

Supermarket Automation System

Data Flow Diagrams



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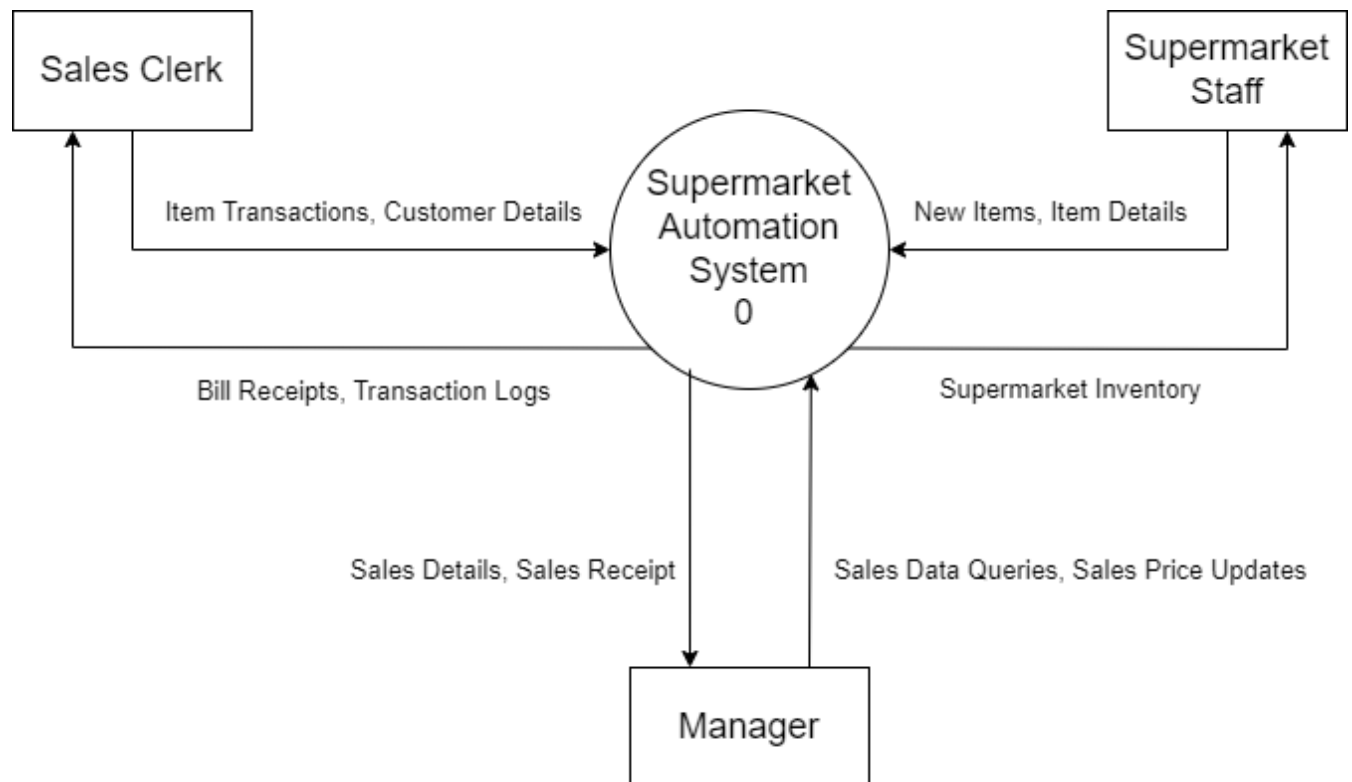
