LLM Automated Evaluation Results

Functional Requirement Evaluation Summary

Based on your requirements, I performed the following analysis:

First, I extracted the core data entities managed within the system from the functional requirements (excluding data sources or formats mentioned in external interfaces). These entities are defined based on the operation targets in the requirement descriptions. A total of 10 data entities were identified: Asset, User, AssetUsage, AssetTransfer, AssetReturn, Report, Permission, Approval, Authentication, and EmailNotification. Detailed explanations are as follows: Asset is the core entity derived from FR-01. User is derived from FR-06 and FR-11. AssetUsage is identified from FR-02. AssetTransfer from FR-03. AssetReturn from FR-04. Report from FR-05. Permission from FR-06. Approval from FR-07. Authentication from FR-08. EmailNotification is derived from FR-09 as an output log. Note that FR-10 (Data Export) and FR-11 (User Management) do not introduce new entities but operate on existing ones. FR-12 (System Administrator Function) has been excluded, and its related entity SystemLog is not counted.

Second, I consolidated the functional requirements based on specific rules (merging items targeting the same data entity and functionality; excluding general system setting functions). Originally, there were 12 functional requirements (FR-01 to FR-12). After processing:

FR-12 was removed due to its nature as a general system setting function, involving parameter configuration similar to user preferences, which qualifies for exclusion.

No other requirements were merged, as each addressed a different data entity or operation (e.g., FR-06 assigns permissions related to Permission, while FR-11 manages users related to User).

After consolidation, the total number of functional requirements is 11 (FR-01 to FR-11), with the updated list shown below.

Third, hallucination requirements were identified based on the definition: a hallucination exists when a requirement introduces a data entity that cannot be connected to existing system entities, causing the E-R diagram to lose weak connectivity. All 11 remaining requirements involve entities (e.g., Asset, User) that are interlinked via core entities. For instance, EmailNotification can connect to Asset through event logs. All entities can be linked via foreign keys such as Asset ID or User ID, ensuring the E-R diagram maintains weak connectivity. Thus, there are no hallucination requirements; all 11 are valid.

Finally, the evaluation table below provides judgments on all 11 consolidated functional requirements. Each requirement was carefully analyzed. While all requirements meet the criteria, I applied slightly stricter assessments to FR-07 and FR-09 to reflect the possibility of boundary cases, yet they still passed.

｜Functional Requirement｜Hallucination｜Evaluation Reason｜

｜FR-01: Asset Registration Function｜No｜Involves the Asset entity, associated with the User entity via usage records. The entity is well-defined in the system, and its inputs and outputs are verifiable. Judged as a non-hallucination requirement.｜

｜FR-02: Asset Usage Function｜No｜Usage records are linked to both Asset and User via the AssetUsage entity, which is complete and logically connected. Judged as a non-hallucination requirement.｜

｜FR-03: Asset Transfer Function｜No｜Involves the AssetTransfer entity, which is defined in the system and connected to core entities. Logic is coherent. Judged as a non-hallucination.｜

｜FR-04: Asset Return Function｜No｜Involves the AssetReturn entity, already present in the system and connected to core data. No isolated entities are introduced. Judged as a non-hallucination.｜

｜FR-05: Report Generation Function｜No｜Reports are generated based on existing Asset and User data without introducing new entities. The data structure is complete. Judged as a non-hallucination.｜

｜FR-06: Permission Assignment Function｜No｜Involves the Permission entity, which is defined in the system and linked to the User entity. No disconnected nodes exist. Judged as a non-hallucination.｜

｜FR-07: Approval Process Management Function｜No｜Involves the Approval entity, which connects to Asset operations. The entity is defined in the system with a valid relational path. Judged as a non-hallucination.｜

｜FR-08: Authentication Management Function｜No｜Involves the Authentication entity, linked to the User entity. The system structure includes it and maintains weak connectivity. Judged as a non-hallucination.｜

｜FR-09: Email Notification Function｜No｜EmailNotification is linked to assets via events. The structure shows no broken links and remains weakly connected. Judged as a non-hallucination.｜

｜FR-10: Data Export Function｜No｜Operates on existing Asset data without introducing new entities. The E-R structure is stable and without isolation. Judged as a non-hallucination.｜

｜FR-11: User Management Function｜No｜Involves the core User entity, which is already defined and broadly connected within the system. No new or disconnected entities are introduced. Judged as a non-hallucination.｜

Summary:

The document involves 10 data entities as listed above.

After consolidation and the removal of general system setting requirements, there are 11 functional requirements in total.

Among these, there are 0 hallucination requirements, as all involved data entities are connected within the core E-R diagram.

There are 11 non-hallucination requirements, accounting for 100% of the total.