Banana Phone Estate Services Sales Management System
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Fixes based on Feedback from Step 1:

We received the following feedback and addressed it in our final schema and design decisions:

1. Clarified that items are unique and typically sold only once. Although we use an intersection table between Items and Sales, it is primarily to allow future scalability, such as bundling or quantity tracking.
2. Renamed "created_at" to "dateAdded" in the Customers table to maintain camelCase consistency.
3. Renamed the Event table to "estateSaleEvent" for clarity and specificity, as suggested in peer feedback.
4. Added "itemDate" to the Items table to allow inclusion of provenance/history for items, supporting a richer data structure.
5. Clarified the M:N relationship between Sales and Items is facilitated via the SoldItems table.
6. Updated phone number column to VARCHAR(20) to accommodate international numbers.

Overview

Banana Phone Estate Services is an estate sale company that manages roughly 100 estate-sale events per year across the Portland Metro area, each featuring on average 1,000 one-of-a-kind items (antiques, furniture, collectibles, etc.), meaning each item is sold only once. Annually the company facilitates around 100,000 item transactions, generating approximately $3 million in gross sales. Banana Phone Estate Services currently relies on manual processes and disconnected tools to manage inventory and sales, leading to data entry errors, inconsistent reporting, and time-consuming reconciliation. Without a centralized system, it's difficult to track items across events or analyze sales trends, limiting the company's ability to make informed pricing and planning decisions.

A database-driven website will let staff define each Event, catalog Items, record Customer purchases (Sales) with line items, and produce financial and inventory reports in real time.

Database Design Outline:

EstateSaleEvent: each sale-event Banana Phone runs
- **eventID:** INT, AUTO_INCREMENT, PK, NOT NULL
- **title:** VARCHAR(100), NOT NULL
- **startDate:** DATETIME, NOT NULL
- **endDate:** DATETIME, NOT NULL
- **location:** VARCHAR(200), NOT NULL
- **description:** TEXT, nullable
- **Relationships:**
    - 1:M to **Item** (an event has many items)
    - 1:M to **Sale** (all purchases happen at a given event)

Item: each unique object for sale
- **itemID**: INT, AUTO_INCREMENT, PK, NOT NULL
- **eventID**: INT, NOT NULL, FK → EstateSaleEvents(eventID)
- **name**: VARCHAR(100), NOT NULL
- **category**: VARCHAR(50), *nullable*
- **itemDate:** DATETIME, *nullable*
- **description**: TEXT, *nullable*
- **startingPrice**: DECIMAL(10,2), NOT NULL
- **status**: ENUM('Available','Sold','Held'), NOT NULL, default 'Available'
- **Relationships**:
    - M:1 to **EstateSaleEvent**
    - M:N to **Sale** (via SoldItems)

