# CS 340 - Project Step 7

**Group Name/Number: Group 71** 

**Group Members: Darren Paddock & Vincent Chen** 

**Project Title: Corvallis Pop-Up Art Gallery** 

URL: http://flip2.engr.oregonstate.edu:61579/

## **Executive Summary**

Throughout the development of this project, there were a number of major changes that we made from the initial version to Step 7. Some of these changes were influenced by our peer reviewers while other changes were made by us to increase readability, usability, functionality and overall quality of the web application.

In Step 3, all four of our peer reviewers highlighted that we did not seem to have a NULLable relationship present between any of our entities. In response to this, we decided to implement a NULLable relationship between Artists and GalleryInventory in that Artists can have zero or many artworks in GalleryInventory. So, an artwork inside GalleryInventory will have NULL as the artist if the artist is to be deleted and an artwork can be added with NULL as the artist inside GalleryInventory. This implementation not only satisfies the project requirement of a NULLable relationship in our web app, but also the existing partial participation relationship between Artists and GalleryInventory.

To make our UPDATE and DELETE queries simpler to manipulate for the two M:M relationship tables, we decided to change from using the foreign keys as the primary keys to making a new primary key named event\_artistld and event\_inventoryld and using those primary keys for the GalleryEvents\_Artists and GalleryEvents\_GalleryInventory tables, respectively. In addition, we made our UPDATE and DELETE functionality reside within the "Edit" page of the selected row of data due to how we were querying from the database for these two tables. Subsequently, we implemented the same UPDATE and DELETE functionality from within an "Edit" page for all entities.

And based on our peer review of other classmates, we realized that it would be much more readable and user-friendly to display the names or descriptions of the foreign keys as the columns attached to each row in the GalleryInventory table, Events\_Inventory table, and Events\_Artists table, rather than just the foreign key lds as the columns.

We are extremely satisfied with the changes we have made throughout the development of this project. Thanks to our peers and the review process for each Step, we were able to improve upon each iteration and make this web application into what it is today.

# **CS 340 TEAM EVALUATION FORM**

MARCH 15, 2021

# RATE YOUR TEAMS PERFORMANCE USING THE SCALE BELOW.

# 1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

| 1 = Strongly Disagree 2 = Disa   | igree 3 – A                   | gree 4 = Strongly Agree |  |
|--|-------------------------------|-------------------------|--|
| GROUP NUMBER   | 71                            |                         |  |
| NAME OF GROUP TEAM MEMBERS:  | Darren Paddock & Vincent Chen |                         |  |
| SCALE AND COMMENTS   | RATING                        | ADDITIONAL COMMENTS     |  |
| HOW PREPARED WAS YOUR TEAM? Research, reading, and assignment complete   | 4                             |                         |  |
| HOW RESPONSIVE & COMMUNICATIVE WERE YOU BOTH AS A TEAM? Responded to requests and assignment modifications needed. Initiated and responded appropriately via email, Slack etc. | 4                             |                         |  |
| DID BOTH GROUP MEMBERS PARTICIPATE EQUALLY Contributed best academic ability   | 4                             |                         |  |
| DID YOU BOTH FOLLOW THE INITIAL TEAM CONTRACT? Were both team members both positive and productive?  | 4                             |                         |  |

## Project Outline and Database Outline, ERD, and Schema

Division of work:

- Darren: Artists, GalleryEvents\_Artists, GalleryEvents
- Vincent: GalleryInventory, GalleryEvents GalleryInventory, Styles, Mediums

#### Overview

We're tasked with designing a relational database for a successful local artist, Paul Picasso, who wishes to have a pop-up gallery that opens 12 times this year (one event per month) in Corvallis, Oregon. This fictional pop-up will be featuring Paul and other local artists and allow them a place to display their collection of work. There are currently 8 artists that have signed up to showcase this year, but more can be added through this database. This pop-up will only be open at night during "events". In normal business hours, this pop-up is actually a cafe, but the owner is kind enough to lend this space for free. The successful local artist hosting the pop-up requires a database to keep track of each artist, their respective work in our inventory, artworks to be displayed at each pop-up event, the events themselves, as well as the style and medium of each artwork.

Our current inventory contains 10 artwork pieces. This inventory can be added or removed on the website.

