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19 April 2019

CSC 434

Theatre Database Definitions

I have created a database for use by a theatre company. A theatre company is usually a large group of people who work as a group to put on theatrical productions. This company would use this database to log things like where they are putting their shows on, what shows they are doing, and ticket/audience information. This would be useful because of how many different parts of theatre there are. The organization of this information would help any theatre artist with little to no turmoil in the process of production.

Before reading the following definitions, please note that the constraints are implied by the fact that most entities are defined by a primary key. Every instance of the primary key attribute must be unique, otherwise it cannot be a new instance. All primary keys are underlined in the entity definitions. Some do not have primary keys because they are entities that do not require unique identifiers.

Entities:

Ticket(ticket\_number, seat\_number, price, seat\_section, theater\_name, play\_title)

Audience\_member(ticket\_number, confirmation\_number, first\_name, last\_name)

Theater(name, street, max\_seats)

Season(play\_title, playwright\_name, opening\_date, closing\_date, theater\_name)

Actor(name, salary\_per\_hour, equity\_status)

Staff(ID, first\_name, last\_name, job\_title, salary\_per\_hour, play\_title)

Creative\_team(name, job\_title, salary\_per\_hour, play\_title)

Cast(role, actor\_name, play\_title)

Detailed descriptions:

* **Ticket** (holds all details around every single ticket):
  + Key: ticket\_number. This number is used to identify a specific ticket on its own. This is usually a bar code.
  + Attributes:
    - Seat\_number (code that references the specific location of a seat, i.e. D16 or E3)
    - Price (price of the ticket)
    - Seat\_section (references the section of the theatre that the ticket’s seat is in, i.e. orchestra, balcony, etc.)
    - Theater\_name (references the specific theater building that the ticket is for)
    - Play\_title (references the specific play in the season that the ticket is for)
  + Relationships:
    - One-to-one with **Audience\_member** because its always one ticket per audience member.
    - Many-to-one with **Theater** because all the tickets are for seats in a specific theater, even though there are multiple theaters.
    - Many-to-one with **Season** because there are many tickets per one play in the entire season of plays.
* **Audience\_member** (holds all info pertaining to the members of an audience in a theatre):
  + Key: ticket\_number. This entity shares a key with **Ticket** because it is the only thing that can uniquely identify an audience member in this case.
  + Attributes:
    - First\_name (their first name)
    - Last\_name (their last name. I decided to separate first and last name because it makes the audience members easier to search for and sort)
    - Confirmation\_number (the number/code that uniquely identifies the audience member singularly. One audience member can purchase multiple tickets under the same confirmation number, so this is what separates the **Audience\_member** entity from the **Ticket** entity)
  + Relationships:
    - See **Ticket** entity section
* **Season** (holds all info about the list of plays/productions that the theatre company will be doing in their season)
  + Key: play\_title. Because every instance in this entity is a play, the unique identifier is the name/title of said play.
  + Attributes:
    - Playwright\_name (name of the person who wrote the play)
    - Opening\_date (the date that the play/production starts performing to the public)
    - Closing\_date (the date that the play/production finished performing to the public)
    - Theater\_name (the theater that the play/production is performed at)
  + Relationships:
    - One-to-one with **Theater**. This is because this theatre company is not a traveling one, meaning each play/production in the season is performed at one specific theater. The company can use different theatres for different productions, but they do not use multiple theaters for each individual production.
    - One-to-many with **Cast**. This is because there are multiple productions in one season, requiring multiple casts.
    - One-to-many with **Creative\_team**. This is because there are multiple productions in one season, requiring multiple creative teams.
    - See **Ticket** entity section
* **Theater** (holds all info about the physical theater at which productions/plays are produced)
  + Key: name. The only thing that uniquely identifies a theater would be its name.
  + Attributes:
    - Street (the name of the street that the theater is located on)
    - Max\_seats (the maximum number of seats that the theater has)
  + Relationships:
    - One-to-many with **Staff**. This is because multiple staff members work for each theater.
    - See **Ticket** entity section
    - See **Season** entity section
* **Staff** (holds all info pertaining to the people who permanently work for a theater)
  + Key: ID. This is a number that uniquely identifies each staff member.
  + Attributes:
    - First\_name (the first name of the staff member)
    - Last\_name (the last name of the staff member. Separated in the same way as in **Audience\_member** for the same reasons)
    - Job\_title (the position that this staff member fulfills. i.e. usher, set builder, master electrician, etc)
    - Salary\_per\_hour (the salary paid to the staff member on an hourly basis)
    - Theater\_name (the name of the theater that the staff member works at)
  + Relationships
    - Many-to-many with **Actor**. This is because multiple staff members often work with the entire cast of a play during the production stages of the process.
    - See **Theater** entity section.
* **Actor** (holds all information pertaining to the actors in a show. It is separate from Creative\_team because actors are often used as the face of a production. This means it is more important to keep a separate log of actors who have worked with this company so that it can be used for marketing purposes)
  + Key: Name. The only unique identifier for an actor is said actor’s name. In the rare case of actors with duplicate names, the middle initial or some other identifier can be added to this value to make it more unique.
  + Attributes:
    - Salary\_per\_hour (the salary paid to the actor on an hourly basis)
    - Equity\_status (defines whether or not the actor is a member of the Actor’s Equity Association (AEA). This determines whether or not the actor will be handled using the set guidelines provided by the AEA (i.e. pay, work hours, etc.) or if they will be handled using the guidelines set forth by the higher powers associated with whatever production the actor is involved in. The two options for this attribute are equity and nonequity)
  + Relationships:
    - Many-to-one with **Cast**. This is because there are multiple actors in one cast per production.
    - See **Staff** entity section.
* **Cast** (holds all info pertaining to the list of actors in every production and what roles they are playing)
  + Key: N/A. This is because **Cast** is directly related to **Actor** in that it just lists out every actor in a production. The unique identifier comes when looking at the **Actor** entity. This is the best solution to a situation in which one actor is used for multiple productions in a season.
  + Attributes:
    - Role (the name of the role/character that the actor is performing)
    - Actor\_name (the name of the actor that is performing the associated role)
    - Play\_title (the name of the play/production that the role is a part of)
  + Relationships:
    - See **Season** entity section.
    - See **Actor** entity section.
* **Creative\_team** (the team of people who work on the production that are not actors or permanent staff members of the theater. People like the director, lighting designer, or scenic designer. I would include unique entities for each of these roles, but that would be too many entities and it would clutter the database)
  + Key: N/A. This doesn’t have a primary key either for a similar reason as with **Cast**. There are often cases where members of a creative team for one production work on another production in the same season. It is most likely that this entity will contain duplicate values, meaning a key will not be possible.
  + Attributes:
    - Name (the name of the creative team member)
    - Job\_title (the position that the team member fulfills. See the examples outlined in the description of the entity)
    - Salary\_per\_hour (the salary paid to the creative team member on an hourly basis)
    - Play\_title (the name/title of the production that the creative team member is a part of)
  + Relationships:
    - See **Season** entity section