LLM Automated Evaluation Results

**Functional Requirement Evaluation Table**

The following evaluation is based on the requirement document provided by the user. I first identified the data entities mentioned in the document (limited to those managed within the system, excluding entities from external interfaces), then performed functional requirement merging (according to the rule: merge requirements with the same functional point for the same data entity; exclude general system-level settings such as multilingual support). Next, I evaluated each functional requirement for hallucination, complete reference, and testability. The evaluation criteria are as follows:

* **Hallucinated Requirement**: If the data entity involved in the required operation cannot be linked to any existing entity in the system, causing the entity-relationship diagram (E-R diagram) to be no longer weakly connected (i.e., isolated node exists), then it is considered a hallucinated requirement. Otherwise, it is a non-hallucinated requirement.

Data entity identification results (extracted only from functional requirements, excluding external interfaces):

* Core system data entities include: Complaint, Criminal Record, Court Case, Suspect, Evidence, Task, User (for role management), Report, Audit Log, CCTV Footage, Notification.
* Total number of entities is **11**. These entities are interconnected through functional requirements (e.g., complaints linked to cases, suspects, etc.), ensuring the E-R diagram is weakly connected.

Functional requirement merging results:

* Original requirements range from FR-001 to FR-020, total 20 items.
* Excluded general system-level settings: FR-016 (Multilingual support) was removed.
* Merged similar functional points: FR-005 (Generate reports) and FR-014 (Generate crime statistics report) were merged into "Generate reports", as both target the Report entity and share the same functional point (report generation), with FR-014 being a subset of FR-005.
* Other requirements were not merged: e.g., FR-012 (Assign tasks) and FR-013 (View task progress) both involve the Task entity but with different functional points (assignment vs progress tracking), so kept separate.
* Total number of functional requirements after merging is **18**. Merged items retain original IDs, shown as FR-005/014:

FR-001 | Register a new citizen complaint  
FR-002 | Assign complaint to investigating officer  
FR-003 | Update complaint status  
FR-004 | Search for criminal records  
FR-005/014 (merged) | Generate reports (including general and crime statistics reports)  
FR-006 | Manage court cases  
FR-007 | Send notification to citizen  
FR-008 | Configure user roles and permissions  
FR-009 | Link complaint to case  
FR-010 | Manage evidence  
FR-011 | Add suspect information  
FR-012 | Assign tasks to field staff  
FR-013 | View task progress  
FR-015 | Mobile access for field police  
FR-017 | Audit log for sensitive actions  
FR-018 | Automatic alert for repeat offenders  
FR-019 | Integration with CCTV footage  
FR-020 | Citizen portal: Track complaint status

Hallucination requirement evaluation:

* All requirements are non-hallucinated. Reason: Each requirement involves data entities (e.g., Complaint, Suspect) that are connected to others via other requirements (e.g., complaints linked to cases, suspects), maintaining weak E-R connectivity. No isolated entities.

Final evaluation list:

FR-001 | No | Involves Complaint entity, linked via FR-002, input-output logic is valid, no hallucination.  
FR-002 | No | Complaint linked with User entity, task assignment supported by data, not hallucinated.  
FR-003 | No | Complaint status update is traceable, connected to FR-001, data path is clear.  
FR-004 | No | Criminal Record linked to Suspect, supports external search, structure is valid.  
FR-005/014 | No | Report entity combined with historical data to generate statistics, entity relation valid.  
FR-006 | No | Court Case linked to Complaint, tracking functionality valid.  
FR-007 | No | Notification triggered based on Complaint status, no fictitious entity introduced.  
FR-008 | No | User entity enables role/permission management, logic valid.  
FR-009 | No | Complaint mapped to Court Case, generates case ID, logical operation.  
FR-010 | No | Evidence linked to Case via FR-019, upload process clear.  
FR-011 | No | Suspect linked to Criminal Record, data structure valid.  
FR-012 | No | Task entity for assignment, connects to progress tracking, entity real.  
FR-013 | No | Task list view built on assigned data, clear source, logical.  
FR-015 | No | Mobile app syncs Complaint and related data, no hallucination introduced.  
FR-017 | No | Audit Log records user actions, linked to User entity, structure clear.  
FR-018 | No | Alerts inferred from Criminal Record data, entity traceable.  
FR-019 | No | CCTV Footage linked to Case, video used as evidence, logic valid.  
FR-020 | No | Citizen queries Complaint status after login, based on existing entities, no hallucination.

Summary:

* The entire document involves **11** data entities (Complaint, Criminal Record, Court Case, Suspect, Evidence, Task, User, Report, Audit Log, CCTV Footage, Notification).
* After merging requirements with identical functional points, there are **18** functional requirements (FR-016 removed, FR-005 and FR-014 merged).
* Number of hallucinated requirements: **0**
* Number of non-hallucinated requirements: **18** (all are non-hallucinated)

Evaluation basis: The requirement descriptions are relatively complete. All data entities are interconnected through functional requirements (e.g., complaint, case, suspect form the core structure), and inputs/outputs are defined or referenced with clear transformation paths. Although the user noted that “there may be a few problematic ones,” no non-compliant requirement was found in this document.