Sales are not allowed during pop-up events. Instead, sales occur with each individual artist and the buyer would have to contact the individual artist after the event to purchase. Therefore, purchases, customers, and other related sales information are not tracked within this database.

Local artists here frequently use the following Mediums: Oil, Acrylic, Charcoal, Glass, Pencil, Pastel. Their preferred Styles are: Realism, Painterly, Abstract, Impressionism, Expressionism/Fauvism. This database will pre-populate to contain these Styles and Mediums, but more can be added on the website.

The database driven website will record the following entities: **Artists, GalleryInventory, Styles, Mediums, and GalleryEvents.** It will also record the 2 M:M relationships between **GalleryEvents** and **Artists** & **GalleryEvents** and **GalleryInventory**.

#### Database Outline, in Words

Artists: records the details of Artists using the pop up shop.

Attributes:

artistId: int, auto\_increment, PK firstName: varchar, not NULL lastName: varchar, not NULL email: varchar, not NULL, UNIQUE

phone: char(10), not NULL

CONSTRAINT fullName UNIQUE(firstName, lastName)

Relationship:

- a (1:M) relationship between Artists and GalleryInventory. An Artist can have many artwork pieces in the galleryInventory but each artworkName has only one Artist. The artistld is used as a FK inside of GalleryInventory.

**GalleryInventory:** records the details of each artwork that the pop-up shop has in inventory. *Attributes:* 

inventoryId: int, auto increment, not NULL, PK

artworkName: varchar, NOT NULL

artistId: FK, int, coming from Artists table

styleld: FK, int, NOT NULL coming from Styles table

mediumld: FK, int, NOT NULL coming from Mediums table

CONSTRAINT uniqueArtwork UNIQUE(artworkName, artistld)

FOREIGN KEY (artistId) REFERENCES Artists(artistId) ON DELETE SET NULL

FOREIGN KEY (styleId) REFERENCES Styles(styleId)

FOREIGN KEY (mediumId) REFERENCES Mediums(mediumId)

#### Relationships:

- 1. a (M:1) relationship between GalleryInventory and Artists, described within the Artists relationship description.
- 2. a (M:1) relationship between GalleryInventory and Styles is implemented with styleId as a FK inside of GalleryInventory
- 3. a (M:1) relationship between GalleryInventory and Mediums is implemented with mediumId as a FK inside of GalleryInventory

**Styles:** This table includes two columns. One column for a styleId and another for an associated styleDescription. styleDescription will be pre-populated to these five different values: Realism, Painterly, Abstract, Impressionism, Expressionism/Fauvism.

#### Attributes:

styleId: int, auto\_increment, not NULL, PK styleDescription: varchar, not NULL, UNIQUE

#### Relationships:

- a (1:M) relationship between Styles and GalleryInventory. One styleDescription per artwork (artworkName) but there can be many artworks with the same styleDescription. This is implemented as a FK inside of GalleryInventory.

**Mediums:** This table includes two columns. One column for a mediumld and another for an associated mediumDescription. mediumDescription will be pre-populated to these six different values: Oil, Acrylic, Charcoal, Glass, Pencil, Pastel.

#### Attributes:

mediumId: int, auto\_increment, not NULL, PK mediumDescription: varchar, not NULL, UNIQUE

#### Relationships:

- a (1:M) relationship between Mediums and GalleryInventory. One mediumDescription per artwork (artworkName) but there can be many artworks with the same mediumDescription. This is implemented as a FK inside of GalleryInventory.

**GalleryEvents:** records the 12 events this pop-up will showcase this year.

Attributes:

eventId: int, auto\_increment, not NULL, PK eventName: varchar, UNIQUE, not NULL eventDate: date, UNIQUE, not NULL

Relationships:

- 1. a (M:M) relationship between GalleryEvents and Artists. A GalleryEvent may include many artists and an Artist may attend many GalleryEvents.
  - GalleryEvents\_Artists (Intersecting table representing relationship):
     Attributes:

event\_artistld int (11) AUTO\_INCREMENT, NOT NULL, PRIMARY KEY, eventId: int, not NULL, FK from GalleryEvents artistld: int, not NULL, FK from Artists

