

## Project Step 6 Final

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**Project title:** Local Artist Database

**Project URL:** <http://flip3.engr.oregonstate.edu:3757/>

## Summary of Feedback and Changes

Our project focused on creating a functional database for local artists in the Seattle region to share and promote their work. The proposed entities – Artists, Albums, Songs, Venues, and Concerts represented distinct specifications of our database design. Peer and instructional staff reviewed and acknowledged the effectiveness of the database design and did not see any notable opportunities for amendments to the proposed design structure.

Through feedback and our own logic, we determined that our relationships were correctly formulated and there were sufficient M:N relationships. Reviewer input encouraged us to approach our naming of attributes with greater uniformity – we changed multiple attributes to match the “singular attribute, plural entity” naming conventions. Furthermore, we were notified that some of our relationships were stated improperly. Many of our 1:M notations in our database outline needed to be changed to M:1 to show, for instance, that *many* Albums can have *one* Artist associated. These changes enhanced the logical representation of our database design.

Most of the feedback centered on the user interface of our web application. The most substantial critiques spoke on the lack of delete/update forms on all pages, and the need to refresh the page to observe update operations change row data on the tables. Upon receiving these critiques, we fixed bugs in our JavaScript update functions to allow for instantaneous updates on the UI side. As one can observe from the state of our pages, we now have forms for update and add operations to allow for more user-friendly interactions with the tables. We decided against delete forms and instead applied a delete button to each row.

From the initial design of this database, we have found that our SQL manipulation and data definition files are conducive for our intentions. The overall ERD and Schema also work well. These aspects of our project design have not changed. The most apparent changes lie within our UI – the addition of CSS for more aesthetic styling of pages and tables, addition of the aforementioned forms for accessibility, and the general implementation of each of the CRUD operations.

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## Project Outline

Artists often rely on social media and website/app databases, like Spotify and Pandora to gain exposure and build an audience. These types of database platforms are especially beneficial for widely popular artists, as the algorithms built into these platforms allow for greater exposure with curated albums and artist recommendations. Region-specific, smaller artists have a harder time garnering support when in direct competition with these larger artists. The Seattle local music scene, which is home to over 200 venues, will benefit from a database driven website to bring more attention to the 100+ local artists and bands in the area. This local artist database will be employed to give smaller artists a platform to upload their content and update interested users on upcoming concerts at local venues. This local artist database will keep track of *Local Artists*, their *Albums*, and their *Songs*. It will also track *Concerts* that occur at different *Venues* within the next three months and the artists associated with these concerts.

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## Database Outline (Entities, attributes, and relationships)

**Artists:** records the details of local artists that participate in the Seattle music scene

- artistID: INT (11), auto\_increment, unique, not NULL, PK
- socialMediaLink: VARCHAR (255)
- artistName: VARCHAR (255), not NULL
- totalRevenue: DECIMAL(10,2)

Relationships: A 1:M relationship between *Artists* and *Albums*. A 1:M relationship between *Artists* and *Songs*. A M:N relationship between *Artists* and *Concerts* with *concertID* being a foreign key in *Artists*.

**Albums:** records the details of an album that belongs to an artist

- albumID: INT (11), auto\_increment, unique, not NULL, PK
- albumName: VARCHAR(255), not NULL
- releaseDate: DATE, not NULL
- songTotal: INT (11), not NULL
- artistID: INT (11), FK, not NULL

Relationships: A M:1 relationship between *Albums* and *Artists* with *artistID* being a foreign key in *Albums*. A 1:M relationship between *Albums* and *Songs*.

**Songs:** records the details of a song that either belongs to an album or is a single created by an artist

- songID: INT (11), auto\_increment, unique, not NULL, PK
- title: VARCHAR (255), not NULL
- albumID: INT (11), FK, not NULL

- genre: VARCHAR (30), not NULL

Relationships: A M:1 relationship between *Songs* and *Albums* where *albumID* is a foreign key in *Songs*. A M:1 relationship between *Songs* and *Artists* where *artistID* is a foreign key in *Songs*.

