

## Database Design documentation

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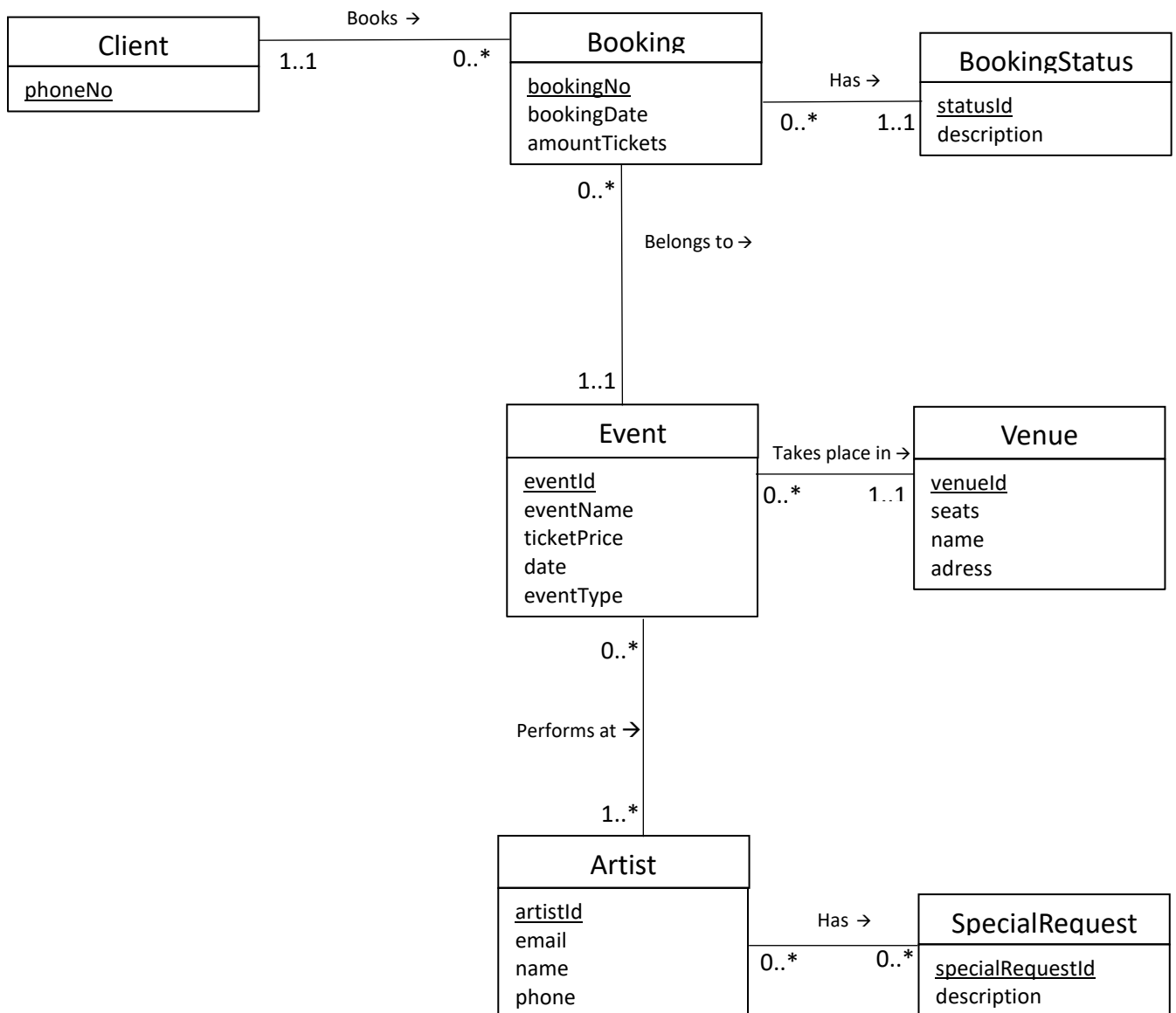
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# 1 Conceptual modelling

## 1.1 ER diagram



## 2 Logical Database Design

### 2.1 Relational schema

**Client**(phoneNo)

**Artist**(artistId, , email, name, phoneNo)

**SpecialRequest**(specialRequestId, description)

**Venue**(venueId, seats, name, address)

**Artist\_SpecialRequest**(artistId, specialRequestId)

FK artistId REFERENCES **Artist**(artistId)

FK specialRequestId REFERENCES **SpecialRequest**(specialRequestId)

**Artist\_Event**(artistId, eventId)

FK (artistId) REFERENCES **Artist** (artistId)

FK (eventId) REFERENCES **Event** (eventId)

**Booking**(bookingNo, bookingDate, eventId, amountTickets, statusId, phoneNo)

FK (eventId) REFERENCES **Event** (eventId)

FK (statusId) REFERENCES **BookingStatus** (statusId)

FK (phoneNo) REFERENCES **Client** (phoneNo)