FOREIGN KEY (eventId) REFERENCES GalleryEvents(eventId) ON DELETE CASCADE

FOREIGN KEY (artistId) REFERENCES Artists(artistId) ON DELETE CASCADE

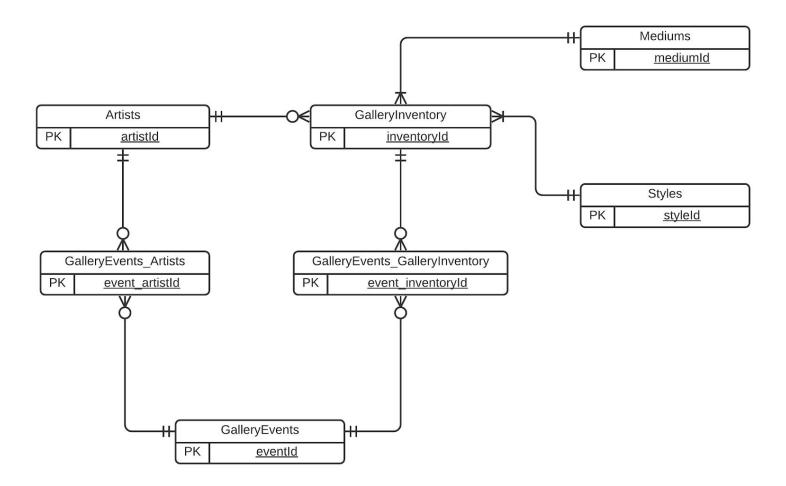
- 2. a (M:M) relationship between GalleryEvents and GalleryInventory. A GalleryEvent may include many artworks from the GalleryInventory. And an inventoryId may be displayed at many GalleryEvents. The maximum number of artwork pieces per event is 10 artwork pieces.
  - GalleryEvents\_GalleryInventory (Intersecting table representing relationship):
     Attributes:

event\_inventoryld int (11) AUTO\_INCREMENT, NOT NULL, PRIMARY KEY, eventId: int, not NULL, FK from GalleryEvents inventoryld: int, not NULL, FK from GalleryInventory

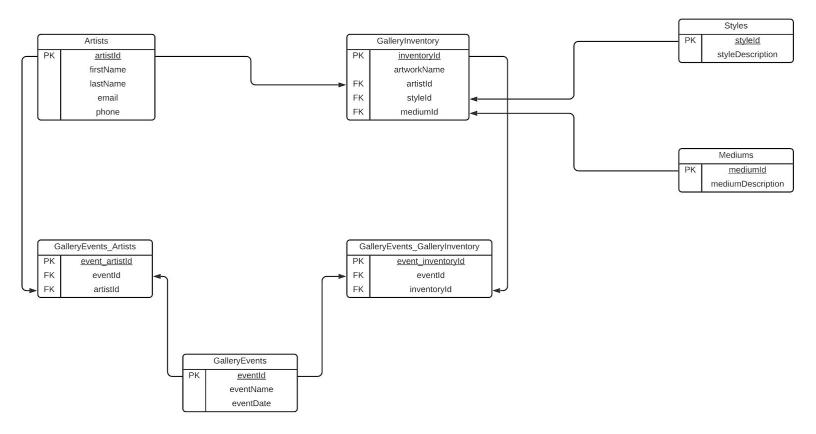
FOREIGN KEY (eventId) REFERENCES GalleryEvents(eventId) ON DELETE CASCADE

FOREIGN KEY (inventoryId) REFERENCES GalleryInventory(inventoryId) ON DELETE CASCADE