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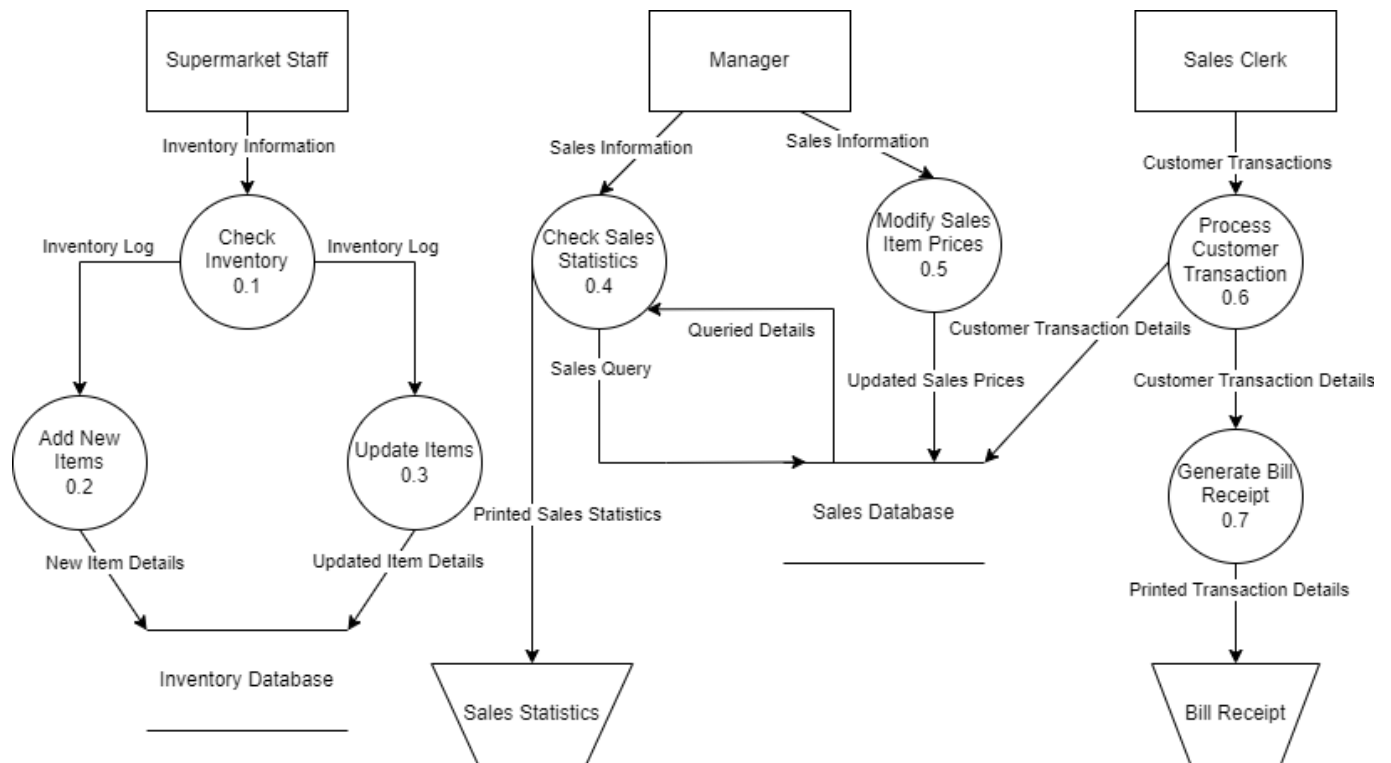
Data Flow Diagrams