Customer: buyers at Banana Phone sales
- **customerID**: INT, AUTO_INCREMENT, PK, NOT NULL
- **firstName**: VARCHAR(50), NOT NULL
- **lastName**: VARCHAR(50), NOT NULL
- **email**: VARCHAR(100), UNIQUE, NOT NULL
- **phone**: VARCHAR(20), *nullable*
- **dateAdded**: DATETIME, NOT NULL, default CURRENT_TIMESTAMP
- **Relationships**:
    - 1:M to **Sale** (a customer can make many purchases)
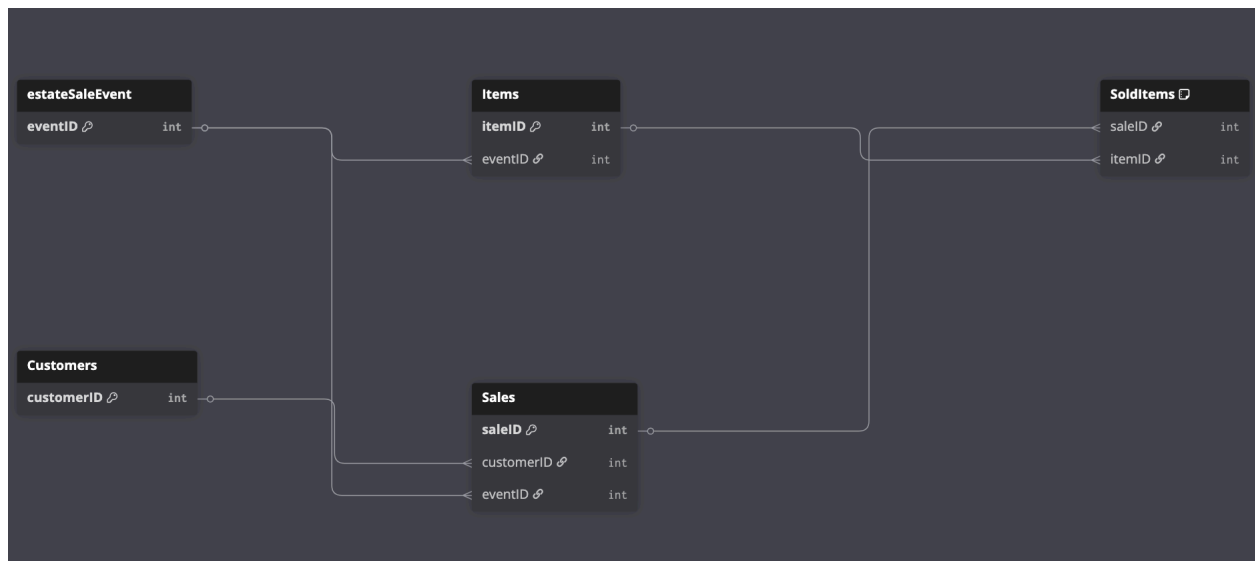
Sale: a checkout transaction at an event
- **saleID**: INT, AUTO_INCREMENT, PK, NOT NULL
- **customerID**: INT, NOT NULL, FK → Customers(customerID)
- **eventID**: INT, NOT NULL, FK → EstateSaleEvents(eventID)
- **saleDate**: DATETIME, NOT NULL

