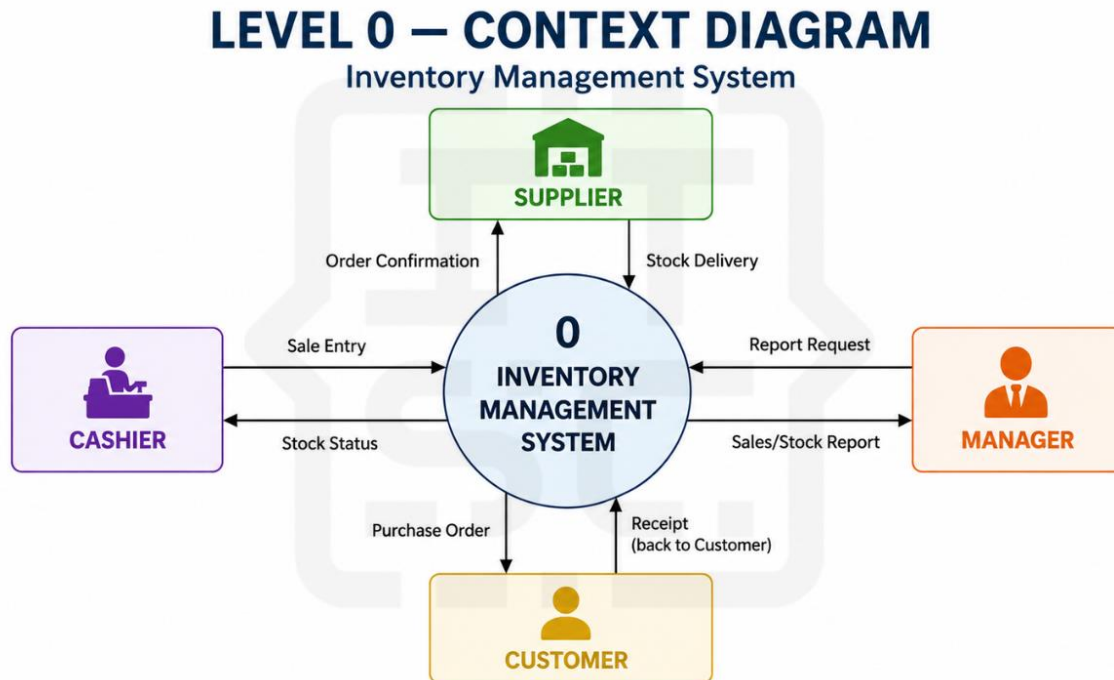


LEVEL 0 — CONTEXT DIAGRAM

Level 0, also called the Context Diagram, shows the ENTIRE system as a single process bubble. No internal detail. Just the system, the external entities, and the major data flows between them.

The point of Level 0 is to define the boundary of your system. Everything inside the bubble is what you'll build. Everything outside is what you'll interact



What's in Level 0

- One process bubble labeled "0" or "Inventory Management System"
- All 4 external entities (Supplier, Customer, Cashier, Manager)
- Labeled data flows between each entity and the system
- NO data stores at Level 0 (data stores only appear from Level 1 onwards)

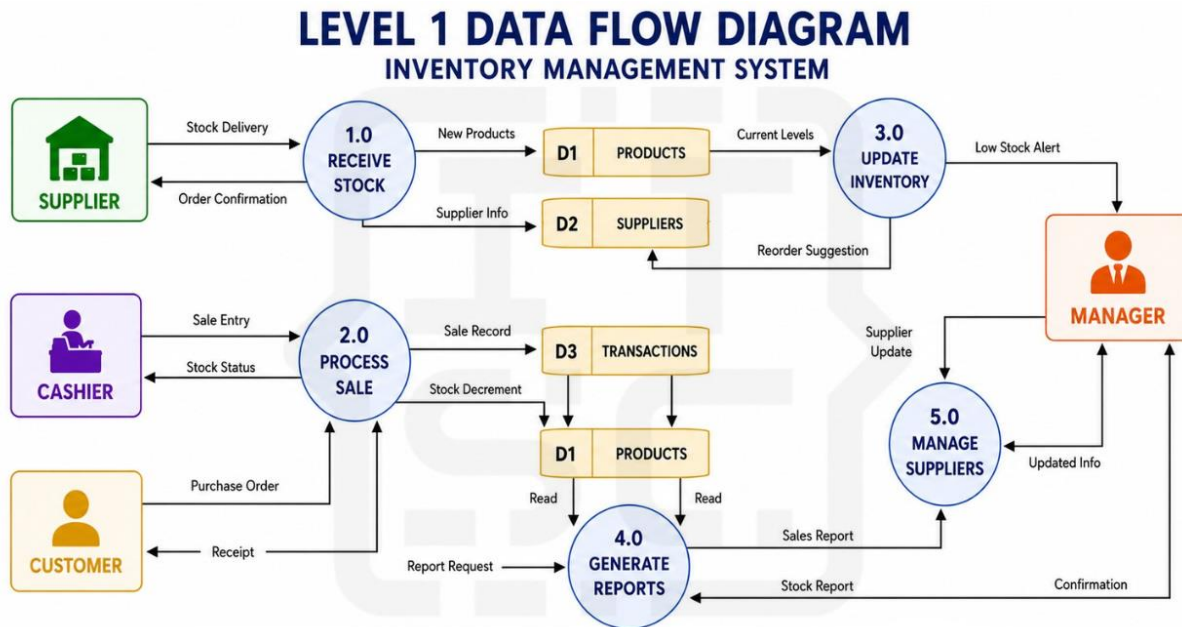
Figure 3.1 presents the Level 0 Data Flow Diagram of the proposed Inventory Management System. Four external entities interact with the system: Suppliers (who deliver stock and receive order confirmations), Customers (who place purchase orders and receive receipts), Cashiers (who record sales and view stock status), and Managers (who request reports and receive sales and stock summaries).