# **Entity-Relationship Diagram:**



## Schema:



## **UI Screenshots**

## Index page

Index Artists Events Inventory Styles Mediums Events\_Inventory Events\_Artists

# Corvallis Pop-Up Art Gallery

#### Artists

View, add, modify and remove artists

#### Gallery Events

View, add, modify and remove planned events

#### Gallery Inventory

View, add, modify and remove gallery inventory items

#### Styles

View, add, and modify artistic styles

#### Mediums

View, add, and modify artistic mediums

#### Events\_Inventory

View, add, modify and remove gallery items showcasing at events

#### Events\_Artists

View, add, modify and remove artists attending events

# READ/BROWSE/DISPLAY Artists page

| Artists                            |              | Index            | Artists Even     | ts Inventory | Styles | Mediums    | Events_Inventory | Events |
|------------------------------------|--------------|------------------|------------------|--------------|--------|------------|------------------|--------|
| นเอเอ                              |              |                  |                  |              |        |            |                  |        |
| earch artists                      |              |                  |                  |              |        |            |                  |        |
| First name                         | Last name    |                  |                  |              |        |            |                  |        |
| Email address                      | Phone number |                  |                  |              |        |            |                  |        |
| Search                             |              |                  |                  |              |        |            |                  |        |
| artists Table Artist Id First Name | Last Name    | Email            |                  |              |        | Phone      | Edit             |        |
| Bartholomeus                       | Wapplington  | bwapplington0@e  | europa.eu        |              |        | 4295939266 | Edit             |        |
| 2 Maible                           | Frenchum     | mfrenchum1@wa    | shingtonpost.com |              |        | 1373031077 | Edit             |        |
| B Florian                          | Kiely        | fkiely2@loc.gov  |                  |              |        | 8226627070 | Edit             |        |
| Milty                              | O'Rudden     | morudden3@hista  | ats.com          |              |        | 1562985754 | Edit             |        |
| 5 Jamill                           | Loudwell     | jloudwell0@ocn.n | e.jp             |              |        | 8118741040 | Edit             |        |
| 6 Maison                           | Joynes       | mjoynes1@news    | /ine.com         |              |        | 8979627642 | Edit             |        |
| Clemmie                            | Cuffe        | ccuffe2@ted.com  |                  |              |        | 6603127737 | Edit             |        |
| B Paul                             | Picasso      | ppicasso12@gma   | il.com           |              |        | 1852627837 | Edit             |        |

#### SEARCH/FILTER Artists

\*The search fields are dynamic. In other words, the user can SEARCH/FILTER by using all the fields or only some of the fields.

|                |              | Index | Artists | Events | Inventory | Styles | Mediums | Events_Inventory | Events_Artists |
|----------------|--------------|-------|---------|--------|-----------|--------|---------|------------------|----------------|
| Artists        |              |       |         |        |           |        |         |                  |                |
| Search artists |              |       |         |        |           |        |         |                  |                |
| Paul           | Last name    |       |         |        |           |        |         |                  |                |
| Email address  | Phone number |       |         |        |           |        |         |                  |                |
| Search         |              |       |         |        |           |        |         |                  |                |

#### Artists Table

| Artist Id | First Name | Last Name | Email                | Phone      | Edit |
|-----------|------------|-----------|----------------------|------------|------|
| 8         | Paul       | Picasso   | ppicasso12@gmail.com | 1852627837 | Edit |

#### **INSERT/ADD to Artists**

Artists

Search artists

First name

Last name

Phone number

Index Artists Events Inventory Styles Mediums Events\_Inventory Events\_Artists

First of the control of the co

#### Artists Table

Search

| Artist Id | First Name   | Last Name   | Email                         | Phone      | Edit |
|-----------|--------------|-------------|-------------------------------|------------|------|
| 1         | Bartholomeus | Wapplington | bwapplington0@europa.eu       | 4295939266 | Edit |
| 2         | Maible       | Frenchum    | mfrenchum1@washingtonpost.com | 1373031077 | Edit |
| 3         | Florian      | Kiely       | fkiely2@loc.gov               | 8226627070 | Edit |
| 4         | Milty        | O'Rudden    | morudden3@histats.com         | 1562985754 | Edit |
| 5         | Jamill       | Loudwell    | jloudwell0@ocn.ne.jp          | 8118741040 | Edit |
| 6         | Maison       | Joynes      | mjoynes1@newsvine.com         | 8979627642 | Edit |
| 7         | Clemmie      | Cuffe       | ccuffe2@ted.com               | 6603127737 | Edit |
| 8         | Paul         | Picasso     | ppicasso12@gmail.com          | 1852627837 | Edit |
| 9         | John         | Smith       | jsmith@yahoo.com              | 1234563242 | Edit |