**Venues:** records the details of a venue that hosts many artists

- venueID: INT (11), auto\_increment, unique, not NULL, PK
- venueName: VARCHAR (255), not NULL
- venueAddress: VARCHAR (255), not NULL

Relationship: A M:N relationship between *Venues* and *Concerts*, where *concertID* is a foreign key in *Venues*.

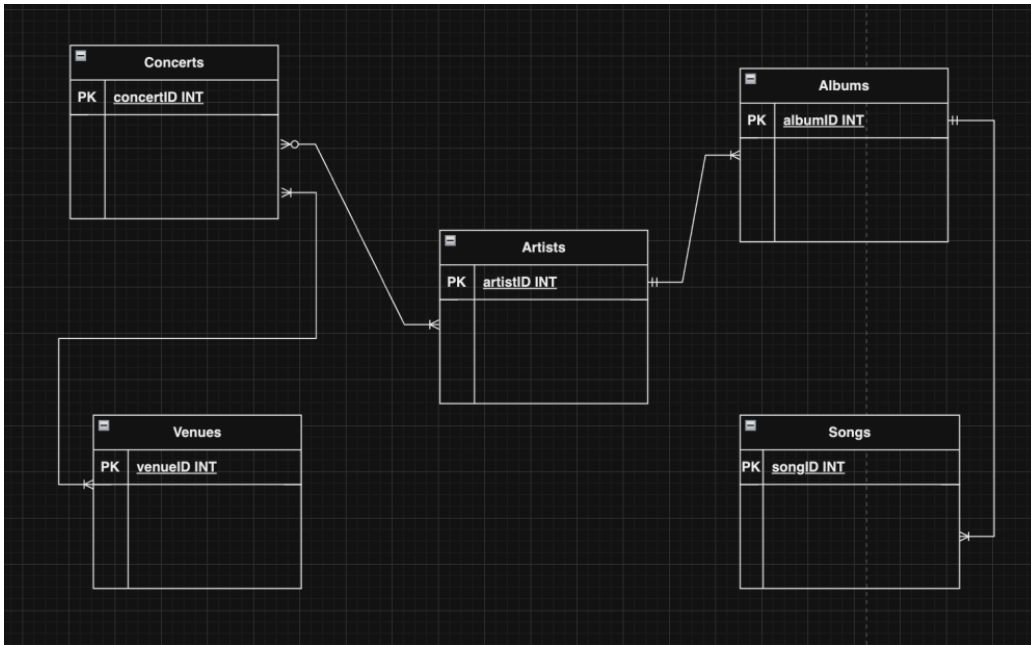
**Concerts:** records the details of a concert

- concertID: INT (11), auto\_increment, unique, not NULL, PK
- concertDate: DATE, not NULL
- concertTime: TIME, not NULL
- ticketSale: DECIMAL(10, 2), not NULL

