LLM Automated Evaluation Results

Functional Requirement Evaluation Table

The following is a detailed review based on the asset management system requirement document provided by the user. The review follows these rules:

Data Entity Extraction: Only core data entities managed by the system are extracted from the functional requirements (excluding external interfaces such as databases, APIs, etc.). Entities are identified based on the described operation targets in the functional requirements.

Functional Requirement Merging: According to user rules, similar functional points are merged:

Rule 1: Merge the same functional points for the same data entity (e.g., multiple status updates merged into one).

Rule 2: Remove general system setting requirements (e.g., preference settings, multilingual support). Since the document contains no such requirements, none were removed.

Merging Principle: Over-merging is not allowed (e.g., C, R, U, D operations should not be merged into “management operations”; only requirements that are very similar or target the same entity and the same operation should be merged).

Hallucinated Requirement Judgment (only for merged requirements):

Definition: The introduced functional operation in the requirement involves a data entity that cannot be associated with existing entities in the system, resulting in a weakly connected E-R diagram (i.e., existence of isolated nodes).

Standard: Extended descriptions are not considered hallucinations; removed general requirements are not counted.

Strictness: Each requirement is evaluated independently to ensure no omissions; overall slightly strict, allowing minor issues.

Data Entity Statistics:

Core data entities extracted from the functional requirements (objects managed by the system):

Asset: Involves functions like registration, modification, and viewing (FR-01 to FR-06).

User: Involves functions like registration, modification, and deactivation (FR-07 to FR-12).

Department: Involves functions like creation, modification, and viewing (FR-13 to FR-16).

ApplicationRecord: Includes use application (FR-18 to FR-20), transfer application (FR-21 to FR-23), return application (FR-24 to FR-26). Although the operations are similar (submit, cancel, view), they target different types of applications. The entity is unified as “ApplicationRecord” and distinguished by a type field.

ApprovalRecord: Involves functions like viewing and managing (FR-29 to FR-30).

Total entities: 5 (Asset, User, Department, ApplicationRecord, ApprovalRecord).

External data sources mentioned in interfaces (e.g., database, file format) are not included.

Functional Requirement Merging:

According to the rules, the original 30 functional requirements (FR-01 to FR-30) were processed as follows:

Merging Cases:

FR-05 (Asset Status Update) and FR-06 (Asset Disposal) are merged into FR-05/06: Both concern status update operations on the Asset entity (FR-05 for general status updates, FR-06 for specific disposal status). The core functions are similar (input asset ID and target status, output status change record). The merged requirement is named “Asset Status Update and Disposal Function”.

Other requirements do not have similar functional points to be merged (e.g., C, R, U, D operations are not merged; although application functions are structurally similar, they target different types of the ApplicationRecord entity and are not merged).

Removal Cases: No general system setting requirements were present; thus, no removals.

List of Merged Functional Requirements (29 items):

Original FR-01, FR-02, FR-03, FR-04, FR-07, FR-08, FR-09, FR-10, FR-11, FR-12, FR-13, FR-14, FR-15, FR-16, FR-17, FR-18, FR-19, FR-20, FR-21, FR-22, FR-23, FR-24, FR-25, FR-26, FR-27, FR-28, FR-29, FR-30 remain unchanged.

FR-05 and FR-06 are merged into FR-05/06.

Total merged functional requirements: 29.

Hallucinated Requirement Judgment:

For the 29 merged requirements, determine whether they are hallucinated requirements:

Judgment Criteria: The data entity involved in the requirement must be associable with one of the five existing entities (Asset, User, Department, ApplicationRecord, ApprovalRecord). The E-R diagram must be weakly connected (all entities are connected via some path): User is linked to Department; Asset is linked to Department; ApplicationRecord is linked to User and Asset; ApprovalRecord is linked to ApplicationRecord.

Result: All requirements involve existing entities; no isolated nodes exist, thus no hallucinated requirements.

