Assignment 1 - Hotel Database

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1. Tables

Hotel

hotelNo	hotelName	hotelCity
1	La Quinta	Charleston
2	La Quinta	Myrtle Beach
3	La Quinta	Columbia

Room

roomNo	hotelNo	type	price
117	1	single	$250
213	2	quad	$400
148	3	single	$225
205	1	double	$300
401	3	penthouse	$1000
117	3	double	$350
118	3	double	$300

Booking

hotelNo	guestNo	dateFrom	dateTo	roomNo
1	1551	09/05/2020	09/10/2020	117
1	1549	09/10/2020	09/12/2020	117
1	1552	09/05/2020	09/08/2020	205
1	1550	09/14/2020	09/19/2020	205
2	1551	09/12/2020	09/13/2020	213
2	1550	09/20/2020	09/25/2020	213
3	1553	09/20/2020	09/25/2020	401
3	1549	09/13/2020	09/15/2020	117

hotelNo	guestNo	dateFrom	dateTo	roomNo
3	1550	09/01/2020	09/05/2020	118
3	1552	09/09/2020	09/12/2020	118

Guest

guestNo	guestName	guestAddress
1549	John Wick	
1550	George Carlin	5050 5th St, New York, NY
1551	John Doe	1008 Imaginary Drive, Springfield, MA
1552	Jane Doe	1008 Imaginary Drive, Springfield, MA
1553	Bruce Wayne	1007 Mountain Drive, Gotham City

2. Schema

Table: Hotel

- **Attribute**: hotelNo
  - **Type**: INTEGER
  - **Required**: yes
- **Attribute**: hotelName
  - **Type**: VARCHAR(12)
  - **Required**: yes
- **Attribute**: hotelCity
  - **Type**: VARCHAR(16)
  - **Required**: yes
- **Primary Key**: hotelNo

Table: Room

- **Attribute**: roomNo
  - **Type**: INTEGER
  - **Required**: yes
- **Attribute**: hotelNo
  - **Type**: INTEGER
  - **Required**: yes
- **Attribute**: type
  - **Type**: VARCHAR(12)
  - **Required**: no
- **Attribute**: price
  - **Type**: INTEGER
  - **Required**: no
- **Primary Key**: (roomNo, hotelNo)

- **Foreign Key**: hotelNo **References** Hotel(hotelNo)

Table: Booking

- **Attribute**: hotelNo
    - **Type**: INTEGER
    - **Required**: yes
- **Attribute**: guestNo
    - **Type**: INTEGER
    - **Required**: yes
- **Attribute**: dateFrom
    - **Type**: CHAR(10)
    - **Required**: yes
- **Attribute**: dateTo
    - **Type**: CHAR(10)
    - **Required**: yes
- **Attribute**: roomNo
    - **Type**: INTEGER
    - **Required**: yes
- **Primary Key**: (hotelNo, guestNo, dateFrom)
- **Foreign Key**: hotelNo **References** Hotel(hotelNo)
- **Foreign Key**: guestNo **References** Guest(guestNo)
- **Foreign Key**: roomNo **References** Room(roomNo)

Table: Guest

- **Attribute**: guestNo
    - **Type**: INTEGER
    - **Required**: yes
- **Attribute**: guestName
    - **Type**: VARCHAR(24)
    - **Required**: yes
- **Attribute**: guestAddress
    - **Type**: VARCHAR(63)
    - **Required**: no
- **Primary Key**: guestNo

3. Schemas, redesigned

Table: Room

- **Attribute**: roomID
    - **Type**: INTEGER
    - **Required**: yes
- **Attribute**: roomNo
    - **Type**: INTEGER
    - **Required**: yes

- **Attribute**: hotelNo
  - **Type**: INTEGER
  - **Required**: yes
- **Attribute**: type
  - **Type**: VARCHAR(12)
  - **Required**: no
- **Attribute**: price
  - **Type**: INTEGER
  - **Required**: no
- **Primary Key**: roomID
- **Foreign Key**: hotelNo **References** Hotel(hotelNo)

Table: Booking

- **Attribute**: bookID
- **Type**: INTEGER
- **Required**: yes
- **Attribute**: hotelNo
  - **Type**: INTEGER
  - **Required**: yes
- **Attribute**: guestNo
  - **Type**: INTEGER
  - **Required**: yes
- **Attribute**: dateFrom
  - **Type**: CHAR(10)
  - **Required**: yes
- **Attribute**: dateTo
  - **Type**: CHAR(10)
  - **Required**: yes
- **Attribute**: roomNo
  - **Type**: INTEGER
  - **Required**: yes
- **Primary Key**: bookID
- **Foreign Key**: hotelNo **References** Hotel(hotelNo)
- **Foreign Key**: guestNo **References** Guest(guestNo)
- **Foreign Key**: roomNo **References** Room(roomNo)