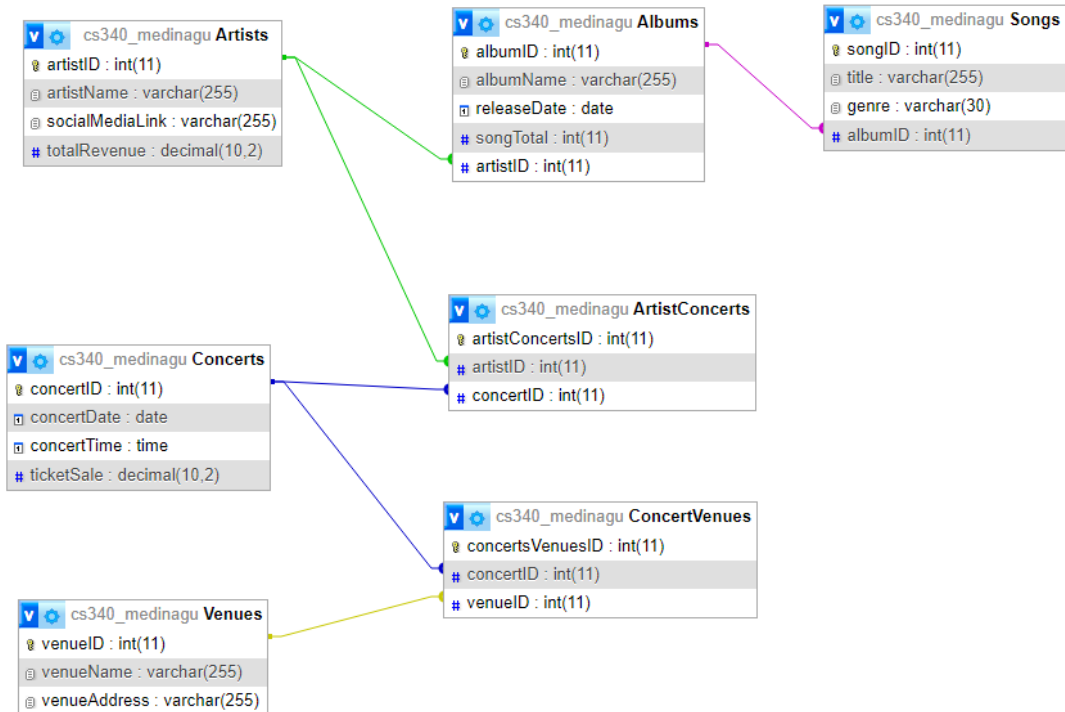
Relationships: A M:N relationship between *Concerts* and *Artists* where *artistID* is a foreign key in *Concerts*. A M:N relationship between *Concerts* and *Venues*, where *venueID* is a foreign key in *Concerts*.

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**ERD**



## Schema



## Sample Data

**Artists(artistName, socialMediaLink, totalRevenue):**

- ('Baylor Rift', 'socialmedia.com/BaylorRift', 123456.78)
- ('Zay J', 'socialmedia.com/ZayJ', 98765.43)
- ('PNGYAKUZA', 'socialmedia.com/PNGYAKUZA', 65432.10)

**Albums(albumName, releaseDate, songTotal, artistID):**

- ('1998', '2014-10-27', 2, 1)
- ('The Redprint', '2001-09-11', 2, 2)
- ('ELP!', '2021-10-22', 2, 3)

**Songs(title, genre, albumID):**

- ('Good Blood', 'Pop', 1)
- ('Tamest Dreams', 'Pop', 1)
- ('Soul of the City', 'Hip Hop', 2)
- ('Song Laugh', 'Hip Hop', 2)
- ('GIANNIS!', 'Alternative Hip Hop', 3)
- ('DORY!', 'Alternative Hip Hop', 3)

**Venues(venueName, venueAddress):**

- ('House of Pop', "1234 Real Ave., Seattle, WA")
- ('The Roman Theatre', "1234 Fake St., Seattle, WA")
- ('Madison Sphere Garden', "4321 Imaginary Rd., Seattle, WA")

**Concerts(concertDate, concertTime, ticketSale):**

- ('2023-10-25', '18:00', 60.00)
- ('2023-10-26', '17:00', 40.00)
- ('2023-10-27', '16:00', 20.00)

**ArtistConcerts(artistID, concertID):**

- (1, 1)
- (2, 2)
- (3, 3)
- 

**ConcertVenues(concertID, venueID):**

- (1, 1)
  - (2, 2)
  - (3, 3)
-

## UI Screenshots

### Artists

CREATE, READ, UPDATE, and DELETE function for this entity. Deletion is restricted by our intended database design, so that Artists cannot be deleted if associated with any existing albums or concerts. The intention of this database is to accumulate local Artists' data; therefore, we do not want the deletion of existing records unless not associated with albums or concerts.

