LLM Automated Evaluation Results  
The following is a step-by-step analysis based on the user query. First, based on the provided system functional requirements document, I extracted data entities and merged functional requirements (following the rule of merging requirements with the same functional point for the same data entity, avoiding over-merging, and excluding general system configuration requirements). Then, I evaluated each merged functional requirement to determine whether it is a hallucinated requirement (judged based on entity-relationship connectivity). The evaluation applied a slightly strict standard, and each requirement was analyzed independently.

**Data Entity Statistics**

Extracted data entities from the functional requirements document (only core internal data objects managed by the system are counted, excluding external interfaces such as hardware, software, or protocols). Entities are independent and mutually exclusive, mainly based on the operational objects described in the requirements:

* **Email**: Involves sending, receiving, searching, formatting, archiving, etc. (FR-001, FR-002, FR-003, FR-005, FR-011, FR-012, FR-013)
* **Folder**: For organizing emails (FR-004)
* **Contact**: For contact management (FR-006)
* **Distribution Group**: For group management (FR-007)
* **Event**: For meeting scheduling (FR-008)
* **Task**: For reminders (FR-009)
* **User Account**: For account management (FR-010)
* **Audit Log**: For audit tracking (FR-016)
* Notes: FR-014 and FR-015 involve system data backup and recovery, but "System Data" is not considered an independent entity—it is an aggregate operation over existing entities such as Email and Contact. "Archive" in FR-011, FR-012, and FR-013 is considered a derived state of Email (archived emails), not a separate entity.

**Total number of data entities mentioned in the document: 8 (Email, Folder, Contact, Distribution Group, Event, Task, User Account, Audit Log)**

**Functional Requirement Merging Statistics**

According to the rules, functional requirements with the same functional point on the same data entity were merged (e.g., FR-011, FR-012, FR-013 are all about Email archiving, merged into "Archiving and Recovery for Emails"; FR-014 and FR-015 are about system data operations, merged into "Backup and Restore System Data"). Merging was only done when the functions were highly similar, ensuring core functions remained clear. General requirements like preferences were excluded; the document contains none.

* **Original number of requirements**: 16 (FR-001 to FR-016)
* **Merged functional requirements list** (13 total):
  1. **Send Email** (FR-001): not merged, standalone function
  2. **Receive Email** (FR-002): not merged, standalone function
  3. **Search Emails** (FR-003): not merged, standalone function
  4. **Organize Emails into Folders** (FR-004): not merged, standalone function
  5. **Format Emails** (FR-005): not merged, standalone function
  6. **Create Contacts** (FR-006): not merged, standalone function
  7. **Manage Distribution Groups** (FR-007): not merged, standalone function
  8. **Schedule Meetings/Events** (FR-008): not merged, standalone function
  9. **Set Task Reminders** (FR-009): not merged, standalone function
  10. **Create Email Accounts (Admin)** (FR-010): not merged, standalone function
  11. **Archiving and Recovery for Emails** (merged FR-011, FR-012, FR-013): email archiving and recovery
  12. **Backup and Restore System Data** (merged FR-014, FR-015): system data backup and restore
  13. **Audit Logs** (FR-016): not merged, standalone function

**Total functional requirements after merging: 13**

**Hallucinated Requirement Evaluation**

* **Evaluation criteria**: A requirement is considered a hallucinated requirement if its involved data entity cannot be connected to any existing system entity (i.e., resulting in a non-weakly connected E-R diagram with isolated nodes). General requirements were excluded.
* **Evaluation result**: All 13 requirements are **not hallucinated**. Each functional requirement involves entities (e.g., Email, Contact) that are either directly or indirectly connected to core entities (e.g., User Account or Email), ensuring the E-R diagram remains weakly connected. For instance, "Schedule Meetings/Events" involves the Event entity, which is connected via participants (Contact or User Account).
* **Detailed reasoning**:
  + Core system entities include Email and User Account. Other entities like Contact, Distribution Group, and Event are connected via operations such as sending emails or managing accounts.
  + No requirement introduces unrelated entities (e.g., “Product Catalog”), and all functions revolve around the core email system.

**Functional Requirements Evaluation Table**

| Functional Requirement | Hallucination | Justification |

|------------------------|---------------|---------------|

Send Email | No | The Email entity is connected to the core system; the operation path is clear and the sending logic is reasonable.  
Receive Email | No | Receiving is based on IMAP/POP3; entity relationships are clear and the process is realistic.  
Search Emails | No | Query based on email attributes; search logic is consistent with the data structure.  
Organize Emails into Folders | No | Relationship between emails and folders is reasonable; behavior is valid.  
Format Emails | No | Formatting is a sub-operation of sending; entity exists and the logic is sound.  
Create Contacts | No | The Contact entity is linked via sending; input/output paths are clear.  
Manage Distribution Groups | No | Group entity is associated with bulk sending; management logic is valid.  
Schedule Meetings/Events | No | Event entity exists but lacks defined output mechanism; flow is partially incomplete.  
Set Task Reminders | No | Task entity exists but reminder mechanism is undefined; output logic is not sound.  
Create Email Accounts (Admin) | No | User Account entity is clearly connected; creation behavior is valid.  
Archiving and Recovery for Emails | No | Archive/recovery flow is clear; state transitions are logical.  
Backup and Restore System Data | No | System data operations are aggregative; I/O flow is complete; entities are related.  
Audit Logs | No | Audit log entity is linked to user behavior; logging mechanism is clear and functional.

**Summary**

* **Total data entities involved**: 8 (Email, Folder, Contact, Distribution Group, Event, Task, User Account, Audit Log)
* **Total functional requirements after merging**: 13
* **Hallucinated requirements**: 0 (no entity is disconnected; no weak connection issue)
* **Non-hallucinated requirements**: 13 (all requirements are valid)

The evaluation followed a slightly strict standard: all requirements meet the criteria.