- **totalAmount**: DECIMAL(10,2), NOT NULL
- **paymentMethod**: ENUM('Cash','Credit Card','Check'), NOT NULL
- **Relationships**:
  - 1:M to **SoldItem** (each sale includes multiple unique items)
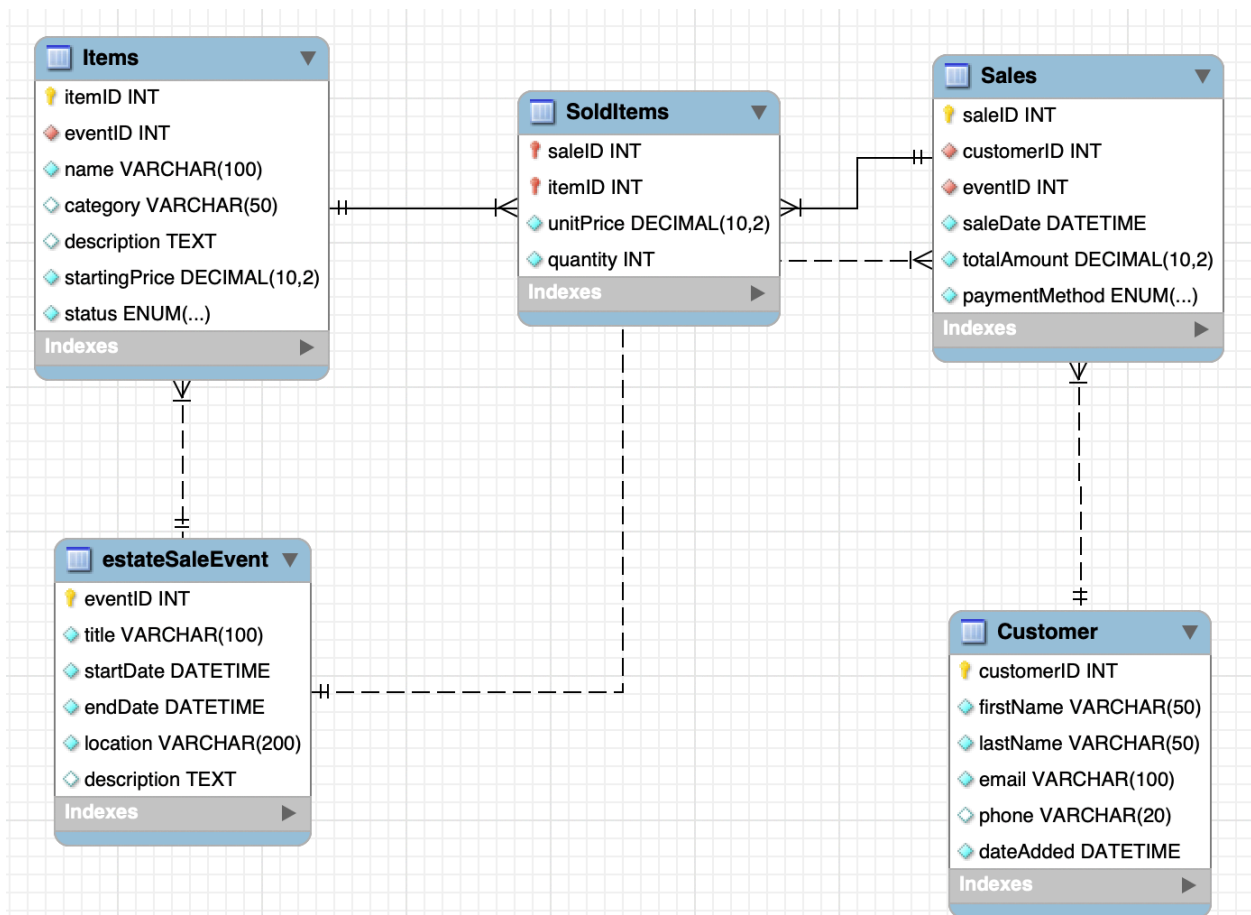
SoldItem: Line-items connecting Sales and Items

- **saleID:** INT, FK → Sales(saleID), NOT NULL
- **itemID:** INT, FK → Items(itemID), NOT NULL
- **unitPrice:** DECIMAL(10,2), NOT NULL
- **quantity:** INT, NOT NULL DEFAULT 1
- **Composite PK:** (saleID, itemID)
- **Relationships**:
  - M:1 to **Sale**
  - M:1 to **Item**

Entity-Relationship Diagram

Schema

Example Data

estateSaleEvent Table

eventID	title	startDate	endDate	location	description
1	Victorian Manor Sale	2025-08-01 09:00:00	2025-08-03 16:00:00	1234 Oak St, Portland, OR	Antiques and collectibles
2	Mid-Century Auction	2025-08-15 10:00:00	2025-08-17 15:00:00	5678 Pine Ave, Beaverton	Furniture and vintage décor

Customers Table

customerID	firstName	startDate	email	phone	dateAdded

1	Sarah	Johnson	sarah.j@email.com	503-555-0101	2025-07-20 12:00:00
2	Michael	Chen	mchen@email.com	503-555-0102	2025-07-20 12:10:00

Items Table

itemID	eventID	name	category	description	startingPrice	status
1	1	Mahogany Table	Furniture	Antique dining table	450.00	Available
2	2	Royal Doulton China	China	12-place setting	275.00	Sold
3	3	Eames Lounge Chair	Furniture	Chair and ottoman combo	1200.00	Held

Sales Table

saleID	customerID	eventID	saleDate	totalAmount	paymentMethod
1	1	1	2025-08-01 14:30:00	275.00	Credit Card
2	2	2	2025-08-15 11:45:00	85.00	Cash

SoldItems Table

saleID	itemID	eventID	unitPrice	quantity
1	2	1	275.00	1

| 2 | 3 | 2 | 85.00 | 1 |