### Artists SELECT

### Artists

Artist ID	Name	Social Media	Total Revenue	
1	Baylor Rift	socialmedia.com/BaylorRift	123456.78	Delete
2	Zay J	socialmedia.com/ZayJ	98765.43	Delete
3	PNGYAKUZA	socialmedia.com/PNGYAKUZA	65432.1	Delete

Add Artist

Artist Name

Social Media

Total Revenue

### Artists CREATE Form + Row Added to Table

Artists

Artist ID	Name	Social Media	Total Revenue	
1	Baylor Rift	socialmedia.com/BaylorRift	123456.78	<div>Delete</div>
2	Zay J	socialmedia.com/ZayJ	98765.43	<div>Delete</div>
3	PNGYAKUZA	socialmedia.com/PNGYAKUZA	65432.1	<div>Delete</div>
4	Larry July	socialmedia.com/LarryJuly	4000.66	<div>Delete</div>

Add Artist

Artist Name

Larry July

Social Media

socialmedia.com/LarryJuly

Total Revenue

4000.66

Artists Update Form with Update Data for Social Media Attribute

Update Artist Details

Artist

Larry July

Social Media

socialmedia.com/BaylorRift

Total Revenue

4000.66

Update Artist

Cancel

Artists UPDATE Displaying Updated Social Media (Row 4)

Artists

Artist ID	Name	Social Media	Total Revenue	
1	Baylor Rift	socialmedia.com/BaylorRift	123456.78	Delete
2	Zay J	socialmedia.com/ZayJ	98765.43	Delete
3	PNGYAKUZA	socialmedia.com/PNGYAKUZA	65432.1	Delete
4	Larry July	socialmedia.com/BaylorRift	4000.66	Delete

Add Artist

Artist Name

Artists DELETE (delete functions restricted to artists who do not have associated albums/concerts by database design)

Concert Venues

Artists

Artist ID	Name	Social Media	Total Revenue	
1	Baylor Rift	socialmedia.com/BaylorRift	123456.78	Delete
2	Zay J	socialmedia.com/ZayJ	98765.43	Delete
3	PNGYAKUZA	socialmedia.com/PNGYAKUZA	65432.1	Delete

Add Artist

Artist Name

Social Media



# Concerts, ConcertVenues & ArtistConcerts

There is a M:N relationship between Concerts and Artists, as well as Concerts and Venues. When a concert is created, ArtistConcerts and ConcertVenues tables are appended with a new row containing the newly added data in accordance with database design. The same correlation occurs when a concert is updated or deleted. Both the ConcertVenues and ArtistConcerts tables have NULLable relationships with Venues and Artists, respectively. The deletion of an entity from either table results in a NULL value within their associated intersection tables. The screenshots below show this relationship. **Deletion of a M:N relationship occurs here.**

## Concerts SELECT

Concerts						
Concert ID	Show Date	Time	Ticket Sales	Artist Name	Venue Name	
1	Wed Oct 25 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	18:00:00	60	Baylor Rift	House of Pop	Delete
2	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	17:00:00	40	Zay J	The Roman Theatre	Delete
3	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	16:00:00	20	PNGYAKUZA	Madison Sphere Garden	Delete

## Concerts CREATE with Form (Row 4 added)

Concert ID	Show Date	Time	Ticket Sales	Artist Name	Venue Name	
1	Wed Oct 25 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	18:00:00	60	Baylor Rift	House of Pop	Delete
2	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	17:00:00	40	Zay J	The Roman Theatre	Delete
3	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	16:00:00	20	PNGYAKUZA	Madison Sphere Garden	Delete
4	Wed Dec 13 2023 00:00:00 GMT-0800 (Pacific Standard Time)	21:35:00	122	Baylor Rift	House of Pop	Delete

Add a Concert

Show Date

mm / dd / yyyy

Time

-- : --

Ticket Sales

1

Artist

Select an Artist

**ArtistConcerts SELECT and CREATE**  
(through CREATE operation from Concerts entity on Row 4)

Concert Venues		
Explore your favorite artists' concerts		
ID	Artist	Concert Date
1	Baylor Rift	Wed Oct 25 2023 00:00:00 GMT-0700 (Pacific Daylight Time)
2	Zay J	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)
3	PNGYAKUZA	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)
4	Baylor Rift	Wed Dec 13 2023 00:00:00 GMT-0800 (Pacific Standard Time)

