**Amr Salah**

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**CCAS.4.3 - Assignment 1**

**Question 1**

**Github link:**

<https://github.com/amrkhaled179/amrsalah_assignment1>

**Question 2**

**Functional Requirements:**

| **ID** | **MOSCOW** | **Requirement Description** | **Justification** |
| --- | --- | --- | --- |
| FR-MUST-01 | MUST | Store product details (name, category, price, unit, brand). | Ensure all products are cataloged and retrievable. |
| FR-MUST-02 | MUST | Maintain stock quantities for each product. | Track inventory levels and prevent stockouts. |
| FR-MUST-03 | MUST | Store supplier information. | Manage product sourcing and supplier relations. |
| FR-MUST-04 | MUST | Record each purchase transaction. | Track sales for accounting and reporting. |
| FR-MUST-05 | MUST | Store customer profiles. | Enable loyalty programs and customer tracking. |
| FR-MUST-06 | MUST | Support barcode lookup for products. | Speed checkout and ensure accuracy. |
| FR-MUST-07 | MUST | Update inventory automatically after each sale. | Maintain accurate real-time stock levels. |
| FR-MUST-08 | MUST | Record payment method for transactions. | Financial reconciliation and audits. |
| FR-MUST-09 | MUST | Handle product discounts and promotions. | Apply pricing rules consistently. |

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| FR-MUST-10 | MUST | Generate daily sales reports. | Support managerial decision-making. |
| FR-SHOULD-11 | SHOULD | Support multiple store locations. | Centralized management for chains. |
| FR-SHOULD-12 | SHOULD | Provide stock reorder alerts. | Prevent stock depletion. |
| FR-SHOULD-13 | SHOULD | Track employee access and activities. | Ensure accountability and security. |
| FR-SHOULD-14 | SHOULD | Categorize products hierarchically. | Improve organization and search. |
| FR-SHOULD-15 | SHOULD | Support digital receipts. | Reduce paper usage and improve service. |
| FR-COULD-16 | COULD | Store customer feedback. | Improve service quality. |
| FR-COULD-17 | COULD | Integrate with mobile app. | Allow customers to view discounts or order online. |
| FR-COULD-18 | COULD | Track seasonal sales trends. | Useful for promotional planning. |
| FR-WONT-19 | WONT | Handle employee payroll. | Payroll is handled by HR system. |
| FR-WONT-20 | WONT | Handle tax filing directly. | Tax managed by external accounting systems. |

**Non-Functional Requirements:**

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| **ID** | **MOSCOW** | **Requirement Description** | **Justification** |
| NFR-01 | MUST | Ensure data security. | Protect sensitive business and customer information. |
| NFR-02 | MUST | Provide backup and recovery. | Prevent data loss during system failures. |
| NFR-03 | SHOULD | Support high availability. | Maintain service during peak hours. |
| NFR-04 | MUST | Maintain data integrity. | Ensure accuracy and consistency. |
| NFR-05 | SHOULD | Scale to handle more transactions. | Allow business growth without performance loss. |