A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination. Data flowcharts can range from simple, even hand-drawn process overviews, to in-depth, multi-level DFDs that dig progressively deeper into how the data is handled. They can be used to analyze an existing system or model a new one. Like all the best diagrams and charts, a DFD can often visually “say” things that would be hard to explain in words, and they work for both technical and nontechnical audiences, from developer to CEO. That’s why DFDs remain so popular after all these years. While they work well for data flow software and systems, they are less applicable nowadays to visualizing interactive, real-time or database-oriented software or systems.

Context Diagram (Level 0 DFD)



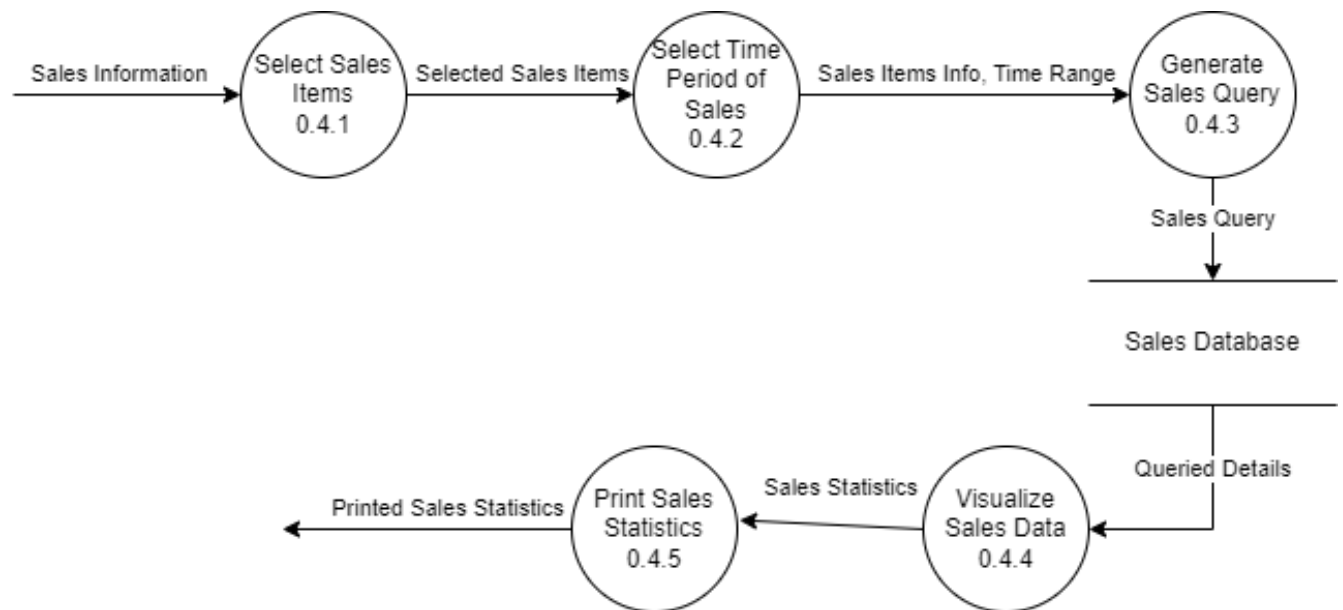
Level 1 Data Flow Diagram