**ConcertVenues SELECT and CREATE**  
(through CREATE operation from Concerts entity on Row 4)

Find your concert's location		
ID	Concert Date	Venue
1	Wed Oct 25 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	House of Pop
2	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	The Roman Theatre
3	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	Madison Sphere Garden
4	Wed Dec 13 2023 00:00:00 GMT-0800 (Pacific Standard Time)	House of Pop

## Concerts UPDATE and Form

Update Concert Details

Concert ID

4

Show Date

12/13/2023

Time

08:35 PM

Ticket Sales

200

Artist

Baylor Rift

Venue

Madison Sphere Garden

Update Concert

Cancel

## Concerts UPDATE on table (ticket sales and venue association changed)

Concerts						
Concert ID	Show Date	Time	Ticket Sales	Artist Name	Venue Name	
1	Wed Oct 25 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	18:00:00	60	Baylor Rift	House of Pop	Delete
2	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	17:00:00	40	Zay J	The Roman Theatre	Delete
3	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	16:00:00	20	PNGYAKUZA	Madison Sphere Garden	Delete
4	Tue Dec 12 2023 00:00:00 GMT-0800 (Pacific Standard Time)	20:35:00	200	Baylor Rift	Madison Sphere Garden	Delete

## ConcertVenues UPDATE (venue association changed on Row 4 with Concert UPDATE)

### Find your concert's location

ID	Concert Date	Venue
1	Wed Oct 25 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	House of Pop
2	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	The Roman Theatre
3	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	Madison Sphere Garden
4	Tue Dec 12 2023 00:00:00 GMT-0800 (Pacific Standard Time)	Madison Sphere Garden

### Concert UPDATE to change Artist association

Update Concert Details

Concert ID

4

Show Date

12 / 13 / 2023

Time

08 : 35 PM

Ticket Sales

200

Artist

Zay J

Venue

Madison Sphere Garden

Update Concert

Cancel

Concerts UPDATE changes the Artist Name in Concerts Table

Concerts						
Concert ID	Show Date	Time	Ticket Sales	Artist Name	Venue Name	
1	Wed Oct 25 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	18:00:00	60	Baylor Rift	House of Pop	Delete
2	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	17:00:00	40	Zay J	The Roman Theatre	Delete
3	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	16:00:00	20	PNGYAKUZA	Madison Sphere Garden	Delete
4	Tue Dec 12 2023 00:00:00 GMT-0800 (Pacific Standard Time)	20:35:00	200	Zay J	Madison Sphere Garden	Delete

ArtistsConcerts UPDATE (Row 4 is updated with new artist association)

Explore your favorite artists' concerts		
ID	Artist	Concert Date
1	Baylor Rift	Wed Oct 25 2023 00:00:00 GMT-0700 (Pacific Daylight Time)
2	Zay J	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)
3	PNGYAKUZA	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)
4	Zay J	Tue Dec 12 2023 00:00:00 GMT-0800 (Pacific Standard Time)

Concerts DELETE of Row 1 (M:N relationship)

Concerts						
Concert ID	Show Date	Time	Ticket Sales	Artist Name	Venue Name	
2	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	17:00:00	40	Zay J	The Roman Theatre	Delete
3	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	16:00:00	20	PNGYAKUZA	Madison Sphere Garden	Delete
4	Tue Dec 12 2023 00:00:00 GMT-0800 (Pacific Standard Time)	20:35:00	200	Zay J	Madison Sphere Garden	Delete

ConcertVenues DELETE (row 1 deleted)

### Find your concert's location

ID	Concert Date	Venue
2	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	The Roman Theatre
3	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	Madison Sphere Garden
4	Tue Dec 12 2023 00:00:00 GMT-0800 (Pacific Standard Time)	Madison Sphere Garden

ArtistConcerts DELETE (row 1 deleted)

