

ER Diagram to XML Schema

Most of the entities in the ER Diagram have the same attributes as the entities in the XML Schema with a few exceptions:

- The ER Diagram is missing the Resource, Expense and Service entities.
- Room entity has new attributes HotelCode, PricePerNight, NumBeds in the XML schema. While the ER Diagram has Occupancy, Services.
- Booking entity has NumAdults and HotelCode as new attributes found in the XML schema which are not present in the ER Diagram.
- Bill has a new attribute Amount, PaidDate instead of PaymentDate, PaymentMode.

Appendix

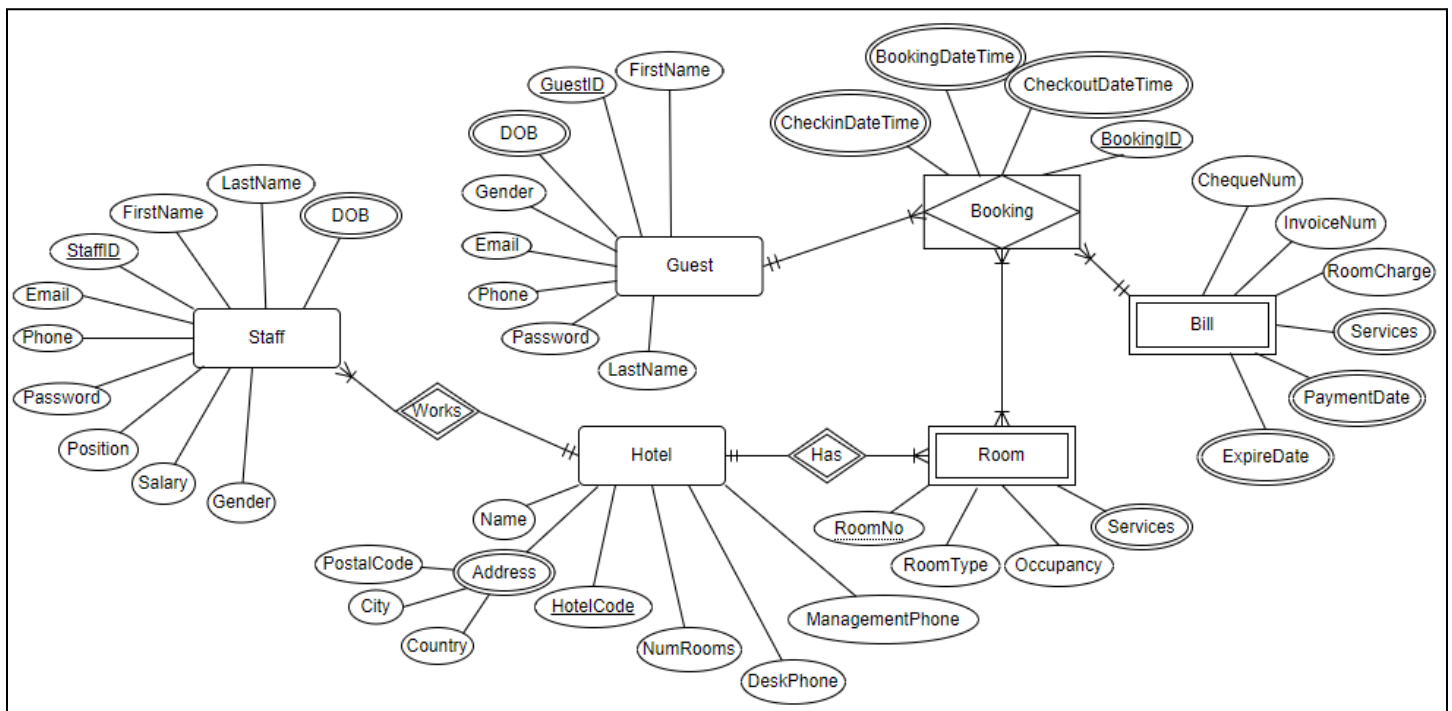


Figure 1: ER Diagram of Hotel Database.

