Database Schema:

- Categories: This table stores information about product categories.
  - `category_id` (Primary Key): A unique identifier for each category.
  - `name`: The name of the category.
- Products: This table stores information about products.
  - `product_id` (Primary Key): A unique identifier for each product.
  - `name`: The name of the product.
  - `price`: The price of the product.
  - `category_id` (Foreign Key): A reference to the category to which the product belongs. This establishes a relationship between products and categories.
- Sales: This table stores information about product sales.
  - `sale_id` (Primary Key): A unique identifier for each sale.
  - `product_id` (Foreign Key): A reference to the product that was sold. This establishes a relationship between sales and products.
  - `sale_date`: The date and time of the sale.
  - quantity`: The quantity of the product sold.
- Inventory: This table stores information about the inventory of products.
  - `inventory_id` (Primary Key): A unique identifier for each inventory record.
  - `product_id` (Foreign Key): A reference to the product for which inventory is tracked. This establishes a relationship between inventory and products.
  - `stock_quantity`: The current quantity of the product in stock.
  - `low_stock_threshold`: The threshold quantity below which the stock is considered low.

Relationships:

- Categories and Products: The `category_id` column in the `Products` table serves as a foreign key referencing the `category_id` column in the `Categories` table. This relationship allows products to be associated with specific categories.
- Products and Sales: The `product_id` column in the `Sales` table serves as a foreign key referencing the `product_id` column in the `Products` table. This relationship connects each sale record to a specific product.

- Products and Inventory: The `product_id` column in the `Inventory` table serves as a foreign key referencing the `product_id` column in the `Products` table. This relationship links inventory records to specific products.

These relationships ensure data integrity and allow for queries that involve retrieving product details, sales data, and inventory status based on the relationships between these tables.