### Explore your favorite artists' concerts

ID	Artist	Concert Date
2	Zay J	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)
3	PNGYAKUZA	Fri Oct 27 2023 00:00:00 GMT-0700 (Pacific Daylight Time)
4	Zay J	Tue Dec 12 2023 00:00:00 GMT-0800 (Pacific Standard Time)

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## Albums

CREATE, READ, UPDATE, and DELETE function for this entity. Deletion is restricted by our intended database design, so that Albums cannot be deleted if associated with any existing songs. The intention of this database is to accumulate local Album's data; therefore, we do not want the deletion of existing records unless not associated with a song(s).

### Albums SELECT

Albums					
Album ID	Name	Release Date	Song Total	Artist Name	
1	1998	Mon Oct 27 2014 00:00:00 GMT-0700 (Pacific Daylight Time)	2	Baylor Rift	Delete
2	The Redprint	Tue Sep 11 2001 00:00:00 GMT-0700 (Pacific Daylight Time)	2	Zay J	Delete
3	ELP!	Fri Oct 22 2021 00:00:00 GMT-0700 (Pacific Daylight Time)	2	PNGYAKUZA	Delete

Albums CREATE with new Row 4

Album ID	Name	Release Date	Song Total	Artist Name	
1	1998	Mon Oct 27 2014 00:00:00 GMT-0700 (Pacific Daylight Time)	2	Baylor Rift	Delete
2	The Redprint	Tue Sep 11 2001 00:00:00 GMT-0700 (Pacific Daylight Time)	2	Zay J	Delete
3	ELP!	Fri Oct 22 2021 00:00:00 GMT-0700 (Pacific Daylight Time)	2	PNGYAKUZA	Delete
4	The Worst Escape	Thu Dec 14 2023 00:00:00 GMT-0800 (Pacific Standard Time)	12	PNGYAKUZA	Delete

Add an album

Name

Release Date

Song Total

Artist

### Albums UPDATE form

Update Album Details

Album

Release Date

Song Total

Albums UPDATE (Row 4 song total attribute changed)

Album ID	Name	Release Date	Song Total	Artist Name	
1	1998	Mon Oct 27 2014 00:00:00 GMT-0700 (Pacific Daylight Time)	2	Baylor Rift	Delete
2	The Redprint	Tue Sep 11 2001 00:00:00 GMT-0700 (Pacific Daylight Time)	2	Zay J	Delete
3	ELP!	Fri Oct 22 2021 00:00:00 GMT-0700 (Pacific Daylight Time)	2	PNGYAKUZA	Delete
4	The Worst Escape	2023-12-13T08:00:00.000Z	100	PNGYAKUZA	Delete

Albums DELETE

(Row 4 deleted; Albums design intentionally restricts deletion of any rows that have associated songs)

Album ID	Name	Release Date	Song Total	Artist Name	
1	1998	Mon Oct 27 2014 00:00:00 GMT-0700 (Pacific Daylight Time)	2	Baylor Rift	Delete
2	The Redprint	Tue Sep 11 2001 00:00:00 GMT-0700 (Pacific Daylight Time)	2	Zay J	Delete
3	ELP!	Fri Oct 22 2021 00:00:00 GMT-0700 (Pacific Daylight Time)	2	PNGYAKUZA	Delete

Songs

CREATE, READ, UPDATE, and DELETE function for this entity.

Songs SELECT

Songs				
Song ID	Title	Genre	Album	
1	Good Blood	Pop	1998	Delete
2	Tamest Dreams	Pop	1998	Delete
3	Soul of the City	Hip Hop	The Redprint	Delete
4	Song Laugh	Hip Hop	The Redprint	Delete
5	GIANNIS!	Alternative Hip Hop	ELP!	Delete
6	DORY!	Alternative Hip Hop	ELP!	Delete

