ER Diagram

- **waitlist entry** (entity)
  - free-form text
  - waitlist id (key)
- **ticket** (entity)
  - date and time of purchase
  - payment processor
  - transact ID (key)
- **assign** (relationship) — between waitlist entry and ticket
- **process** (relationship) — waitlist entry to staff
- **has** (relationship) — waitlist entry to fan
- **purchase** (relationship) — ticket to fan
- **associated wt** (relationship) — ticket to seat
- **has** (relationship) — waitlist entry to event (left side)
- **employer** (entity)
  - name (key)
  - email
  - phone number
- **hire** (relationship) — employer to staff
- **staff** (entity)
  - last name
  - first name
  - staff id (key)
  - start date of employment
  - end date of employment
  - training status
- **declare** (relationship) — staff to fan
- **fan** (entity)
  - last name
  - first name
  - phone num
  - email address
- **connects** (relationship) — fan, start date
- **affiliated** (relationship) — fan to affiliation
- **affiliation** (entity)
  - affiliation name
- **occupy** (relationship) — fan to seat
- **seat** (entity)
  - coordinates (key)
  - comments
  - accessibility
- **involved** (relationship) — staff to event
- **event** (entity)
  - URL
  - number (key)
  - location
  - sell style
  - venue
  - date and time
- **has** (relationship) — event to zone
- **zone** (entity)
  - zone type (key)
  - description
  - safety limit
- **has** (relationship) — zone to seat
- **warning times** (fan attribute)
- **has** (relationship) — event to concert
- **concert** (entity)
  - promoter
  - name
  - artist
  - concert id (key)

Search

Concert
- concertID INT
- concertName VARCHAR(45)
- concertArtist VARCHAR(45)
- concertPromoter VARCHAR(45)
- Indexes

Event
- eventNumber INT
- venue VARCHAR(45)
- location VARCHAR(45)
- eventDate_Time DATETIME
- eventURL VARCHAR(45)
- ticketSellingType TINYINT
- Concert_concertID INT
- Indexes

Zone
- zoneType VARCHAR(45)
- zoneDescription TEXT(500)
- safetyLimit INT
- Event_eventNumber INT
- Event_Concert_concertID INT
- Indexes

Seat
- seatRow VARCHAR(45)
- seatColumn VARCHAR(45)
- seatComment VARCHAR(45)
- accessibility TINYINT
- Zone_zoneType VARCHAR(45)
- Zone_Event_eventNumber INT
- Zone_Event_Concert_concertID INT
- fan_emailAdress VARCHAR(100)
- Indexes

has   has   has

works in

declare

staff
- staffID INT
- firstName VARCHAR(45)
- lastName VARCHAR(45)
- trainingStatus TINYINT
- fan_emailAdress VARCHAR(100)
- Event_eventNumber INT
- Event_Concert_concertID INT
- Indexes

fan
- emailAdress VARCHAR(100)
- firstName VARCHAR(45)
- lastName VARCHAR(45)
- phoneNumber VARCHAR(45)
- warningTime INT
- Indexes

fan_has_fan
- fan_emailAdress VARCHAR(100)
- fan_emailAdress1 VARCHAR(100)
- connectionStartDate DATETIME
- Indexes

connected by

connects to

occupy

associated with

has   process   has

hired by

purchase

affiliated with

staff_has_employer
- staff_staffID INT
- employer_name VARCHAR(45)
- startDate DATETIME
- endDate DATETIME
- Indexes

affiliation
- affiliationName VARCHAR(45)
- Indexes

fan_has_affiliation
- fan_emailAdress VARCHAR(100)
- affiliation_affiliationName VARCHAR(45)
- Indexes

has

hire

waitlistEntry
- waitlistID INT
- freeformText TEXT(100)
- ticket_transactID VARCHAR(45)
- Event_eventNumber INT
- Event_Concert_concertID INT
- staff_staffID INT
- Indexes

assign to

employer
- name VARCHAR(45)
- email VARCHAR(100)
- phoneNumber INT
- Indexes

ticket
- transactID VARCHAR(45)
- purchaseDateTime DATETIME
- paymentProcesser ENUM(...)
- fan_emailAdress VARCHAR(100)
- Seat_seatRow VARCHAR(45)
- Seat_seatColumn VARCHAR(45)
- Seat_Zone_zoneType VARCHAR(45)
- Seat_Zone_Event_eventNumber INT
- Seat_Zone_Event_Concert_concertID INT
- Indexes

Assumptions:

1. A seat can only be in 1 zone.

2. A seat is not necessarily to have an associated ticket.

3. Each standing ticket has a unique column number.

4. A ticket is generated after a fan makes a request. Therefore every ticket is associated with exactly 1 fan.

5. The number of each type of zone is at most 1.

6. Employers must hire at least 1 member of staff and each employer works for at least 1 employer.

7. The name of each employer is unique.

8. The start and end date of employment of staff cannot be null.

9. All staff work at exactly one event.

10. The text, comment, description and promoter in waitlist, seat, zone, and concert could be null.