TABLE 1: MAU ArtWork Status History Reports:

MAU Artwork Status History

Artwork No: 8
Artwork Title: Beach Sunset

Artist Code: 1234
Artist Name: Michel Van Gough

Date Added to stock: 1st Feb 2018

Date	Artwork Status	Gallery ID	Gallery Name
01/02/2018	In MAU Warehouse		
10/03/2018	Shipped to Gallery	12	Seaside Breeze Art Gallery
10/4/2018	In MAU Warehouse		
5/5/2019	Shipped to Gallery	14	Melbourne National Gallery
20/12/2019	In MAU Warehouse		
03/01/2020	Shipped to Gallery	12	Seaside Breeze Art Gallery
28/01/2020	In MAU Warehouse		
05/02/2020	Returned to Painter		

UNF:

ARTWORK(artwork_no,artwork_title,artist_code,artist_name,added_date,(status_date, artwork_status,gallery_id,gallery_name))

1NF:

ARTWORK (artwork_no,artwork_title,artist_code,artist_name,added_date)

STATUS(artwork_no, artist_code ,status_date, artwork_status,gallery_id,gallery_name)

Partial Dependency:

artist_code → artist_name

2NF:

ARTWORK (artwork_no ,artist_code ,added_date, artwork_title)

ARTIST(artist_code,artist_name)

STATUS(artwork_no, artist_code ,status_date, artwork_status,gallery_id,gallery_name)

Transitive dependency:

gallery_id → gallery_name

3NF:

ARTWORK (<u>artwork_no</u> ,<u>artist_code</u> ,added_date, artwork_title)

ARTIST(<u>artist_code</u>,artist_name)

STATUS(<u>artwork_no, artist_code ,status_date</u>, artwork_status,*gallery_id*)

GALLERY(<u>gallery_id</u>,gallery_name)

Full dependency:

artwork_no ,artist_code → added_date, artwork_title

artist_code → artist_name

artwork_no, artist_code ,status_date → artwork_status,gallery_id

gallery_id → gallery_name

TABLE 2: Sample MAU GalleryDisplay Report

Sample MAU GalleryDisplay Report

Gallery Display Report

Gallery ID: 12
Gallery Name: Seaside Breeze Art Gallery
Gallery Street: 150 Church Street
Gallery Town: Cowes
Gallery State: VIC
Gallery Opens: 08:00
Gallery Closes: 18:00

Artist Code	Artwork No	Artwork Title	Artist Name	Date Exhibition Started	Date Exhibition Ended	Featured in Catalog
1234	8	Beach Sunset	Michael Van Gough	14/03/2018	1/4/2018	Yes
	...					
2341	1	Whispering Gums	Margot Quigley	5/10/2018	01/06/2019	No
	...					
1234	12	Reverse blue Poles	Michael Van Gough	5/12/2019	10/12/2019	Yes
	...					
1234	8	Beach Sunset	Michael Van Gough	10/1/2020	15/1/2020	No
	...					
3251	8	Flowers in Vase	Maryanne Flower	12/02/2020		Yes

GALLERY(gallery_id, gallery_name, gallery_street ,gallery_town ,gallery_state, gallery_opens, gallery_closes,(artist_code, artwork_no,artwork_title,artist_name , date_exhibition_started, date_exhibition_ended,featured_in_catalog)

1NF:

GALLERY(<u>gallery_id</u>, gallery_name, gallery_street ,gallery_town ,gallery_state, gallery_opens, gallery_closes)

EXHIBITION(<u>artist_code, artwork_no</u>,artwork_title,artist_name,<u>date_exhibition_started</u>, date_exhibition_ended,featured_in_catalog, *gallery_id*)

Partial Dependency:

artwork_no, artist_code → artwork_title

artist_code → artist_name

2NF:

GALLERY(<u>gallery_id</u>, gallery_name, gallery_street ,gallery_town ,gallery_state, gallery_opens, gallery_closes)

EXHIBITION(<u>artist_code, artwork_no</u>, <u>date_exhibition_started</u>, date_exhibition_ended, featured_in_catalog, *gallery_id*)

ARTWORK(<u>artwork_no, artist_code</u>,artwork_title)

ARTIST(<u>artist_code</u>,artist_name)

Transitive dependency:

No Transitive dependency

3NF:

GALLERY(<u>gallery_id</u>, gallery_name, gallery_street ,gallery_town ,gallery_state, gallery_opens, gallery_closes)

EXHIBITION(<u>artist_code, artwork_no</u>, <u>date_exhibition_started</u>, date_exhibition_ended, featured_in_catalog, *gallery_id*)

ARTWORK(<u>artwork_no, artist_code</u>,artwork_title)

ARTIST(<u>artist_code</u>,artist_name)

Full dependency:

gallery_id → gallery_name, gallery_street ,gallery_town ,gallery_state, gallery_opens, gallery_closes

artist_code, artwork_no, date_exhibition_started → date_exhibition_ended, featured_in_catalog, *gallery_id*

artwork_no,artist_code → artwork_title

artist_code → artist_name

ATTRIBUTE SYNTHESIS:

1. **ARTWORK** (<u>artwork_no</u> ,<u>artist_code</u> ,added_date, artwork_title)
2. **ARTIST**(<u>artist_code</u>,artist_name)
3. **STATUS**(<u>artwork_no, artist_code ,status_date</u>, artwork_status,*gallery_id*)
4. **GALLERY**(<u>gallery_id</u>,gallery_name)
5. **GALLERY**(<u>gallery_id</u>, gallery_name, gallery_street ,gallery_town ,gallery_state, gallery_opens, gallery_closes)
6. **EXHIBITION**(<u>artist_code, artwork_no, date_exhibition_started</u>, date_exhibition_ended, featured_in_catalog, *gallery_id*)
7. **ARTWORK**(<u>artwork_no, artist_code</u>,artwork_title)
8. **ARTIST**(<u>artist_code</u>,artist_name)

1 and 7:

1. **ARTWORK** (<u>artwork_no</u> ,<u>artist_code</u> ,added_date, artwork_title)

2 and 8:

2 **ARTIST**(<u>artist_code</u>,artist_name)

3:

3. **STATUS**(<u>artwork_no, artist_code ,status_date</u>, artwork_status,*gallery_id*)

4 and 5:

4. **GALLERY**(<u>gallery_id</u>, gallery_name, gallery_street ,gallery_town ,gallery_state, gallery_opens, gallery_closes)

6:

5. **EXHIBITION**(<u>artist_code, artwork_no, date_exhibition_started</u>, date_exhibition_ended, featured_in_catalog, *gallery_id*)

FINAL CONSOLIDATED RELATIONS AFTER AMALGAMATION:

1. **ARTWORK**(<u>artwork_no</u> ,<u>artist_code</u> ,added_date, artwork_title)
2. **ARTIST**(<u>artist_code</u>,artist_name)
3. **STATUS**(<u>artwork_no, artist_code ,status_date</u>, artwork_status,*gallery_id*)
4. **GALLERY**(<u>gallery_id</u>, gallery_name, gallery_street ,gallery_town ,gallery_state, gallery_opens, gallery_closes)
5. **EXHIBITION**(<u>artist_code, artwork_no, date_exhibition_started</u>, date_exhibition_ended, featured_in_catalog, *gallery_id*)