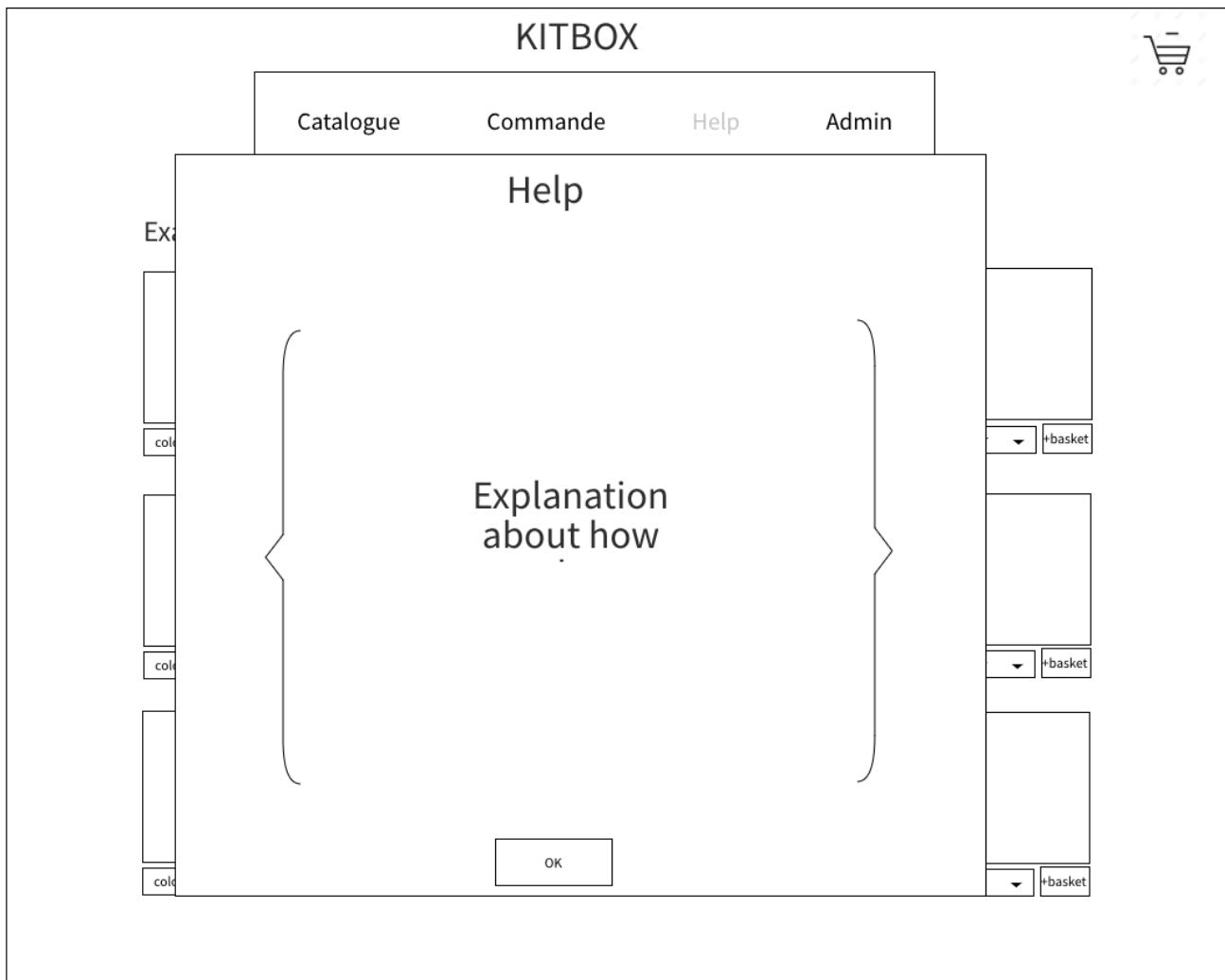
Choose the color of the angle irons

Choose the height your lockers

Choose the color of your doors

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4.3 Help



4.4 Admin connection

KITBOX

Catalogue Commande Help Admin

Cabinets

Admin connection

User

Password

Compose your cabinet

Number of boxes : 2

Choose the dimensions of your cabinet

Do you want doors in your composition?

Boxe 1:

with door

without door

Connect

Choose the color of your panels

Choose the color of the angle irons

Choose the height your lockers

Choose the color of your doors

Choose the color of your panels

Choose the color of the angle irons

Choose the height your lockers

Choose the color of your doors

add your composition to the basket

KITBOX

Stock of all Items :

Stock of all Items :