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```
<!-- Staff entity -->
```

```
<xs:element name="Staff">
```

```
<xs:complexType>
```

```
<xs:sequence>
```

```
<xs:element name="StaffID" type="xs:integer"/>
```

```
<xs:element name="HotelCode" type="xs:integer"/>
```

```
<xs:element name="FirstName" type="xs:string"/>
```

```
<xs:element name="LastName" type="xs:string"/>
```

```
        <xs:element name="DOB" type="xs:date" minOccurs="0"/>
        <xs:element name="Gender" type="xs:string"/>
        <xs:element name="Email" type="xs:string"/>
        <xs:element name="Phone" type="xs:string" minOccurs="0"/>
        <xs:element name="Password" type="xs:string"/>
        <xs:element name="Position" type="xs:string" minOccurs="0"/>
        <xs:element name="Salary" type="xs:decimal" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
```

```
<!-- Room entity -->
<xs:element name="Room">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="RoomNo" type="xs:integer"/>
            <xs:element name="HotelCode" type="xs:integer"/>
            <xs:element name="RoomType" type="xs:string"/>
            <xs:element name="PricePerNight" type="xs:decimal"/>
            <xs:element name="NumBeds" type="xs:integer"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
```

```
<!-- Guest entity -->
<xs:element name="Guest">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="GuestID" type="xs:integer"/>
            <xs:element name="FirstName" type="xs:string"/>
            <xs:element name="LastName" type="xs:string"/>
            <xs:element name="DOB" type="xs:date" minOccurs="0"/>
            <xs:element name="Gender" type="xs:string"/>
            <xs:element name="Email" type="xs:string"/>
            <xs:element name="Password" type="xs:string"/>
            <xs:element name="Address" type="xs:string" minOccurs="0"/>
            <xs:element name="Phone" type="xs:string" minOccurs="0"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
```

```
<!-- Resource entity -->
<xs:element name="Resource">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="ResourceID" type="xs:integer"/>
            <xs:element name="HotelCode" type="xs:integer"/>
            <xs:element name="Name" type="xs:string"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
```

```
        <xs:element name="Quantity" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
```

```
<!-- Expense entity -->
<xs:element name="Expense">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="ExpenseID" type="xs:integer"/>
            <xs:element name="HotelCode" type="xs:integer"/>
            <xs:element name="Name" type="xs:string"/>
            <xs:element name="Amount" type="xs:decimal"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
```

```
<!-- Booking entity -->
<xs:element name="Booking">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="BookingID" type="xs:integer"/>
            <xs:element name="HotelCode" type="xs:integer"/>
            <xs:element name="RoomNo" type="xs:integer"/>
            <xs:element name="GuestID" type="xs:integer"/>
            <xs:element name="BookingDateTime" type="xs:dateTime"/>
            <xs:element name="CheckinDateTime" type="xs:dateTime"/>
            <xs:element name="CheckoutDateTime" type="xs:dateTime"/>
            <xs:element name="NumAdults" type="xs:integer"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
```

```
<!-- Bill entity -->
<xs:element name="Bill">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="InvoiceNum" type="xs:integer"/>
            <xs:element name="BookingID" type="xs:integer"/>
            <xs:element name="Amount" type="xs:decimal"/>
            <xs:element name="PaidDate" type="xs:date" minOccurs="0"/>
            <xs:element name="PaymentMode" type="xs:string" minOccurs="0"/>
            <xs:element name="ExpireDate" type="xs:date"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
```

```
<!-- Service entity -->
```

```
<xs:element name="Service">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="ID" type="xs:integer"/>
      <xs:element name="BillNum" type="xs:integer"/>
      <xs:element name="Name" type="xs:string"/>
      <xs:element name="Cost" type="xs:decimal"/>
      <xs:element name="Description" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

</xs:schema>
```

Figure 2: XML Schema of Hotel Database.