# Functional Requirement

1.1 Asset Registration Function

Function Number: FR-01

Description: System administrators or regular users can enter the basic information of assets. After the system verifies the information, it stores the asset information in the asset data entity and generates a unique asset number.

Input: Asset name, type (asset category), status, assignee (user ID), description.

Output: A new asset record is added to the asset data entity. The system prompts that the asset registration is successful and logs the operation.

1.2 Asset Deletion Function

Function Number: FR-02

Description: System administrators can select and delete specific asset records. The system checks whether the asset has associated data and processes the relevant records according to system rules.

Input: Asset number or selected asset record in the asset list.

Output: The specified asset record is deleted from the asset data entity. Related transfer records, return records, and approval flow data are marked as invalid or synchronously deleted. The system prompts that the asset deletion is successful and logs the operation.

1.3 Asset Modification Function

Function Number: FR-03

Description: System administrators or regular users can modify the information of a specific asset. After the system verifies the information, it saves the updated information to the asset data entity.

Input: Asset number, modified asset name, type, status, assignee, description, etc.

Output: The specified asset record is updated in the asset data entity. Related data remains consistent. The system prompts that the asset modification is successful and logs the operation.

1.4 Asset List Viewing Function

Function Number: FR-04

Description: System administrators or regular users can view the current asset list in the system and use filtering, searching, or sorting functions to find specific assets.

Input: User request to load the asset list, filtering conditions (e.g., asset name, status, assignee, etc.), search conditions, sorting method.

Output: The system loads and displays the asset list, including key information such as asset number, name, type, status, and assignee. The system logs the viewing operation.

1.5 Asset Return Record Function

Function Number: FR-05

Description: Regular users or system administrators can record the return information of assets. The system updates the asset status and generates a return record.

Input: Asset number, returner (user ID), return time, return status, description.

Output: A new return record is added to the return record data entity. The asset status is updated to "returned." The system prompts that the return record operation is successful and logs the operation.

1.6 Approval Process Management Function

Function Number: FR-06

Description: System administrators or regular users can create, modify, or delete approval processes and update the status of assets or transfer records based on the approval status.

Input: Approval process number, asset number, approval type, approver (user ID), approval status, approval comments.

Output: The approval process data entity is updated or a new approval process record is added. The status of related assets or transfer records is synchronously updated. The system prompts that the approval process management operation is successful and logs the operation.

1.7 Approval History Viewing Function

Function Number: FR-07

Description: System administrators or regular users can view the historical records of a specified approval process, including detailed information for each approval step.

Input: Approval process number, filtering conditions (e.g., approver, approval time, approval status, etc.), search conditions.

Output: The system loads and displays the historical records of the approval process from the approval history data entity. The system logs the viewing operation.

1.8 Transfer Record Viewing Function

Function Number: FR-08

Description: System administrators or regular users can view the current asset transfer records in the system and use filtering, searching, or sorting functions to find specific transfer records.

Input: User request to load the transfer record list, filtering conditions (e.g., asset number, transferor, recipient, approval status, etc.), search conditions, sorting method.

Output: The system loads and displays the transfer record list, including key information such as asset number, transferor, recipient, transfer time, and approval status. The system logs the viewing operation.

1.9 Report Management Function

Function Number: FR-09

Description: System administrators can select the report type and configure the generation parameters. The system extracts relevant data based on the parameters and generates a report.

Input: Report type (e.g., asset statistics report, asset transfer report, asset return report, approval flow status report), filtering conditions (e.g., time range, asset type, assignee, etc.).

Output: The generated report content supports export in multiple formats (e.g., PDF, Excel). The system logs the report generation operation.

1.10 Authentication Information Management Function

Function Number: FR-10

Description: System administrators can create, modify, or delete user authentication information and update related user information or authentication status.

Input: User number, username, authentication method, authentication status, password hash, salt value, authentication time.

Output: The authentication information data entity is updated or a new authentication information record is added. Related user information is synchronously updated. The system logs the authentication information management operation.

1.11 Approval Notification Email Sending Function

Function Number: FR-11

Description: System administrators or regular users can send approval notification emails to the approver's email address. The system calls the email server interface to complete the email sending.

Input: Approval process number, approver's email address, email subject, email body, custom remarks or approval comments.

Output: A new email sending record is added to the email system data entity. The approval process status is updated to "notified." The system prompts that the email sending is successful and logs the operation.