



QAP 4 (Group 10)

(Jaowad Hossain, Khoa Pham, Adam Rice)

Entities and Attributes

1. Default File.dat (No primary key and no relationships)

- Invoice Number: 1856
- Room Rate: \$75.00
- HST Rate: 15%
- Early Check-in Rate: \$12.00
- Extra Bed Rate: \$7.00 per night
- Extra Key Rate: \$2.00
- Late Check-out Rate: \$12.00

2. Customer (Extra field)

- Customer ID (Primary Key)
- Room Number (Foreign Key)
- First Name
- Last Name
- Street Address
- City
- Province
- Postal Code
- Phone Number

- Email
- Credit Card

3. Room Status

- Room Number (Primary Key)
- Customer ID (Foreign Key)
- Check-in Date
- Check-out Date
- Early Check-in
- Extra Bed
- Extra Key
- Late Check-out

4. Booking

- Booking ID (Primary Key)
- Room Number (Foreign Key)
- Parking ID (Foreign Key)
- Customer Name
- Phone Number
- Check-in Date
- Check-out Date

5. Revenue

- Room Number (Foreign Key)
- Invoice Number

- Invoice Date
- Customer ID (Foreign Key)
- Payment Method (Cash, Debit, Credit or Gift Card)
- Room Charge
- Subtotal
- Taxes
- Total

6. Supplies

- Supply ID (Primary Key)
- Supplier ID (Foreign Key)
- Item Name
- Quantity
- Reorder Level

8. Supplier (Extra field)

- Supplier ID (Primary Key)
- Supply ID (Foreign Key)
- Supplier Name
- Contact Person
- Phone Number
- Email

8. Parking (Extra Field)

- Parking ID (Primary Key)

- Customer ID (Foreign Key)
- License Plate
- Pass Number

ERD Diagram Relationships

1. Customer to Room Status

- Type: One-to-Many

2. Customer to Booking

- Type: One-to-Many

3. Room Status and Booking

- Type: One-to-One

4. Revenue to Room Status

- Type: One-to-One

5. Supplies to Supplier

- Type: Many-to-One

6. Parking to Customer

- Type: One-to-One

ERD Diagram Description

1. Customer (Extra field)

- Customer ID: Unique identifier for each customer
- Room Number: Foreign key linking to the Room Status table to show which room the customer is currently occupying
- First Name, Last Name: Customer's personal details.
- Street Address, City, Province, Postal Code: Detailed address for correspondence and service
- Phone Number, Email: Contact information
- Credit Card: Payment information, through storing credit card details must comply with security regulations

2. Room Status

- Room Number: Unique identifier for each room
- Customer ID: Foreign key linking to the Customer
- Check-in Date, Check-out Date: Dates for the customers stay
- Early Check-in, Extra Bed, Extra Key, Late Check-out: Indicating additional services or options

3. Booking

- Booking ID: Unique identifier for each booking

- Room Number: Foreign key linking to the Room Status
- Parking ID: Foreign key linking to the Parking
- Customer ID: Foreign key linking to the Customer
- Customer Name, Phone Number: Customer details for the booking
- Check-in Date, Check-out Date: Dates for the booking

4. Revenue

- Room Number: Foreign key linking to the Room Status
- Invoice Number, Invoice Date: Indicate the invoice information
- Customer ID: Foreign key linking to the customer
- Payment Method: Type of payment used
- Room Charge, Subtotal, Taxes, Total: Financial details of the stay

5. Supplies

- Supply ID: Unique identifier for each supply item
- Supplier ID: Foreign key linking to the Supplier
- Item Name: Name of the supply item

- Quantity, Reorder Level: Inventory details, indicates current stock and ensure supplies are in stock in time

6. Supplier (Extra field)

- Supplier ID: Unique identifier for each supplier, allows for the tracking and management of suppliers
- Supplier Name: Name of the supplier
- Contact person: Person to contact within the supplier's organization
- Phone Number, Email: Contact information for the supplier

7. Parking

- Parking ID: Unique identifier for the parking spot
- Customer ID: Foreign key linking to the Customer
- License Plate, Pass Number: Information of customers car the parking spot

Purpose of the Extra Field and reason why it's useful for the system

1. Customer (Extra Field)

Customer ID (Primary Key)

- Purpose: Provides a unique identifier for each customer
- Reason: Ensures that each customer is distinct, which is essential for tracking relationships and linking with other tables like Room Status and Booking

First Name & Last Name

- Purpose: Capture the full name of the customer
- Reason: These fields are used for personalized communications and records, improving customer service and facilitating identification

Street Address, City, Province, Postal Code

- Purpose: Collect full mailing address details
- Reason: Useful for sending correspondence, billing, and verifying customer information. It's especially important for mailing invoices or promotional materials

Phone Number

- Purpose: Provide a contact number for the customer
- Reason: Essential for contacting the customer for booking confirmations, modifications,

emergencies, or any other necessary communication

Email

- Purpose: Store credit card information for billing
- Reason: Needed for processing payments and securing bookings. It's critical for financial transactions, though it must be handled securely in compliance with data protection regulations

2. Supplier (Extra field)

Supplier ID (Primary Key)

- Purpose: Provides a unique identifier for each supplier
- Reason: Ensures that each supplier record is distinct, which helps in tracking and managing supply orders efficiently

Supply ID (Foreign Key)

Purpose: Links to a specific supply item in the Supplies table

Reason: Indicates which supply item is provided by the suppliers. This relationship allows tracking of which supplier provides which item directly within the Supplier table

Supplier Name

- Purpose: Records the name of the supplying entity
- Reason: Identifies who is providing the goods or services, essential for managing and referencing suppliers during ordering and inventory management

Contact Person

- Purpose: Specifies the primary contact at the supplier's organization
- Reason: Facilitates direct communication, making it easier to place orders, resolve issues, and handle any supply-related queries

Phone Number & Email

- Purpose: Provide contact details for the supplier
- Reason: Essential for prompt and effective communication. Phone and email are used to place orders, address concerns, and maintain relationships with suppliers

3. Parking (Extra field)

Parking ID (Primary Key)

- Purpose: Provides a unique identifier for each parking record

- Reason: Ensures each parking entry is distinct, which is useful for managing parking assignments and tracking parking usage

Customer ID (Foreign Key)

- Purpose: Links parking records to specific customer
- Reason: Connects parking assignments to the customer, helping manage which customer has which parking space and ensuring accurate tracking

License Plate

- Purpose: Records the vehicle's license plate number
- Reason: Helps in verifying that the vehicle belongs to the customer and manages parking space allocation effectively. It can also help in preventing unauthorized parking

Pass Number

- Purpose: Assigns a unique identifier to the parking pass issued to the customer
- Reason: Facilitates access control and tracking pass usage, It helps in managing parking assignments and ensuring that only authorized

vehicles use the parking facility.

Here is the link for the GitHub repository:

<https://github.com/JaowadH/SD12G10QAP.git>