# Functional Requirement

## 1.1 Asset Registration Function

Function Number: FR-01

Description: System administrators or users can register asset information. The system needs to verify user permissions and validate the completeness and format of the asset information. The registration operation will update the asset status and save the registration record.

Input: Fields such as asset name, type, status, department, purchase date, price, etc.

Output: Database record of the saved asset information, a prompt message indicating successful registration, and an optional email notification.

## 1.2 Asset Query Function

Function Number: FR-02

Description: System administrators or users can query asset information. The system needs to verify user permissions and validate the format of the query conditions. The query results are displayed in a list or table format, with support for report export.

Input: Query conditions such as asset name, type, status, department, purchase date range, etc.

Output: Query results of assets that meet the conditions, a prompt message indicating successful query, and an optional report export function.

## 1.3 Asset Transfer Function

Function Number: FR-03

Description: System administrators or users can transfer assets from the original department or user to the target department or user. The system needs to verify user permissions and validate the completeness and format of the asset transfer information.

Input: Fields such as asset number, original department/user, target department/user, reason for transfer, transfer date, etc.

Output: Database record of the updated asset information, a prompt message indicating successful transfer, and an optional email notification.

## 1.4 Asset Return Function

Function Number: FR-04

Description: System administrators or users can return borrowed assets. The system needs to verify user permissions and validate the completeness and format of the return information. The return operation will update the asset status and save the return record.

Input: Fields such as asset number, returner, return date, return status, return explanation, etc.

Output: Database record of the updated asset information, a prompt message indicating successful return, and an optional email notification.

## 1.5 Asset Disposal Function

Function Number: FR-05

Description: System administrators or users can dispose of assets. The system needs to verify user permissions and validate the completeness and format of the disposal information. The disposal operation will update the asset status and save the disposal record.

Input: Fields such as asset number, reason for disposal, disposal date, disposal status, operator, etc.

Output: Database record of the updated asset information, a prompt message indicating successful disposal, and an optional email notification.

## 1.6 User Registration Function

Function Number: FR-06

Description: Users can register as system users. The system needs to validate the completeness and format of the registration information and send a registration verification notification. The registration information will be saved to the user information database.

Input: Registration information such as username, password, email, phone number, department, position, etc.

Output: Database record of the saved user information, a prompt message indicating successful registration, and an optional email notification.

## 1.7 User Login Function

Function Number: FR-07

Description: Users or system administrators can log in to the system using their username and password. The system needs to verify the authentication information and load the user's permission configuration.

Input: Username, password, verification code (if enabled).

Output: A prompt message indicating successful user login, login log records, and an optional email notification.

## 1.8 User Information Modification Function

Function Number: FR-08

Description: Users or system administrators can modify user information. The system needs to verify the operator's permissions and validate the completeness and format of the modified information.

Input: Fields such as target user ID, username, email, phone number, department, position, permissions, etc.

Output: Database record of the updated user information, a prompt message indicating successful modification, and an optional email notification.

## 1.9 User Permission Allocation Function

Function Number: FR-09

Description: System administrators can assign permissions to users. The system needs to verify the administrator's permissions and validate the completeness and format of the allocation information.

Input: Fields such as target user ID, list of permissions, allocation description, etc.

Output: Database record of the updated permission allocation, a prompt message indicating successful allocation, and an optional email notification.

## 1.10 User Permission Revocation Function

Function Number: FR-10

Description: System administrators can revoke user permissions. The system needs to verify the administrator's permissions and validate the completeness and format of the revocation information.

Input: Fields such as target user ID, list of revocable permissions, reason for revocation, etc.

Output: Database record after permission revocation, a prompt message indicating successful revocation, and an optional email notification.

## 1.11 Approval Record Viewing Function

Function Number: FR-11

Description: System administrators or users can view approval records. The system needs to verify user permissions and validate the format of the query conditions.

Input: Fields such as approval record number, approval type, approval status, approval time range, associated asset number, etc.

Output: Query results of approval records, a prompt message indicating successful viewing, and an optional report export function.

## 1.12 Approval Process Management Function

Function Number: FR-12

Description: System administrators or users can initiate approval processes. The system needs to verify user permissions and validate the completeness and format of the approval information.

Input: Fields such as approval type, associated asset or user information, approval description, list of approvers, etc.

Output: Approval process record, database record of the updated approval status, and an optional email notification.

## 1.13 Report Generation Function

Function Number: FR-13

Description: Users or system administrators can generate reports. The system needs to verify user permissions and validate the completeness and format of the report generation parameters.

Input: Fields such as report type, data range, report format, etc.

