

## USE CASE DESCRIPTION

### 1. Manual Inspection Use Case:

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**Summary:** Inspect returned items

**Actors:** Mail Truck

**Precondition:** Mail truck has sent returned items

**Main Sequence:**

1. Returned Items are inspected
2. If item inspection is accepted, items are sent to refurbish products

**Alternative Sequence:**

1. Returned Items are inspected
2. If items are rejected, items are sent back to mail trucks

**Post Condition:** Returned items have been inspected

### 2. Refurbish Products Use Case:

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**Summary:** Returned Items are entered as Refurbish Products

**Actors:** Mail Truck and Amazon Financial System

**Precondition:** Items have cleared Manual Inspection

**Main Sequence:**

1. Receive results from Manual Inspection
2. If result is passed, Items are allowed to enter as Refurbished Products
3. Refund grant notification is sent to Amazon Financial System

**Alternative Sequence:**

1. Receive results from Manual Inspection
2. If items do not pass, block entrance
3. Item are returned to mail trucks

**Post Condition:** Items are labelled as refurbished products with unique barcode

### 3. New Merchandize Use Case:

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**Summary:** Supplier trucks bring new merchandise to warehouse

**Actors:** Supplier Truck, Forwarding Robot

**Precondition:** Supplier trucks send items and forwarding robot is idle

**Main Sequence:**

1. Supplier truck sends new merchandise
2. Forwarding robot pick the new merchandise, scans the barcode and send it to inventory management system

**Post Condition:** New merchandise barcode sent to inventory management system for updating main storage plan

#### 4. Update Main Storage Plan Use Case:

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**Summary:** Inventory Management System assigns location to new product according to their barcodes

**Actors:** Inventory Management System

**Precondition:** New merchandise barcode is received from a forwarding robot

**Main Sequence:**

1. Inventory Management System opens Main Storage Plan
2. Searches suitable location for barcode in Main Storage Plan
3. Assigns new barcode location in Main Storage Plan and updates storage plan
4. Inventory Management Storage sends updates map to Forwarding Robot

**Post Condition:** Inventory Management System has sent new storage plan to forwarding robot

#### 5. Deposit New Merchandise Use Case:

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**Summary:** Forwarding Robot deposits new merchandise to their assigned location in warehouse

**Actors:** Forwarding Robot

**Precondition:** Inventory Management System has sent main storage plan

**Main Sequence:**

1. Forwarding robot receives updated information storage map
2. Forwarding robot navigate through the warehouse to find location for new merchandise according to main storage plan
3. The robot deposits the item to its position

**Post Condition:** New merchandises are deposited to their position

#### 6. Order Notification Use Case:

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**Summary:** Order notification is sent from Amazon Ordering System to Inventory Management System

**Actors:** Amazon Ordering System and Inventory Management System

**Precondition:** Amazon Ordering System sends order notification to Inventory Management System

**Main Sequence:**

1. Inventory Management System receives order information from Amazon Ordering System
2. Inventory Management System search the product in inventory

3. Inventory Management System adds the product location and customer information sent by Amazon Ordering System to shipping list
  4. The system removes the item added from inventory
- Post Condition:** New shipping list is sent to forwarding robot

7. Retrieve and Pack Use Case:

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**Summary:** Forwarding robot retrieves and packs item mentioned in shipping list

**Actors:** Shipping robot and Inventory Management System

**Precondition:** Shipping list sent by inventory management system

**Main Sequence:**

1. Forwarding robot search for shipping products in inventory and retrieves them
2. Identifies the suitable box for order and packs all order items
3. Label box with order information and customer address
4. Sends the package to mail truck loading dock
5. Send shipping notification to inventory management system

**Post Condition:** Items are packed and shipped

8. Customer Invoice Use Case:

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**Summary:** Remove shipped item from inventory information

**Actors:** Inventory Management System and Amazon Financial System

**Precondition:** Shipping notification is sent by a shipping robot

**Main Sequence:**

1. Inventory Management System receives shipping information
2. Inventory Management System sends invoice notification to Amazon Financial system
3. Amazon Financial System sends invoice to customer

**Post Condition:** Invoice sent to customer