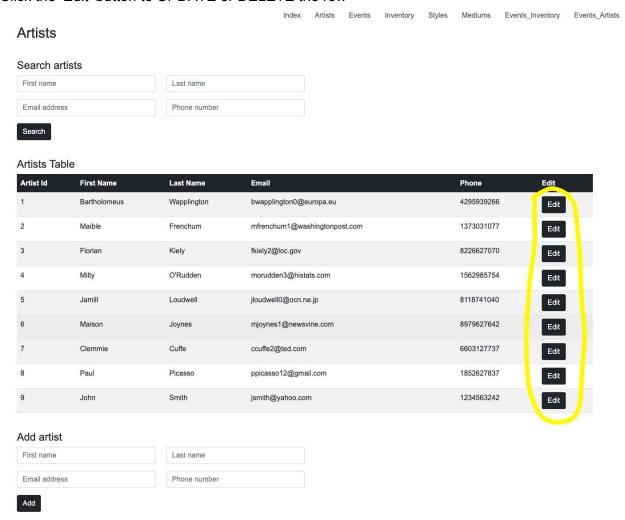
#### Add artist

| John             | Smith      |  |
|------------------|------------|--|
| jsmith@yahoo.com | 1234563242 |  |

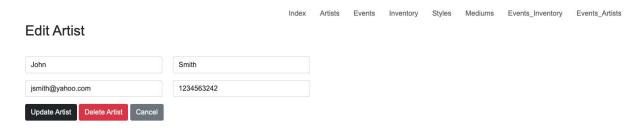
Add

## EDIT/UPDATE & DELETE Artists (part 1)

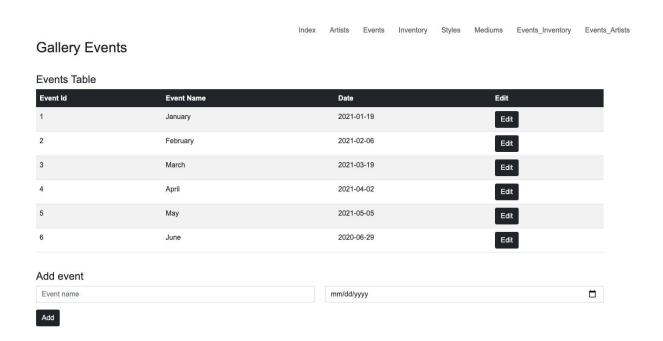
#### \*Click the 'Edit' button to UPDATE or DELETE the row



## EDIT/UPDATE & DELETE Artists (part 2)



## READ/BROWSE/DISPLAY GalleryEvents page

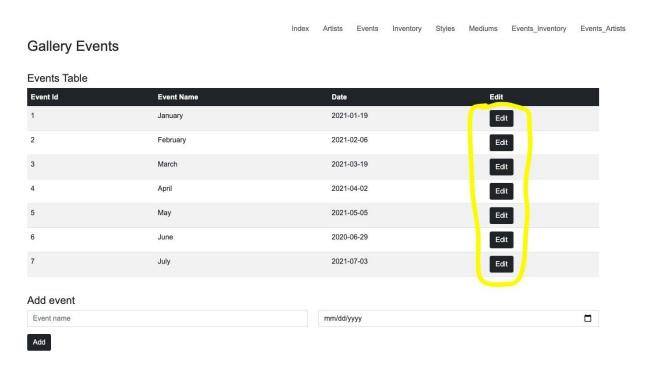


## INSERT/ADD to GalleryEvents

Index Artists Events Inventory Styles Mediums Events\_Inventory Events\_Artists **Gallery Events Events Table** Event Id Edit **Event Name** Date January 2021-01-19 Edit 2 February 2021-02-06 Edit 3 March 2021-03-19 Edit 4 April 2021-04-02 Edit 5 2021-05-05 May Edit 2020-06-29 6 June Edit July 2021-07-03 Edit Add event 07/03/2021 July Add

## EDIT/UPDATE & DELETE GalleryEvents (part 1)

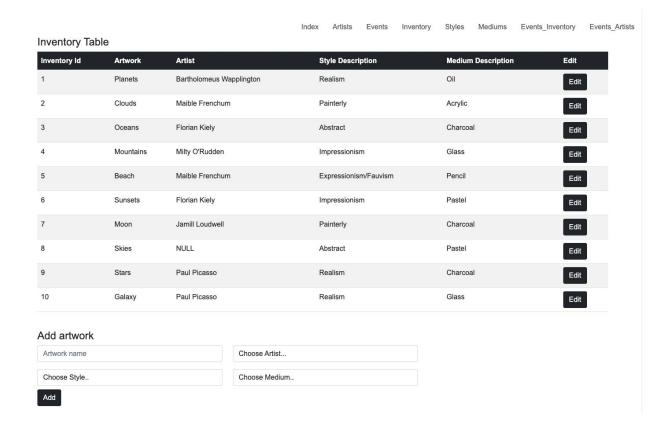
\*Click the 'Edit' button to UPDATE or DELETE the row



