database\_description: "Multi-Agent Inventory Management System - PostgreSQL Database with warehouses, SKUs, inventory, and sales data"

tables:

  warehouses:

    description: "Information about warehouse locations and their geographical details"

    columns:

      - name: "warehouse\_code"

        type: "VARCHAR(10)"

        description: "Unique identifier for each warehouse"

      - name: "city"

        type: "VARCHAR(100)"

        description: "City where the warehouse is located"

      - name: "province"

        type: "VARCHAR(100)"

        description: "Province or state where the warehouse is located"

      - name: "country"

        type: "VARCHAR(100)"

        description: "Country where the warehouse is located"

      - name: "latitude"

        type: "DECIMAL(10,8)"

        description: "Geographical latitude coordinate of the warehouse"

      - name: "longitude"

        type: "DECIMAL(11,8)"

        description: "Geographical longitude coordinate of the warehouse"

      - name: "created\_at"

        type: "TIMESTAMP"

        description: "Timestamp when the record was created"

  skus:

    description: "Product catalog with SKU information"

    columns:

      - name: "sku\_id"

        type: "VARCHAR(10)"

        description: "Unique identifier for each product (Stock Keeping Unit)"

      - name: "sku\_name"

        type: "VARCHAR(200)"

        description: "Human-readable name of the product"

      - name: "created\_at"

        type: "TIMESTAMP"

        description: "Timestamp when the record was created"

  inventory:

    description: "Current inventory levels and product information across warehouses"

    columns:

      - name: "id"

        type: "SERIAL"

        description: "Auto-incrementing primary key"

      - name: "sku\_id"

        type: "VARCHAR(10)"

        description: "Foreign key reference to skus table"

      - name: "vendor\_name"

        type: "VARCHAR(200)"

        description: "Name of the vendor/supplier for this product"

      - name: "warehouse\_id"

        type: "VARCHAR(10)"

        description: "Foreign key reference to warehouses table"

      - name: "current\_inventory\_quantity"

        type: "DECIMAL(15,2)"

        description: "Current stock quantity available in the warehouse"

      - name: "cost\_per\_sku"

        type: "DECIMAL(15,2)"

        description: "Cost price per unit of the product"

      - name: "total\_value"

        type: "DECIMAL(15,2)"

        description: "Total inventory value (cost\_per\_sku \* current\_inventory\_quantity)"

      - name: "units"

        type: "VARCHAR(20)"

        description: "Unit of measurement (e.g., 'Kg', 'Nos')"

      - name: "average\_lead\_time\_days"

        type: "INTEGER"

        description: "Average number of days to restock this product"

      - name: "maximum\_lead\_time\_days"

        type: "INTEGER"

        description: "Maximum number of days to restock this product"

      - name: "unit\_price"

        type: "DECIMAL(15,2)"

        description: "Selling price per unit of the product"

      - name: "created\_at"

        type: "TIMESTAMP"

        description: "Timestamp when the record was created"

  sales:

    description: "Sales transactions and order history"

    columns:

      - name: "id"

        type: "SERIAL"

        description: "Auto-incrementing primary key"

      - name: "order\_number"

        type: "VARCHAR(50)"

        description: "Unique identifier for each sales order"

      - name: "order\_date"

        type: "DATE"

        description: "Date when the order was placed"

      - name: "sku\_id"

        type: "VARCHAR(10)"

        description: "Foreign key reference to skus table"

      - name: "warehouse\_id"

        type: "VARCHAR(10)"

        description: "Foreign key reference to warehouses table"

      - name: "customer\_type"

        type: "VARCHAR(50)"

        description: "Type of customer (e.g., 'Export', 'Wholesale', 'Distributor')"

      - name: "order\_quantity"

        type: "DECIMAL(15,2)"

        description: "Quantity of products ordered"

      - name: "unit\_sale\_price"

        type: "DECIMAL(15,2)"

        description: "Price per unit at the time of sale"

      - name: "revenue"

        type: "DECIMAL(15,2)"

        description: "Total revenue from this order (order\_quantity \* unit\_sale\_price)"

      - name: "created\_at"

        type: "TIMESTAMP"

        description: "Timestamp when the record was created"

*# Key relationships*

relationships:

  - "warehouses.warehouse\_code -> inventory.warehouse\_id"

  - "warehouses.warehouse\_code -> sales.warehouse\_id"

  - "skus.sku\_id -> inventory.sku\_id"

  - "skus.sku\_id -> sales.sku\_id"