# Inventory Module – ARM Analysis

## A – Actors

| Actor | Description |
|---|---|
| Store Employee | Walks around and checks shelves, marks missing or expired/damaged items |
| Inventory Manager | Adds new products, sets minimum thresholds, views reports |
| System | Automatically triggers alerts and manages data in-memory |

## R – Requirements

| ID | Module | Type | Description | Priority | Risk | Status |
|---|---|---|---|---|---|---|
| INV1 | Inventory | Functional | The system MUST allow adding new inventory items with full metadata (manufacturer, location, category, pricing) | High | Low | Planned |
| INV2 | Inventory | Functional | The system MUST support updating quantities of existing items | High | Low | Planned |
| INV3 | Inventory | Functional | The system MUST allow the user to view a list of all items in stock, including their | Medium | Low | Planned |

| | | | name,<br>manufacturer,<br>current quantity,<br>shelf quantity,<br>backroom quantity,<br>and category." | | | |
|------|-----------|------------|---------------------------------------------------------------------------------------------------------|--------|-------------|---------|
| INV4 | Inventory | Functional | The system MUST generate alerts when item quantity drops below its minimum threshold (item-specific) | High | Medi um | Planned |
| INV5 | Inventory | Functional | The system MUST track damaged or expired items using status fields (e.g., DAMAGED, EXPIRED). | Medium | Medi um | Planned |
| INV6 | Inventory | Functional | The system SHOULD allow registering and applying discounts by item or category and date ranges | Medium | Medi um | Planned |
| INV7 | Inventory | Functional | The system MUST support generating stock reports filtered by category and status fields (see req. 5) | high | Low | Planned |

| INV8 | Inventory | Functional | The system MUST store categories in a 3-level hierarchy (Category > Sub-category > Size) | Medium | Low | Planned |
|------|-----------|------------|------------------------------------------------------------------------------------------|--------|-----|---------|
| INV9 | Inventory | Non-Functional | All data MUST be stored in-memory and reset upon restart | High | Low | Planned |
| INV10 | Inventory | Functional | The system MUST store and allow viewing of each item's purchase price and sale price. | Medium | Low | Planned |

## Open Questions

| # | Topic | Question | Assumed Answer |
|---|-------|----------|----------------|
| 1 | Minimum Quantity | Who sets the minimum quantity per item? Is it editable? | Assume: The inventory manager inputs this manually |
| 2 | Alert Mechanism | How are alerts presented to the user? | Assume: Alerts appear in the Inventory UI |
| 3 | Damaged Items | Is employee approval needed to remove expired/damaged items from the system? | Assume: No approval needed, just mark as 'damaged/expired' |
| 4 | Report Format | In what format should inventory | Assume: Reports are table-based inside the UI |

| | | | |
|---|---|---|---|
| | | reports be presented? | |
| 5 | Discount Conflicts | If an item has both an individual and category discount, which takes precedence? | Assume: Item-specific discount overrides category-wide discount |