LLM Automated Evaluation Results

**Functional Requirement Evaluation Table**

Based on the requirement document and evaluation criteria provided by the user, I first conducted data entity statistics and functional requirement consolidation. The detailed steps and results are as follows:

**Data Entity Statistics**

Data entities managed internally by the system were extracted from the functional requirements document (external interfaces such as data sources and formats are excluded). Data entities are core objects that the system needs to store and manage:

* **User Account Entity**: Covers user registration, login, and admin account (creating and managing admin accounts is considered a subtype of user account).
* **Starting Point Entity**: Defined by creating and managing starting points.
* **Destination Entity**: Defined by creating and managing destinations.
* **User Preference Entity**: Defined by setting user preferences and recording them (preference setting is a core function, not a general setting).
* **Traffic Condition Entity**: Defined by real-time traffic updates and records.
* **Timetable Entity**: Defined through timetable queries.
* **Point of Interest Entity**: Defined through exploring points of interest.

**Result: The document involves 7 data entities.**

**Functional Requirement Consolidation**

Requirements were merged according to the following rules:

* **Rule 1**: Merge the same functional point for the same data entity (e.g., create and manage operations merged into a single management function).
* **Rule 2**: Exclude general system setting requirements (e.g., multilingual support), though no such requirement exists here; preference settings are application-specific and thus retained.
* **Merge Details**:
  + Create Starting Point + Manage Starting Point → Merged as “Manage Starting Point” (supports create, update, delete).
  + Create Destination + Manage Destination → Merged as “Manage Destination” (supports create, update, delete).
  + Set User Preferences + Preference Records → Merged as “Manage User Preferences” (setting and recording are continuous operations).
  + Real-Time Traffic Updates + Traffic Status Records → Merged as “Manage Real-Time Traffic Conditions” (updates and records are continuous).
  + Other requirements differ in operation or target entity and are not merged (e.g., user registration and login are distinct operations).
* There were originally 17 functional requirements; after merging, 13 remain.

**List of Merged Functional Requirements (13 items):**

1. User Registration
2. User Login
3. Manage Starting Point
4. Manage Destination
5. Route Planning
6. Select Transportation Mode
7. Distance Query
8. Calculate Travel Time
9. Manage User Preferences
10. Manage Real-Time Traffic Conditions
11. Query Timetable
12. Explore Points of Interest
13. Create and Manage Admin Accounts

**Hallucination Requirement Judgment**

* **Judgment Criteria**: A hallucinated requirement refers to a function involving a data entity that cannot be associated with any existing entity, resulting in a non-weakly connected E-R diagram (i.e., entities have no connecting path). In this system’s E-R structure: user accounts are connected to user preferences and locations (starting point/destination); locations link to route-related functions; traffic conditions and timetables connect to route planning; points of interest are independent but can be queried through location or user. All entities are path-connected (e.g., user account → preference → transport mode → route → location → POI), ensuring weak connectivity.
* **Evaluation**: All functional points involve existing entities; no hallucinated requirements. Even under stricter criteria, all items are non-hallucinated (based on entity connectivity).

**Final Evaluation List**

Each merged functional requirement is evaluated below. Every item is assessed to ensure nothing is missed:

User Registration｜No｜Involves user account entity, clearly defined input/output, closed-loop operation, no hallucinated content.

User Login｜No｜User account entity already exists, verification process is clear, function is real.

Manage Starting Point｜No｜Starting point entity is valid, data entry and management operations are clear.

Manage Destination｜No｜Destination entity exists, data processing operations are well defined and logical.

Route Planning｜No｜Starting and destination entities exist, though recommendation relies on external map APIs.

Select Transportation Mode｜No｜User preference entity exists, user selections are stored properly, structure is valid.

Distance Query｜No｜Calculates distance based on starting and destination points, entities exist, function is real.

Calculate Travel Time｜No｜Entities exist, but function depends on real-time traffic data, external uncertainty exists.

Manage User Preferences｜No｜User preference entity exists, setting and storage functions are clear, structure is effective.

Manage Real-Time Traffic Conditions｜No｜Traffic condition entity exists, but depends on external data sources.

Query Timetable｜No｜Timetable entity exists, query function is logical, but relies on external interface.

Explore Points of Interest｜No｜POI entity exists, search function is built on real data structure.

Create and Manage Admin Accounts｜No｜Admin account is a subtype of user account, functional entity is real, operation is clear.

**Summary**

* **The entire document involves 7 data entities**: user account, starting point, destination, user preference, traffic condition, timetable, point of interest.
* **After merging identical functional points, there are 13 functional requirements.**
* **Number of hallucinated requirements: 0** (all requirements involve existing entities, E-R diagram is weakly connected).
* **Number of non-hallucinated requirements: 13** (all are non-hallucinated).