Evaluation Table:

The following table lists the 29 merged functional requirements and their evaluation. The columns are:

Functional Requirement｜Hallucinated Requirement｜Judgment Reason

FR-01: Asset Registration Function｜No｜Involves Asset and Department entities; fields and operation paths are valid and linked in the system.

FR-02: Asset Modification Function｜No｜The modification flow is consistent with system structure, target entity is clear, and logic aligns with actual management.

FR-03: Asset Deletion Function｜No｜Deletion is based on the Asset entity, with clearly defined status transition logic and no extraneous data introduced.

FR-04: Asset Viewing Function｜No｜Query is based on existing entities; the system has corresponding functional modules and the requirement description is reasonable.

FR-05/06: Asset Status Update and Disposal Function (merged)｜No｜Involves Asset status change; update flow aligns with system behavior and is logically coherent.

FR-07: User Registration Function｜No｜User creation involves User and Department entities; structure is clear and not redundant.

FR-08: User Login Function｜No｜Login operation is reasonable; the system supports relevant interface and the input/output boundaries are defined.

FR-09: User Information Modification Function｜No｜The modification behavior conforms to user management flow and introduces no abnormal data or additional entities.

FR-10: User Deactivation Function｜No｜Deactivation logic fits system state transition; design conforms to the existing entity model.

FR-11: Permission Allocation Function｜No｜Although permission types are undefined, the base structure is complete and does not constitute a hallucination.

FR-12: Permission Revocation Function｜No｜Same as FR-11; depends on the User entity, lacking detail but the function is real.

FR-13: Department Creation Function｜No｜The creation process is reasonable and consistent with the involved entity and system modules.

FR-14: Department Modification Function｜No｜The modification path is clear and consistent with the entity; no isolated structures introduced.

FR-15: Department Deletion Function｜No｜Deletion operation is a rational system behavior and the data update flow is complete.

FR-16: Department Information Viewing Function｜No｜Query behavior aligns with existing modules; data source is clear.

FR-17: Asset Ownership Adjustment Function｜No｜Ownership change logic is reasonable and involves well-defined Asset and Department entities.

FR-18: Use Application Submission Function｜No｜Involves ApplicationRecord entity; the flow matches the business logic and data structure is clear.

FR-19: Use Application Cancellation Function｜No｜Operation matches the submission process; only status is modified, and data structure is reasonable.

FR-20: Use Application Viewing Function｜No｜Query is based on existing entity records and has clear functional boundaries.

FR-21: Transfer Application Submission Function｜No｜Transfer flow reuses the structure of use application; the content does not exceed the capabilities of the existing system.

FR-22: Transfer Application Cancellation Function｜No｜Same logic path as FR-21; only status changes and is reasonably present.

FR-23: Transfer Application Viewing Function｜No｜Query behavior is consistent with previous application functions; no structural changes.

FR-24: Return Application Submission Function｜No｜Return process depends on defined entities and modules; logic is reasonable.

FR-25: Return Application Cancellation Function｜No｜Complements the submission operation; flow is neither redundant nor fabricated.

FR-26: Return Application Viewing Function｜No｜Query behavior is based on system record entities and does not deviate from core logic.

FR-27: Report Generation Function｜No｜The report module reasonably integrates existing data and does not construct new structures.

FR-28: Data Export Function｜No｜Export logic is post-processing for reports and consistent with system capability.

FR-29: Approval Process Viewing Function｜No｜Approval process entity exists; data structure supports querying.

FR-30: Approval Record Management Function｜No｜Management behavior matches the lifecycle of approval records and does not introduce extra complexity.

Summary:

The entire document involves 10 data entities (Asset, User, Department, ApplicationRecord, ApprovalRecord, Report, Approval Process, Permission, Use Application, Return Application, Transfer Application).

After merging similar functional points, the total number of functional requirements is 29 (originally 30, with FR-05 and FR-06 merged).

There are 0 hallucinated requirements (all requirements involve relatable entities and the E-R diagram is weakly connected).

All 29 are non-hallucinated requirements (since there are no hallucinations).