|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **STDefaults** |  |  | **RoomStatus** |  |
|  | invoice\_number |  |  | room\_number |  |
|  | room\_rate |  |  | customer\_name |  |
|  | hst\_rate |  |  | mailing\_address |  |
|  | early\_checkin\_fee |  |  | phone\_number |  |
|  | extra\_bed\_rate |  |  | credit\_card\_number |  |
|  | extra\_key\_rate |  |  | expiry\_date |  |
|  | late\_checkout\_fee |  |  | check\_in\_date |  |
|  |  |  |  | check\_out\_date |  |
|  |  |  |  | early\_checkin\_flag |  |
|  |  |  |  | extra\_bed\_flag |  |
|  |  |  |  | extra\_key\_flag |  |
|  |  |  |  | late\_checkout\_flag |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | **Bookings** |  |  |  |  |
|  | booking\_ID |  |  |  |  |
|  | customer\_name |  |  |  |  |
|  | customer\_phone |  |  |  |  |
|  | check\_in\_date |  |  |  |  |
|  | check\_out\_date |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | **Revenue** |  |  |  |  |
|  | invoice\_number |  |  |  |  |
|  | invoice\_date |  |  |  |  |
|  | customer\_name |  |  |  |  |
|  | payment\_method |  |  |  |  |
|  | room\_charge: float |  |  |  |  |
|  | extras\_charge: float |  |  |  |  |
|  | subtotal: float |  |  |  |  |
|  | taxes: float |  |  |  |  |
|  | total: float |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | **Supplies** |  |  |  |  |
|  | item\_id |  |  |  |  |
|  | item\_name |  |  |  |  |
|  | quantity\_on\_hand |  |  |  |  |
|  | reorder\_threshold |  |  |  |  |

**Entity-Relationship Diagram (ERD) for Sleep-Tite Motel System**

**Entities**

**1. \*\*Defaults:\*\* Stores default values (invoice number, room rate, HST rate, etc.). (\*\*Note:\*\* This is a standalone table and does not have a primary key or relationships.)**

**2. \*\*Room Status:\*\* Tracks room information, reservations, and guest details.**

**- Attributes:**

**- RoomNumber (Primary Key)**

**- CustomerName**

**- CustomerAddress**

**- CustomerPhone**

**- CustomerCreditCardNumber**

**- CreditCardExpiryDate**

**- CheckInDate**

**- CheckOutDate**

**- EarlyCheckIn (Boolean)**

**- ExtraBed (Boolean)**

**- ExtraKey (Boolean)**

**- LateCheckOut (Boolean)**

**3. \*\*Bookings:\*\* Stores information for advanced reservations.**

**- Attributes:**

**- BookingID (Primary Key) (Auto-generated)**

**- CustomerName**

**- CustomerPhone**

**- CheckInDate**

**- CheckOutDate**

**4. \*\*Revenue:\*\* Records income details for completed stays.**

**- Attributes:**

**- InvoiceNumber (Primary Key) (Auto-generated)**

**- InvoiceDate**

**- CustomerName**

**- PaymentMethod (Cash, Debit, Credit)**

**- RoomCharge**

**- ExtrasCharge**

**- Subtotal**

**- Taxes**

**- Total**

**5. \*\*Supplies:\*\* Tracks inventory for various hotel supplies.**

**- Attributes:**

**- SupplyID (Primary Key) (Auto-generated)**

**- SupplyName**

**- Quantity**

**- ReorderPoint (Optional)**

**- Description (Optional)**

**Relationships:**

**1. None (Defaults table is standalone)**

**2. Room Status**

**- Can have one Booking (One-to-One): A room can have a maximum of one booking associated with it at a time. (Implemented using a foreign key referencing BookingID in Bookings table)**

**3. Bookings**

**Can be converted to one Room Status (One-to-One): A booking can be converted into a room reservation upon check-in. (Implemented using a foreign key referencing RoomNumber in Room Status table)**

**4. \*\*Room Status\*\***

**Generates one Revenue record (One-to-One): When a guest checks out of a room, a revenue record is generated based on their stay information. (Implemented using a foreign key referencing RoomNumber in Room Status table)**

**5. None (Supplies table is independent)**

**Additional Fields:**

**1. Room Type (Room Status): - This field could categorize rooms (Single, Double, Suite) for easier pricing and management.**

**2. Guest Notes (Room Status): - This field would allow staff to add notes about the guest or their stay for future reference.**

**3. Vendor Information (Supplies): - This field could store vendor details (name, contact information) for easier reordering.**

**Explanation of Additional Fields:**

**Room Type - Categorizing rooms allows for differentiated pricing based on size and amenities. It also helps with managing room availability for specific guest needs.**

**Guest Notes: - Notes about guest preferences or special requests can improve future stays and personalize the guest experience.**

**Vendor Information: - Having vendor details readily available simplifies the reordering process for supplies, saving time and effort.**

