**Recycling Machine Application:**

**Functional Requirements:**

| **ID** | **Functional Requirement** | **Description** |
| --- | --- | --- |
| FR1 | Item Return Processing | Allow customers to return bottles and cans in a single session. |
| FR2 | Item Recognition | Automatically identify and record the type and quantity of returned items. |
| FR3 | Receipt Generation | Generate receipts listing deposited items, deposit values, and total refund amount upon customer request. |
| FR4 | Transaction Recording | Record each transaction accurately for reporting and audit. |
| FR5 | Daily Usage Monitoring | Allow operators to check the number of bottles and cans returned during the day. |
| FR6 | Daily Report Generation | Generate a daily report with totals of all items deposited. |
| FR7 | Configuration Management | Allow operators to modify system settings such as deposit values for items. |
| FR8 | Alarm Triggering | Detect issues (e.g., stuck item, empty receipt roll) and trigger alarms. |
| FR9 | Issue Resolution Support | Provide operator notifications and controls to resolve technical problems. |
| FR10 | Receipt Printing | Print customer receipts showing transaction details and refund amount. |

**Non-Functional Requirements:**

| **ID** | **Non-Functional Requirement** | **Description** |
| --- | --- | --- |
| NFR1 | Performance | Process item recognition and refund calculation in real-time without delay. |
| NFR2 | Reliability | Ensure accurate item counting and receipt printing; alarms must trigger reliably on faults. |
| NFR3 | Usability | User-friendly interface for customers and operators with clear instructions and feedback. |
| NFR4 | Maintainability | Easy to update deposit values and system configurations by operators. |
| NFR5 | Availability | Machine and system must be operational throughout the day with minimal downtime. |