# EDIT/UPDATE & DELETE GalleryEvents (part 2)



## READ/BROWSE/DISPLAY GalleryInventory page

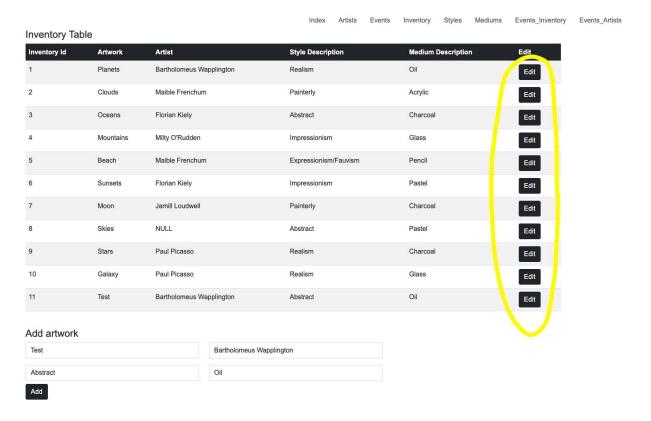


## INSERT/ADD to GalleryInventory

Artists Events Inventory Styles Mediums Events\_Inventory Events\_Artists Index Inventory Table Inventory Id Artwork Artist Style Description **Medium Description** Edit Planets Bartholomeus Wapplington Realism Edit 2 Clouds Maible Frenchum Painterly Acrylic Edit 3 Oceans Florian Kiely Abstract Charcoal Edit Impressionism 4 Mountains Milty O'Rudden Glass Edit 5 Beach Maible Frenchum Expressionism/Fauvism Pencil Edit 6 Sunsets Florian Kiely Impressionism Pastel Edit 7 Moon Jamill Loudwell Painterly Charcoal Edit 8 Skies NULL Abstract Pastel Edit Stars Paul Picasso Realism Charcoal Edit 10 Galaxy Paul Picasso Realism Edit 11 Test Bartholomeus Wapplington Abstract Oil Edit Add artwork

| Test     | Bartholomeus Wapplington |  |
|----------|--------------------------|--|
| Abstract | Oil                      |  |
| Add      |                          |  |

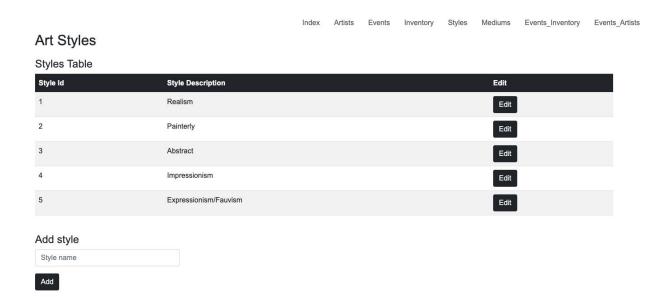
# EDIT/UPDATE & DELETE **GalleryEvents** (part 1) \*Click the 'Edit' button to UPDATE or DELETE the row



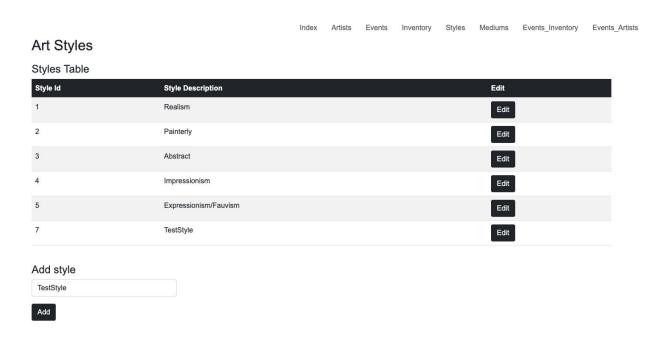
# EDIT/UPDATE & DELETE GalleryEvents (part 2)