Ref	Stock	Description	Price Supplier 1	Price Supplier 2	Price Supplier 3	State	Stock Commanded
23010	10	Panels 40x40 white	10€	8€	9.5€	Not commanded	/
23011	20	Panels 40x20 blue	12€	7€	10€	Not commanded	/
23012	12	Panels 40x10 black	12€	9	10€	Commanded	8
23014	14	Panels 40x10 black	12€	9.5€	10€	Not commanded	/
23016	18	Panels 40x10 black	12€	10€	10€	Commanded	5
23019	11	Panels 40x10 black	12€	8.5€	10€	Not commanded	/
23019	15	Panels 40x10 black	12€	11€	10€	Not commanded	/
23020	18	Panels 40x10 black	10€	12€	10€	Not commanded	/
23021	10	Panels 40x10 black	15€	7€	10€	Not commanded	/
23022	6	Panels 40x10 black	13€	9€	10€	Not commanded	/
23023	1	Panels 40x10 black	12.5	10€	10€	Not commanded	/
23024	18	Panels 40x10 black	13.5	10.5€	10€	Not commanded	/

Generate the list

4.5 Secretary

4.6 Seller

KITBOX

List of commands:

Id command	Client	Amount	Stock of the command	deposit	Validate	Order closed
23010	Name	500€	OK	/	<input type="button" value="Print invoice"/>	YES
23011	Name	450€	OK	/	<input type="button" value="Print invoice"/>	YES
23012	Name	300€	OK	/	<input type="button" value="Print invoice"/>	YES
23014	Name	100€	OK	/	<input type="button" value="Print invoice"/>	YES
23016	Name	150€	OK	/	<input type="button" value="Print invoice"/>	YES
23019	Name	90€	NOT OK	50€	<input type="button" value="Print invoice"/>	NO
23020	Name	115€	OK	/	<input type="button" value="Print invoice"/>	YES
23021	Name	120€	NOT OK	50€	<input type="button" value="Print invoice"/>	NO
23022	Name	220€	OK	/	<input type="button" value="Print invoice"/>	YES
23023	Name	225€	OK	/	<input type="button" value="Print invoice"/>	YES
23024	Name	180€	OK	/	<input type="button" value="Print invoice"/>	YES
23025	Name	260€	OK	/	<input type="button" value="Print invoice"/>	YES
23026	Name	290€	OK	/	<input type="button" value="Print invoice"/>	NO

4.7 Manager

KITBOX

Items with low stock :

Ref	Stock	Description	Supplier 1	Supplier 2	Supplier 3	Pass the Command	
23010	7	Panels 40x40 white	11.5€ -10 days	15€ - 1 week	14€ - 2 weeks	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>
23011	6	Panels 40x20 blue	10.5€ -10 days	15€ - 1 week	14€ - 2 weeks	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>
23012	7	Panels 40x10 black	9.5€ -10 days	15€ - 1 week	14€ - 2 weeks	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>
23014	5	Panels 40x10 black	12.5€ -10 days	15€ - 1 week	14€ - 1 week	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>
23016	4	Panels 40x10 black	11 €-10 days	15€ - 1 week	14€ - 2 weeks	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>
23019	2	Panels 40x10 black	11 €-10 days	15€ - 1 week	14€ - 2 weeks	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>

Stock of all Items :

Ref	Stock	Description	Supplier 1	Supplier 2	Supplier 3	Pass the Command	
23020	17	Panels 40x40 white	11.5€ -10 days	15€ - 1 week	14€ - 2 weeks	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>
23021	16	Panels 40x20 blue	10.5€ -10 days	15€ - 1 week	14€ - 2 week	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>
23022	17	Panels 40x10 black	9.5€ -10 days	15€ - 1 week	14€ - 2 week	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>
23024	15	Panels 40x10 black	12.5€ -10 days	15€ - 1 week	14€ - 2 week	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>
23026	24	Panels 40x10 black	11€ -10 days	15€ - 1 week	14€ - 2 week	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>
23029	12	Panels 40x10 black	11€ -10 days	15€ - 1 week	14€ - 2 week	Supplier	► <input type="button" value="QT"/> <input type="button" value="Validate"/>

4.8 Keeper

KITBOX

Stock of all Items :

Ref	Stock	Description	State	Stock in Command	Modify
23010	10	Panels 40x40 white	Not commanded	/	Modify
23011	20	Panels 40x40 blue	Not commanded	/	Modify
23012	12	Panels 40x20 black	Commanded	8	Modify
23014	14	Panels 40x10 blue	Not commanded	/	Modify
23016	18	Panels 40x10 black	Commanded	5	Modify
23019	11	Panels 40x10 black	Not commanded	/	Modify
23019	15	Panels 40x10 black	Not commanded	/	Modify
23020	18	Panels 40x10 black	Not commanded	/	Modify
23021	10	Panels 40x10 black	Not commanded	/	Modify
23022	6	Panels 40x10 black	Not commanded	/	Modify
23023	1	Panels 40x10 black	Not commanded	/	Modify
23024	18	Panels 40x10 black	Not commanded	/	Modify

Generate the list

Source list (according to APA standards) :

- StarUML. (n.d.). StarUML. Retrieved on November 17, 2022, from <https://staruml.io/>
- Morkflow (n.d.). Morkflow. Retrieved on November 17, 2022, from <https://wireframepro.mockflow.com/>