**BookingStatus**(statusId, description)

**Events**(eventId, eventType, eventName, venueId, price, date)

FK (venueId) REFERENCES **Venue** (venueId)

## 2.2 Relation validation

Client(phoneNo)

Tickets(ticketId, bookingNo)

Artist(artistId, email, name, phoneNo)

SpecialRequest(specialRequestId, description)

Venue(venueId, seats, name, address)

Artist\_SpecialRequest(artistId, specialRequestId)

FK artistId REFERENCES Artist (artistId)

FK specialRequestId REFERENCES SpecialRequest (specialRequestId)

Artist\_Event(artistId, eventId)

FK (artistId) REFERENCES Artist (artistId)

FK (eventId) REFERENCES Event (eventId)

Booking(bookingNo, bookingDate, eventId, amount, tickets, statusId, phoneNo)

FK (eventId) REFERENCES Event (eventId)

FK (statusId) REFERENCES BookingStatus (statusId)

FK (phoneNo) REFERENCES Client (phoneNo)

BookingStatus(statusId, description)

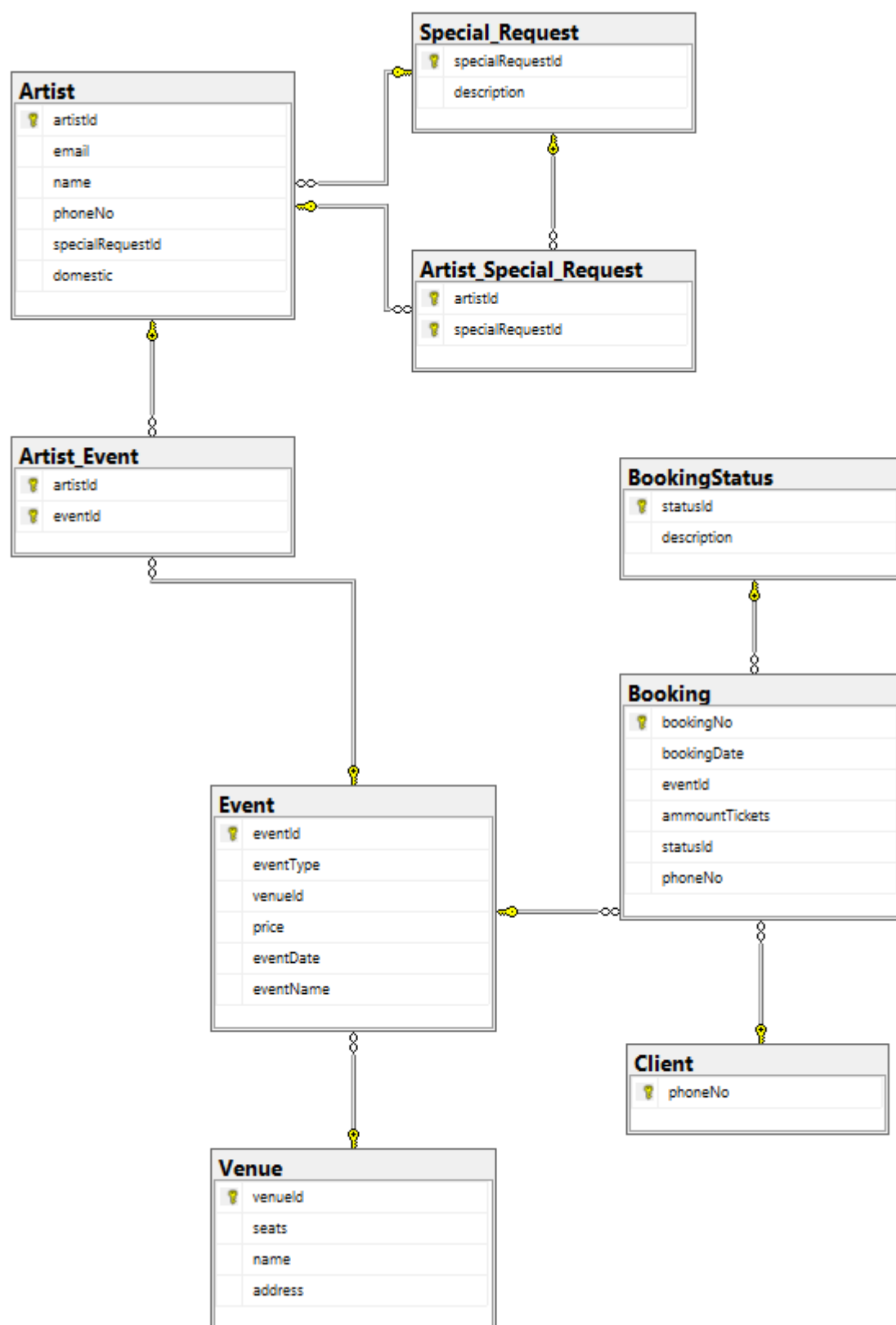
Events(eventId, eventType, eventName, venueId, price, date)