## READ/BROWSE/DISPLAY Styles page

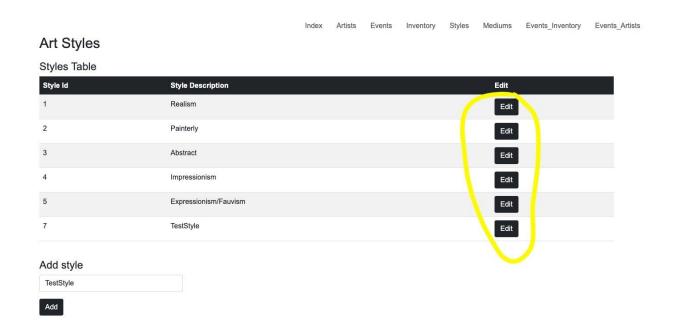


#### INSERT/ADD to Styles



## EDIT/UPDATE **Styles** (part 1)

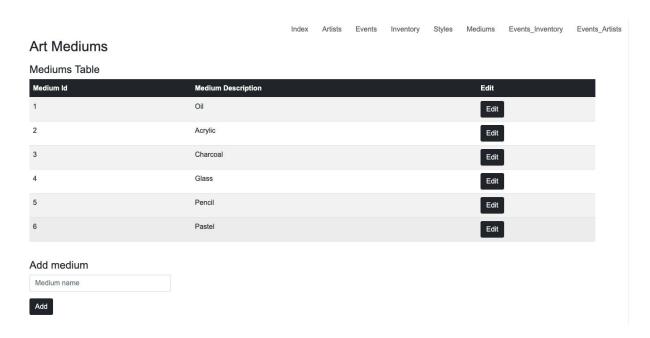
#### \*Click the 'Edit' button to UPDATE the row



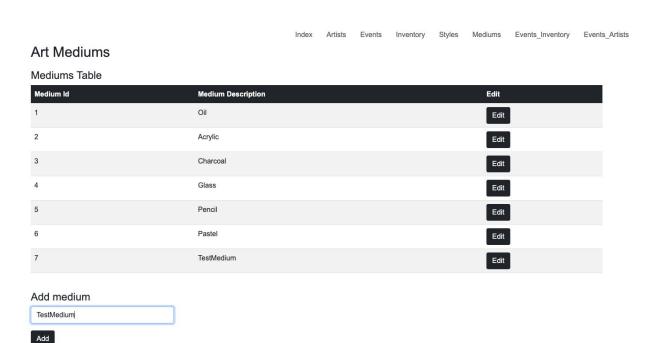
# EDIT/UPDATE **Styles** (part 2)



## READ/BROWSE/DISPLAY Mediums page

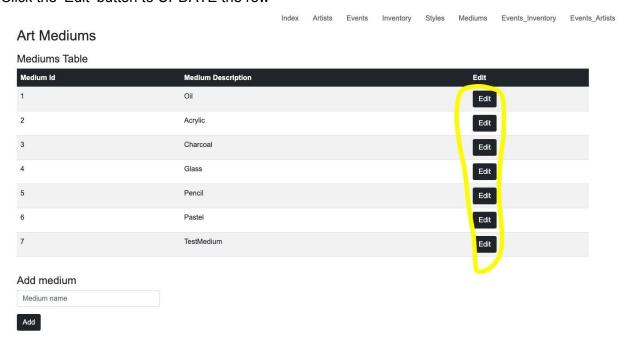


#### INSERT/ADD to Mediums

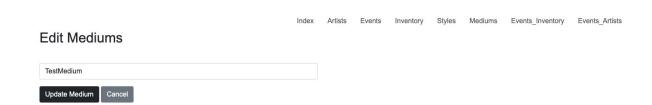


## EDIT/UPDATE **Mediums** (part 1)

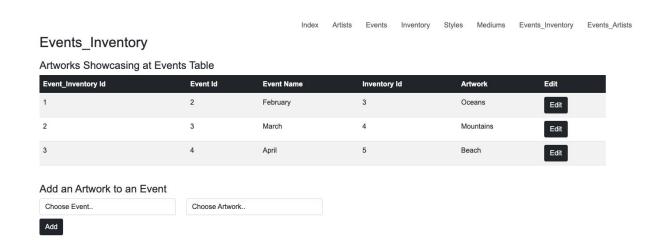
\*Click the 'Edit' button to UPDATE the row



