

**Assignment 1B Normalisation**  
**Shenyi Zhang 30359953**

- **MAU ArtWork Status History Reports.**

UNF:

ARTWORK(art\_no, art\_title, artist\_code, artist\_name, art\_add\_date(status\_date, status, gal\_id, gal\_name))

1NF:

ARTWORK(art\_no, art\_title, artist\_code, artist\_name, art\_add\_date)  
STATUS(status\_date, art\_no, artist\_code, status, gal\_id, gal\_name)

Partial Dependencies:

artist\_code → artist\_name

2NF:

ARTWORK(art\_no, artist\_code, art\_title, art\_add\_date)  
STATUS(status\_date, art\_no, artist\_code, status, gal\_id, gal\_name)  
ARTIST(artist\_code, artist\_name)

Transitive Dependencies:

gal\_id → gal\_name

3NF:

ARTWORK(art\_no, artist\_code, art\_title, art\_add\_date)  
STATUS(status\_date, art\_no, artist\_code, status, gal\_id)  
ARTIST(artist\_code, artist\_name)  
GALLERY(gal\_id, gal\_name)

Full Dependencies:

art\_no, artist\_code → art\_title, art\_add\_date  
status\_date, art\_no, artist\_code → status, gal\_id  
artist\_code → artist\_name  
gal\_id → gal\_name

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- MAU GalleryDisplay Report

UNF:

GALLERY(gal\_id, gal\_name, gal\_str, gal\_town, gal\_state, gal\_open, gal\_close(artist\_code, art\_no, art\_title, artist\_name, exh\_start, exh\_end, exh\_fea) )

1NF:

GALLERY(gal\_id, gal\_name, gal\_str, gal\_town, gal\_state, gal\_open, gal\_close)

EXHIBITION(artist\_code, art\_no, exh\_start, art\_title, artist\_name, exh\_end, exh\_fea, gal\_id)

Partial Dependencies:

artist\_code, art\_no → art\_title

artist\_code → artist\_name

2NF:

GALLERY(gal\_id, gal\_name, gal\_str, gal\_town, gal\_state, gal\_open, gal\_close)

EXHIBITION(artist\_code, art\_no, exh\_start, exh\_end, exh\_fea, gal\_id)

ARTWORK(artist\_code, art\_no, art\_title )

ARTIST(artist\_code, artist\_name)

Transitive Dependencies:

No Transitive Dependencies.

3NF:

GALLERY(gal\_id, gal\_name, gal\_str, gal\_town, gal\_state, gal\_open, gal\_close)

EXHIBITION(artist\_code, art\_no, exh\_start, exh\_end, exh\_fea, gal\_id)

ARTWORK(artist\_code, art\_no, art\_title )

ARTIST(artist\_code, artist\_name)

Full Dependencies:

gal\_id → gal\_name, gal\_str, gal\_town, gal\_state, gal\_open, gal\_close

artist\_code, art\_no, exh\_start → exh\_end, exh\_fea, gal\_id

artist\_code, art\_no → art\_title

artist\_code → artist\_name

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- Collected 3NF Relations:

1. ARTWORK(art\_no, artist\_code, art\_title, art\_add\_date)
2. STATUS(status\_date, art\_no, artist\_code, status, gal\_id)
3. ARTIST(artist\_code, artist\_name)
4. GALLERY(gal\_id, gal\_name)
5. GALLERY(gal\_id, gal\_name, gal\_str, gal\_town, gal\_state, gal\_open, gal\_close)
6. EXHIBITION(artist\_code, art\_no, exh\_start, exh\_end, exh\_fea, gal\_id)
7. ARTWORK(artist\_code, art\_no, art\_title)
8. ARTIST(artist\_code, artist\_name)

- ATTRIBUTE SYNTHESIS:

1&7:

ARTWORK(art\_no, artist\_code, art\_title, art\_add\_date)

2:

STATUS(status\_date, art\_no, artist\_code, status, gal\_id)

3&8:

ARTIST(artist\_code, artist\_name)

4&5:

GALLERY(gal\_id, gal\_name, gal\_str, gal\_town, gal\_state, gal\_open, gal\_close)

6:

EXHIBITION(artist\_code, art\_no, exh\_start, exh\_end, exh\_fea, gal\_id)