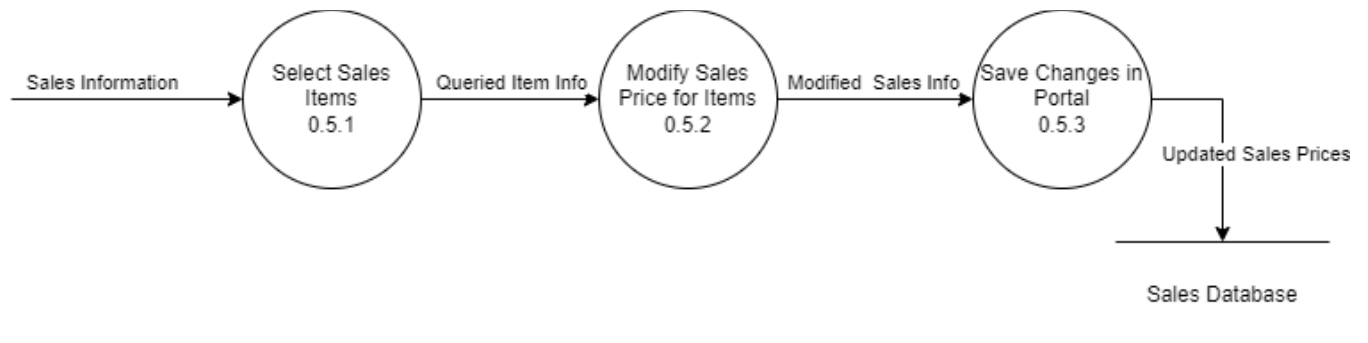
LEVEL 1 DATA FLOW DIAGRAM

Level 2 Data Flow Diagrams

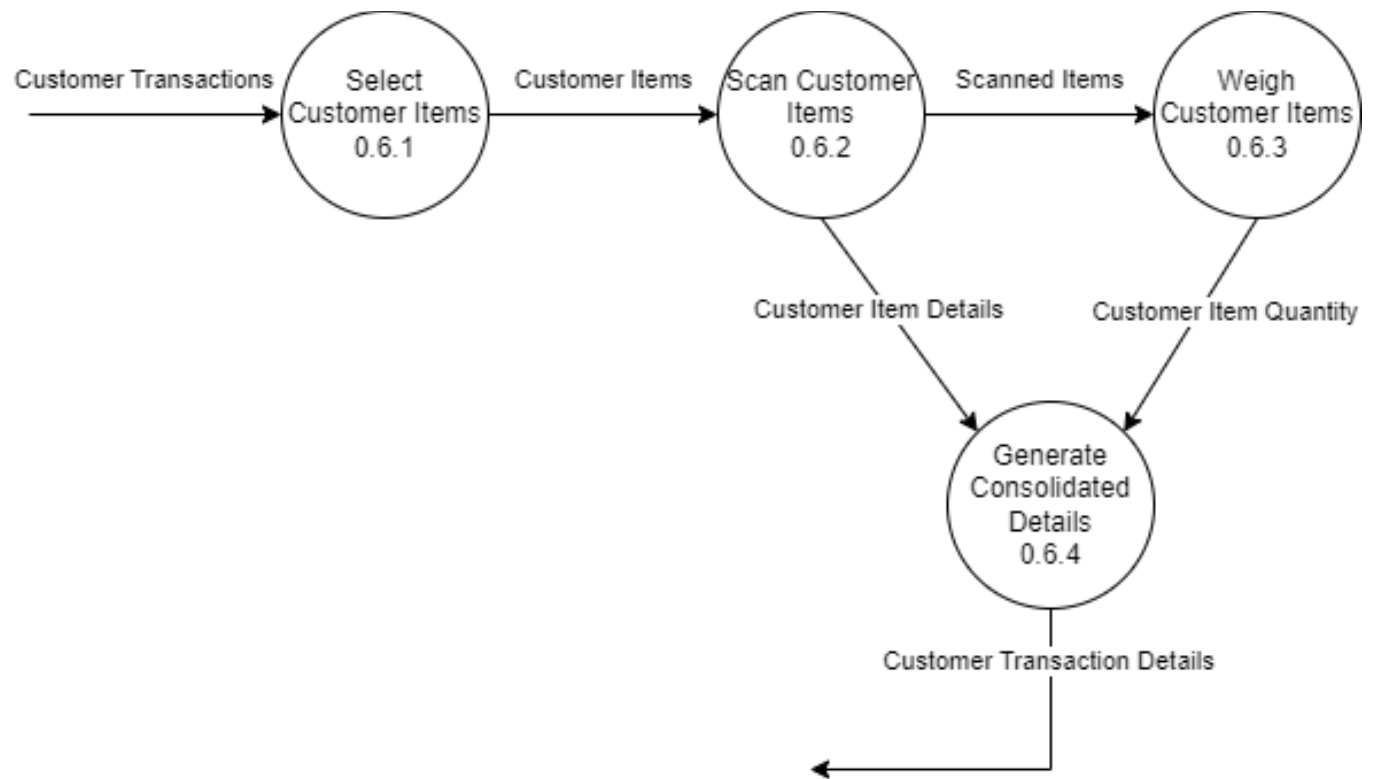
Check Sales Statistics



Modify Sales Item Prices



Process Customer Transaction



Data Dictionary

- **Inventory Information = Inventory Log:** Inventory Item Details + Inventory Item Available Quantities
- **Sales Information:** Sales Item Details + Sales Transaction Details
- **Customer Transactions:** Inventory Item ID
- **New Item Details = Updated Item Details = Inventory Item Details = Sales Item Details:** Item ID + Item Name + Manufactured Date + Item Price
- **Sales Query:** Selected Sales Items + Time Range of Sales
- **Customer Transaction Details:** Inventory Item Details + Quantity Purchased + Purchase Date
- **Sales Statistics:** Sales Information + Time Range of Sales