Output: Generated report file, a prompt message indicating successful report generation, and an optional email notification.

## 1.14 Report Export Function

Function Number: FR-14

Description: Users or system administrators can export report data. The system needs to verify user permissions and validate the completeness and format of the export parameters.

Input: Fields such as report type, data range, export format, etc.

Output: Exported report file, a prompt message indicating successful export, and an optional email notification.

## 1.15 Data Import Function

Function Number: FR-15

Description: System administrators or users can import asset data. The system needs to verify user permissions and validate whether the file format and content meet the standards.

Input: Asset data file in Excel or CSV format, selected data type.

Output: Database record of the updated asset data, a prompt message indicating successful import, and an optional email notification.

## 1.16 Data Export Function

Function Number: FR-16

Description: Users or system administrators can export asset data. The system needs to verify user permissions and validate the completeness and format of the export parameters.

Input: Fields such as data type, export range, export format, etc.

Output: Exported asset data file, a prompt message indicating successful export, and an optional email notification.

## 1.17 Data Backup Function

Function Number: FR-17

Description: System administrators can perform data backup operations. The system needs to verify the administrator's permissions and validate the completeness and format of the backup parameters.

Input: Fields such as backup scope, backup storage path, backup format, etc.

Output: Storage path of the backup file, a prompt message indicating successful backup, and an optional email notification.

## 1.18 Data Recovery Function

Function Number: FR-18

Description: System administrators can perform data recovery operations. The system needs to verify the administrator's permissions and validate the completeness and format of the recovery parameters.

Input: Fields such as recovery scope, source of recovery data, target database for recovery, etc.

Output: Database records after recovery, a prompt message indicating successful recovery, and an optional email notification.

## 1.19 Asset Category Management Function

Function Number: FR-19

Description: System administrators can manage asset categories, including adding, editing, and deleting operations. The system needs to verify the administrator's permissions and validate the completeness and format of the category information.

Input: Fields such as asset category name, code, parent category, status, description, etc.

Output: Database record of the updated asset category information, a prompt message indicating successful management, and an optional email notification.

## 1.20 Approval Process Management Function

Function Number: FR-20

Description: System administrators can manage approval processes, including defining approval steps and rules.

Input: Fields such as process name, approval steps, approval rules, etc.

Output: Database record of the updated approval process information, a prompt message indicating successful management, and an optional email notification.

## 1.21 Email Notification Configuration Function

Function Number: FR-21

Description: System administrators or users can configure email notification settings. The system needs to verify the operator's permissions and validate the completeness and format of the configuration information.

Input: Fields such as notification event type, recipient's email, email template, enabled status, etc.

Output: Database record of the updated email notification configuration, a prompt message indicating successful configuration, and an optional email notification.

## 1.22 Data Import and Export Record Management Function

Function Number: FR-22

Description: System administrators or users can view records of data import and export. The system needs to verify user permissions and validate the completeness and format of the query conditions.

Input: Fields such as operation type, file name, operation time range, etc.

Output: Query results of import and export records, a prompt message indicating successful viewing, and an optional report export function.

## 1.23 Authentication Information Management Function

Function Number: FR-23

Description: System administrators or users can manage authentication information, including modifying passwords, email addresses, phone numbers, etc.

Input: Fields such as username, old password, new password, email, phone number, etc.

Output: Database record of the updated authentication information, a prompt message indicating successful modification, and an optional email notification.

## 1.24 Email Notification Management Function

Function Number: FR-24

Description: System administrators or users can view email notification records and perform related operations.

Input: Fields such as email subject, send time, recipient, email type, etc.

Output: Query results of email notifications, a prompt message indicating successful viewing, and an optional report export function.

## 1.25 Data Backup Record Management Function

Function Number: FR-25

Description: System administrators can view, search, or delete data backup records.

Input: Fields such as backup time, backup type, operator, storage path, etc.

Output: Query results of backup records, a prompt message indicating successful deletion, and an optional email notification.

## 1.26 Data Recovery Record Management Function

Function Number: FR-26

Description: System administrators can view, search, or delete data recovery records.

Input: Fields such as recovery time, recovery type, operator, storage path, etc.

Output: Query results of recovery records, a prompt message indicating successful deletion, and an optional email notification.

## 1.27 Report Template Management Function

Function Number: FR-27

Description: System administrators or users can manage report templates, including creating, editing, deleting, enabling/disabling, etc.

Input: Fields such as template name, field selection, format settings, generation rules, etc.

Output: Database record of the updated report template, a prompt message indicating successful management, and an optional email notification.