LLM Automated Evaluation Results

**Functional Requirements Evaluation Table**

Based on the user's request, I first analyzed the provided requirements document. The evaluation process is as follows:

1. **Data Entity Statistics**:  
   From the functional requirements and external interface descriptions, 11 internal system-managed data entities were identified (excluding external data sources and formats):  
   Customer, Product, Product Category, Inventory, Shopping Cart, Order, Payment, Contact Information, Plugin, PluginConfiguration, Administrator.  
   All these entities are explicitly referenced in the functional requirements.
2. **Functional Requirement Consolidation**:  
   According to the user’s rules, identical functional points on the same data entity were merged (e.g., multiple create/update/delete operations were merged into a single "management" function), and general system configuration requirements were excluded (none found in the document).  
   After merging the original 30 functional requirements, 20 consolidated functional requirements remained.  
   The consolidation was strictly conducted: only highly similar functions on the same entity (e.g., CRUD operations) were merged to preserve clarity.

For example:

* + FR-06, FR-07, FR-08, FR-23 (all about Shopping Cart) → merged into "Shopping Cart Management"
  + FR-13, FR-14, FR-15 (all about Product Category) → merged into "Product Category Management"
  + FR-19, FR-20, FR-21, FR-24, FR-29 (Plugin installation, configuration, uninstallation) → merged into "Plugin Management"
  + FR-22 and FR-30 (Admin order confirmation actions) → merged into "Manage Order Confirmation"

1. **Hallucinated Requirement Judgment**:
   * Evaluation Criterion: A hallucinated requirement is one that introduces a data entity not connected to any existing entity in the system, breaking the weak connectivity of the E-R diagram (i.e., creating an isolated node).
   * Analysis: The 11 system entities are all connected through core functions (e.g., Customer links to Order, Order links to Product, Product links to Category and Inventory).  
     Even Plugin and Administrator are linked to core entities via admin operations.
   * Therefore, all 20 requirements are determined to be non-hallucinated.

The full evaluation table is as follows (each requirement is evaluated independently):

Functional Requirement | Hallucinated | Evaluation Reason  
Customer Registration (FR-01) | No | Involves Customer entity, connected to Order; input/output defined in FR-01 and Email Notification interface.  
Customer Login (FR-02) | No | Involves Customer; login session logic is defined in FR-02.  
Customer Logout (FR-03) | No | Involves Customer; logout mechanism is clear.  
Product Browsing (FR-04) | No | Involves Product entity, connected to Category; display process is clear.  
Product Search (FR-05) | No | Involves Product; search mechanism is well defined.  
Shopping Cart Management (FR-06,07,08,23) | No | Involves Shopping Cart entity; connected to Product and Inventory; cart operations are well defined.  
Order Placement (FR-09) | No | Involves Order, Shopping Cart, Inventory; includes payment and inventory update logic.  
Order Confirmation (FR-10) | No | Involves Order; includes confirmation and notification logic.  
Order History Viewing (FR-11) | No | Involves Order; order list generation logic is clear.  
Inventory Management (FR-12) | No | Involves Inventory; output “restocking alerts as needed” lacks definition, output is vague.  
Product Category Management (FR-13,14,15) | No | Involves Product Category; connected to Product; category management logic is complete.  
Payment Processing (FR-16) | No | Involves Payment; linked to Order; supported by external payment interface.  
Payment Information Update (FR-17) | No | Involves Payment; update mechanism is clear.  
Contact Information Management (FR-18) | No | Involves Contact Information; connected to Customer; update path is clear.  
Plugin Management (FR-19,20,21,24,29) | No | Involves Plugin and PluginConfiguration; format of setup not specified; outputs depend on external components and are vague.  
Manage Order Confirmation (FR-22,30) | No | Involves Order; status update and notification logic is clear.  
Manage Product (FR-25) | No | Involves Product, Category, Inventory; input fields not specified; output range overly broad and vague.  
Manage Order (FR-26) | No | Involves Order, Inventory; order update mechanism is reasonable.  
Manage Payment (FR-28) | No | Involves Payment, Order; modification record handling logic is clear.  
Manage Administrator (FR-27) | No | Involves Administrator; output fields unclear; actions not specific.

**Summary**

* The requirements document involves 11 data entities:  
  Customer, Product, Product Category, Inventory, Shopping Cart, Order, Payment, Contact Information, Plugin, PluginConfiguration, Administrator.
* After merging same-function items, there are 20 functional requirements.
* **Hallucinated requirements: 0** (all entities are connected in the system)
* **Non-hallucinated requirements: 20**

Evaluation Notes:

* Slightly strict criteria used, per user instruction: “some requirements are expected to have issues.”
* No hallucinated requirements found: all entities are connected through core functional paths (e.g., Plugin linked via admin actions), maintaining a weakly connected E-R diagram.