FK (venueId) REFERENCES Venue (venueId)

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### 3 Physical Database Design

#### 3.1 Database Diagram



## 4 Repository

### 4.1 Entity type descriptions

ENTITY TYPE	Description	Synonyms, aliases	Occurrence
<b>Client</b>	A person who wants to attend an event	customer, fan, visitor	Every time an event is held there are between 200 and thousands of clients wanting to attend the event.
<b>Booking</b>	An intend of a client to buy the tickets at the Cardiff library	reservation,	Every time an event is held there is the possibility for the client to make a booking. There can be more than 3500 bookings per event but probably less.
<b>BookingStatus</b>	Determines what happened to a booking and what can happen in the future.	Update, booking possibilities	per booking the booking status can change 4 times.
<b>Events</b>	A gathering of people who have a ticket or are working during the event.	gig, happening, experience	Since there are only 2 venues, there is a maximum of $2 \times 365 = 730$ times a year. But this depends on the amount of venues and actual bookings
<b>Artist</b>	A person who performs the event.	Performer, special guest, professional	Event may include performances from several different artists.
<b>Venue</b>	The place where an event takes place. It has limited place for people.	place, setting, site	There are at the moment only 2 venues available
<b>SpecialRequest</b>	Special request for catering and/or refreshments.	demand, inquiry, message	Artist may have (many) special request(s).

### 4.2 Attribute type descriptions

#### Client

Attribute type	Description	Data type	Value required	Identity attribute or part of it	Special domain
phoneNo	The phone number of the client on which is used to contact them. In this case the phoneNo is also used to uniquely identify them.	int	Yes	Yes	Phone number range

### Booking

Attribute type	Description	Data type	Value re-quired	Identity attribute or part of it	Special domain
bookingNo	Unique number of the booking	Integer	Yes	Yes	.
booking-Date	Date when the client books the ticket for the event	Date	Yes	-	Valid date format
eventId	Event identifier	Integer	Yes	FK	-
amountTickets	Amount of tickets within one booking	Integer	Yes	-	-
statusId	Identifier of booking's current status	Integer	Yes	FK	-
phoneNo	Unique identifier of the client	Text	Yes	FK	Valid phone number format

### BookingStatus

Attribute type	Description	Data type	Value re-quired	Identity attribute or part of it	Special domain
statusId	Represents the current status of client's booking	Integer	Yes	Yes	-
description	Description of booking statusId identifier	Text	Yes	-	Paid, Reserved, cancelled (artist side), refunded



### Events

Attribute type	Description	Data type	Value re-quired	Identity attribute or part of it	Special domain
eventId	Unique identifier of the event	Integer	Yes	Yes	-
eventType	Description of eventide identifier	Text	Yes	-	-
venueId	Identifier of the place where the event will be held	Integer	Yes	FK	-
price	The amount of money to be paid for particular performance	Number	Yes	-	Valid currency format
Date	A day when the performance is held	Date	Yes	-	Valid date format
eventName	The official name of the event	Text	Yes	-	-

### Artist

Attribute type	Description	Data type	Value re-quired	Identity attribute or part of it	Special domain
artistId	The artist id identifies each artist uniquely	Integer	Yes	Yes	-
email	The email adress that is used to contact the artist	Text	Yes	-	-
name	The name of the artist that is used for promotions and announcements.	Text	Yes	-	-
phoneNo	The phone number that is used to contact the artists	Integer	Yes	AK	phonenummer
specialRequestId	The special request id corresponds with a detailed description of a special request.	Integer	no	FK	
domestic	Y if artist is domestic. N if not	Text	Yes		Y,N

### SpecialRequest

Attribute type	Description	Data type	Value re-quired	Identity attribute or part of it	Special domain
specialRe-questId	The special request id corresponds with a detailed description of a special request.	Integer	Yes	Yes	-
description	The description of what kind of wish the artist has. It can contain only one wish at the time.	Text	Yes	-	

### Venue

Attribute type	Description	Data type	Value re-quired	Identity attribute or part of it	Special domain
venueId	The unique venueId identifies each venue	Integer	Yes	Yes	-
seats	The number of seats that are available for customers in each venue	Integer	Yes	-	
name	The name of the venue that can be used in promotions and location directions	Text	Yes	-	-
Address	Identifies the location of the venue	Text	yes	AK	-

### Artist\_Special request

Attribute type	Description	Data type	Value re-quired	Identity attribute or part of it	Special domain
ArtistId	The artist id identifies each artist uniquely	Integer	Yes	Yes	-
SpecialRe-questId	The special request id corresponds with a detailed description of a special request.	Integer	Yes	Yes	

### Artist\_Event

Attribute type	Description	Data type	Value re-quired	Identity attribute or part of it	Special domain
artistId	The artist id identifies each artist uniquely	Integer	Yes	Yes	-
eventId	Event identifier	Integer	Yes	Yes	-