**Grocery To-Do (Shopping List) Application**

*SDLC Phase: Software Requirements Specification (SRS)*

Individual Assignment 1 – Software Development and DevOps

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**1. Purpose and Scope**  
The purpose of this Software Requirements Specification (SRS) is to define the functional and non-functional requirements for the **Grocery To-Do List Application**. This minimal shopping list system will allow users to create, read, update, and delete grocery items, with persistent storage to ensure data is not lost between sessions.

**2. Definitions and Abbreviations**

* **CRUD:** Create, Read, Update, Delete
* **Item:** A grocery list entry with attributes id, name, quantity, category, purchased.

**3. Functional Requirements (FR)**

* **FR-1 Create Item:** The system should allow creating new grocery items with attributes: name (required), quantity (default = 1), category (optional).
* **FR-2 Read Items:** The system should allow viewing all items.
* **FR-3 Filter Purchased:** Filtering items by purchased status.
* **FR-4 Read One Item:** Viewing a single item.
* **FR-5 Update Item:** Editing any subset of fields of an item.
* **FR-6 Toggle Purchased:** Change the purchased status of an item.
* **FR-7 Delete Item:** Deleting an item.

**4. Non-Functional Requirements (NFR)**

* **NFR-1 Performance:** CRUD operations should execute within 150 ms for lists of up to 100 items.
* **NFR-2 Reliability:** Data shall persist across application restarts using SQLite.
* **NFR-3 Usability:** The system shall provide a minimal interface (API + optional HTML page).
* **NFR-4 Security:** Input validation should prevent invalid data (e.g. empty names)
* **NFR-5 Maintainability:** The code should be clear and organized so future extensions or DevOps pipeline integration are possible.
* **NFR-6 Portability:** The system should run on any local machine with Python 3.