The Level 0 diagram establishes the system boundary and the major data exchanges with each external entity, without showing internal processes or data stores.

LEVEL 1 — MAIN PROCESSES

Level 1 takes the single Level 0 bubble and decomposes it into the main processes that make up the system. This is where data stores first appear.

For our inventory system, Level 1 shows the 5 main processes, all 3 data stores, and all the labeled data flows between processes, entities, and stores.



What's in Level 1

- 5 process bubbles (1.0 through 5.0), each labeled
- All 4 external entities from Level 0
- All 3 data stores (D1, D2, D3)
- Every data flow labeled

Process explanations

1.0 Receive Stock — Accepts incoming stock deliveries from suppliers, records new products in D1, updates supplier information in D2, and sends order confirmation back to the supplier.

2.0 Process Sale — Handles sales transactions from cashiers and customers, decrements stock in D1, records the transaction in D3, issues a receipt to the customer, and shows current stock status to the cashier.

3.0 Update Inventory — Monitors current stock levels from D1, generates low-stock alerts when items fall below threshold, and writes reorder suggestions to D2 for the supplier management process.

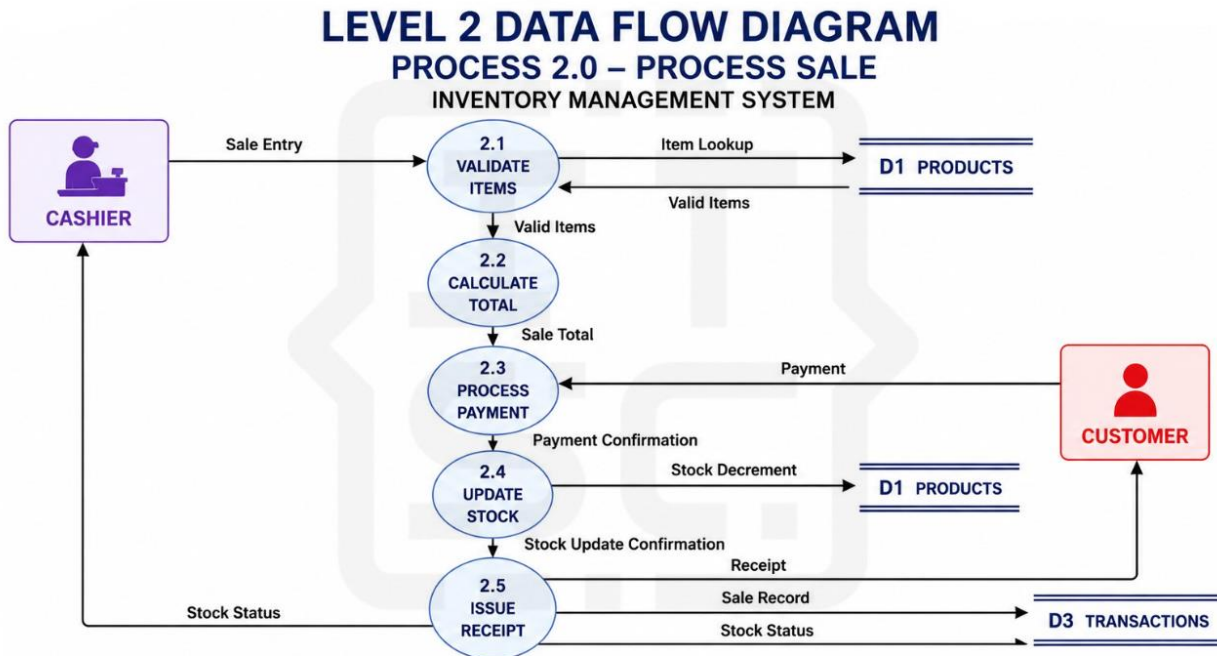
4.0 Generate Reports — Responds to manager report requests by reading from D1 (current stock) and D3 (transaction history), producing both sales reports and stock reports.

5.0 Manage Suppliers — Allows managers to add, edit, or remove supplier records in D2, with confirmation feedback.

LEVEL 2 — SUBPROCESS DECOMPOSITION

The Level 2 takes ONE Level 1 process and decomposes it further. You don't need a Level 2 diagram for every Level 1 process — only the complex ones that benefit from showing internal subprocesses.

For our system, we'll decompose Process 2.0 (Process Sale) because it has the most internal logic.



What's in Level 2

- 5 subprocess bubbles (2.1 through 2.5), numbered as children of 2.0
- The same external entities and data stores that touch Process 2.0
- Detailed internal data flows showing the sequence of operations

Subprocess explanations

2.1 Validate Items — Checks that each item the cashier entered exists in D1 Products and is in stock. Returns the validated item list with current prices.

2.2 Calculate Total — Sums up the validated item prices, applies any discounts, computes tax, and produces the final sale total.

2.3 Process Payment — Accepts payment from the customer (cash, card, GCash, etc.), validates the amount, and confirms payment.

2.4 Update Stock — Decrements the stock quantity in D1 Products for each sold item, and confirms the update.

2.5 Issue Receipt — Generates a receipt for the customer, records the complete transaction in D3 Transactions, and updates the cashier with the current stock status.

Why Level 2 matters

Without Level 2, the panel sees "Process Sale" as a single black-box bubble in Level 1. They can't tell whether you actually thought through the steps of a transaction. Level 2 shows you understand the workflow at a fine-grained level.

You don't need Level 2 for every Level 1 process. Pick the 1-2 most complex ones. For inventory, "Process Sale" is the obvious candidate. "Generate Reports" might also benefit from Level 2 if your reports are complex.