

Relational Schema Design for RENTALS Database

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Database Schema

Database Name: RENTALS

Table: rentals

Attribute Name	Data Type	Constraints	Description
rental_id	INT	PRIMARY KEY, AUTO_INCREMENT	Unique identifier for each rental record
customer_full_name	VARCHAR(255)	NOT NULL	Full name of the customer renting the costume
costume_name	VARCHAR(255)	NOT NULL	Name of the costume being rented
rent_date	DATETIME	NOT NULL, CHECK (rent_date <= return_date OR rent_date <= CURRENT_TIMESTAMP)	Date and time when costume was rented
return_date	DATETIME	NULL, CHECK (return_date >= rent_date)	Date and time when costume was/will be returned
daily_rental_fee	DECIMAL(10,2)	NOT NULL, CHECK (daily_rental_fee > 0)	Daily fee charged for renting the costume
insertion_time	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP	Automatic timestamp when record is created
update_time	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP	Automatic timestamp when record is last updated

Schema Diagram

RENTALS (TABLE)	
🔑 rental_id	INT [PK, AUTO_INCREMENT]
customer_full_name	VARCHAR(255) [NOT NULL]
costume_name	VARCHAR(255) [NOT NULL]
rent_date	DATETIME [NOT NULL]
return_date	DATETIME [NULL]
daily_rental_fee	DECIMAL(10,2) [NOT NULL]
insertion_time	TIMESTAMP [DEFAULT CURRENT_TIMESTAMP]
update_time	TIMESTAMP [DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP]

Key Information

- **Primary Key:** rental_id
- **Total Attributes:** 8
- **Nullable Attributes:** return_date (for ongoing rentals)
- **Auto-generated Attributes:** rental_id, insertion_time, update_time
- **Business Constraints:**
 - Rental fees must be positive
 - Return date cannot be earlier than rent date
 - Rent date cannot be in the future