Songs DELETE



Songs				
Song ID	Title	Genre	Album	
1	Good Blood	Pop	1998	Delete
2	Tamest Dreams	Pop	1998	Delete
3	Soul of the City	Hip Hop	The Redprint	Delete
4	Song Laugh	Hip Hop	The Redprint	Delete
6	DORY!	Alternative Hip Hop	ELP!	Delete

Songs CREATE (New Row 7)

Songs				
Song ID	Title	Genre	Album	
1	Good Blood	Pop	1998	Delete
2	Tamest Dreams	Pop	1998	Delete
3	Soul of the City	Hip Hop	The Redprint	Delete
4	Song Laugh	Hip Hop	The Redprint	Delete
6	DORY!	Alternative Hip Hop	ELP!	Delete
7	XYZ	pop	1998	Delete

Songs UPDATE Form

Update Song Details

Song

Soul of the City

Genre

Pop

Update Song

Cancel

Songs UPDATE (Genre changed for Row 3)

## Songs

Song ID	Title	Genre	Album	
1	Good Blood	Pop	1998	Delete
2	Tamest Dreams	Pop	1998	Delete
3	Soul of the City	Pop	The Redprint	Delete
4	Song Laugh	Hip Hop	The Redprint	Delete
6	DORY!	Alternative Hip Hop	ELP!	Delete
7	XYZ	pop	1998	Delete

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## Venues

CREATE, READ, UPDATE, and DELETE function for this entity.

There is a M:N relationship between Venues and Concerts. When a venue is deleted, ConcertVenues and Concerts tables will be affected, as rows associated with the deleted Venue will also be deleted. This is the intention of the database design. The screenshots below show this relationship. **Deletion of a M:N relationship occurs here.**

### Venues SELECT

Venues			
Venue ID	Name	Venue Address	
1	House of Pop	1234 Real Ave., Seattle, WA	Delete
2	The Roman Theatre	1234 Fake St., Seattle, WA	Delete
3	Madison Sphere Garden	4321 Imaginary Rd., Seattle, WA	Delete

### Venues CREATE (Row 4 created)

Venue ID	Name	Venue Address	
1	House of Pop	1234 Real Ave., Seattle, WA	<button>Delete</button>
2	The Roman Theatre	1234 Fake St., Seattle, WA	<button>Delete</button>
3	Madison Sphere Garden	4321 Imaginary Rd., Seattle, WA	<button>Delete</button>
4	ShoeBox SoDo	4747 Broadway, Seattle, WA	<button>Delete</button>

### Add a New Venue

Venue Name:

Venue Address:

Submit

Cancel

## Venues UPDATE Form

### Update Venue Details

Venue

Madison Sphere Garden



Venue Address

1122 Broadway, Seattle WA

Update Venue

Cancel

## Venues UPDATE

(Row 3 Venue Address attribute updated)

Venues			
Venue ID	Name	Venue Address	
1	House of Pop	1234 Real Ave., Seattle, WA	Delete
2	The Roman Theatre	1234 Fake St., Seattle, WA	Delete
3	Madison Sphere Garden	1122 Broadway, Seattle WA	Delete
4	ShoeBox SoDo	4747 Broadway, Seattle, WA	Delete
Add New Venue			

Venues DELETE  
(Row 3 deleted)

Venues			
Venue ID	Name	Venue Address	
1	House of Pop	1234 Real Ave., Seattle, WA	Delete
2	The Roman Theatre	1234 Fake St., Seattle, WA	Delete
4	ShoeBox SoDo	4747 Broadway, Seattle, WA	Delete

ConcertVenues DELETE  
(when Venue is deleted, any ConcertVenues row with respective Venue associated is deleted)

Find your concert's location		
ID	Concert Date	Venue
2	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	The Roman Theatre

Concerts DELETE  
(When Venue is deleted, any Concert row with respective Venue associated is deleted)

## Concerts

Concert ID	Show Date	Time	Ticket Sales	Artist Name	Venue Name	
2	Thu Oct 26 2023 00:00:00 GMT-0700 (Pacific Daylight Time)	17:00:00	40	Zay J	The Roman Theatre	<div>Delete</div>