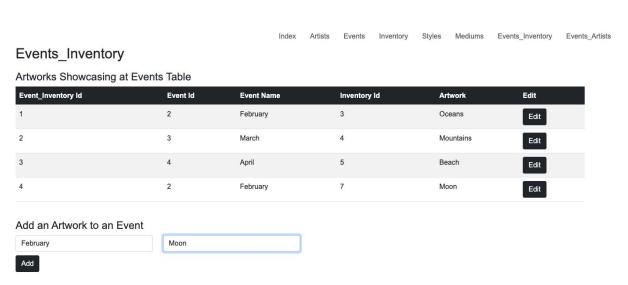
## EDIT/UPDATE Mediums (part 2)



#### READ/BROWSE/DISPLAY GalleryEvents\_GalleryInventory page

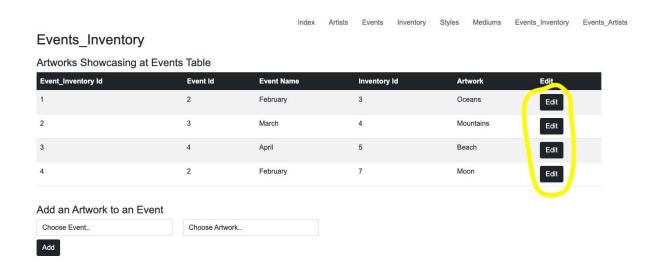


# INSERT/ADD to GalleryEvents\_GalleryInventory

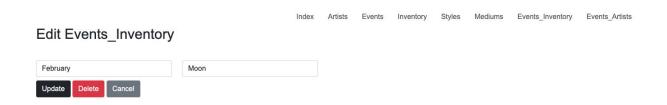


## EDIT/UPDATE & DELETE GalleryEvents\_GalleryInventory (part 1)

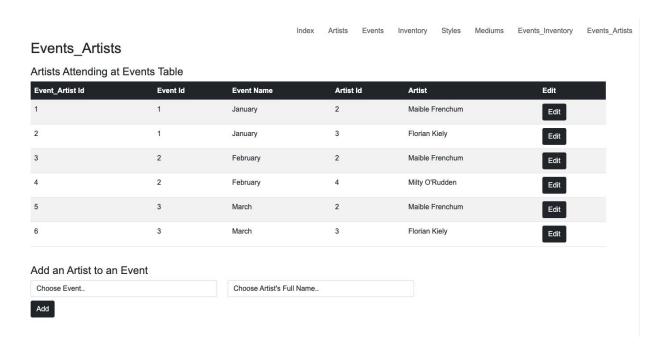
\*Click the 'Edit' button to UPDATE or DELETE the row



# EDIT/UPDATE & DELETE GalleryEvents\_GalleryInventory (part 2)



## READ/BROWSE/DISPLAY GalleryEvents\_Artists page

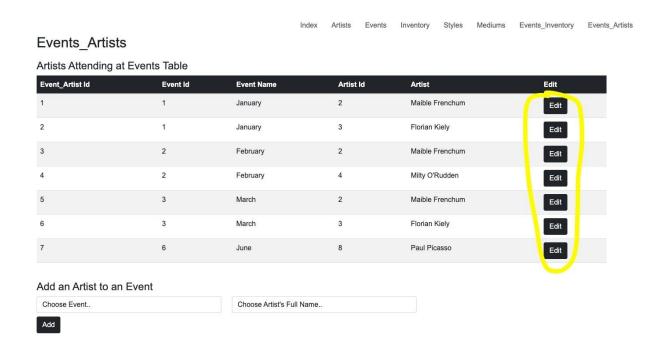


## INSERT/ADD to GalleryEvents\_Artists

Index Artists Events Inventory Styles Mediums Events\_Inventory Events\_Artists Events\_Artists Artists Attending at Events Table Event\_Artist Id Event Id Artist Id Edit **Event Name** Artist 2 Maible Frenchum Edit January 2 Florian Kiely 1 January 3 Edit 3 2 February Maible Frenchum Edit 2 Milty O'Rudden 4 February 4 Edit Edit March Maible Frenchum 6 3 March Florian Kiely Edit Paul Picasso Edit Add an Artist to an Event Paul Picasso

## EDIT/UPDATE & DELETE GalleryEvents\_Artists (part 1)

\*Click the 'Edit' button to UPDATE or DELETE the row



## EDIT/UPDATE & DELETE GalleryEvents\_Artists (part 2)

