**SAMPLE 1:**

UNF

MOVEMENT(ART\_NO,ART\_TITLE,ARTIST\_CODE,(ARTIST\_FNAME,ARTIST\_LNAME),DATE\_ADDED,DATE,ART\_STATUS,GAL\_ID,GAL\_NAME)

1NF

MOVEMENT(ART\_NO,ARTIST\_CODE,GAL\_ID,DATE,ART\_TITLE,(ARTIST\_FNAME,ARTIST\_LNAME),DATE\_ADDED,ART\_STATUS,GAL\_ID,GAL\_NAME)

Partial Dependencies:

(ART\_NO,ARTIST\_CODE🡪ART\_TITLE,DATE\_ADDED)

(ARTIST\_CODE🡪(ARTIST\_FNAME,ARTIST\_LNAME))

(GAL\_ID🡪GAL\_NAME)

(ART\_NO,ARTIST\_CODE,DATE🡪ART\_STATUS)

2NF

ARTWORK(ART\_NO,ARTIST\_CODE,ART\_TITLE,DATE\_ADDED)

ARTIST(ARTIST\_CODE,(ARTIST\_FNAME,ARTIST\_LNAME))

GALLERY(GAL\_ID,GAL\_NAME)

MOVEMENT(ART\_NO,ARTIST\_CODE,DATE,ART\_STATUS)

Transitive Dependencies:

No Transitive Dependencies.

3NF

ARTWORK(ART\_NO,ARTIST\_CODE,ART\_TITLE,DATE\_ADDED)

ARTIST(ARTIST\_CODE,(ARTIST\_FNAME,ARTIST\_LNAME))

GALLERY(GAL\_ID,GAL\_NAME)

MOVEMENT(ART\_NO,ARTIST\_CODE,DATE,ART\_STATUS)

Full Dependencies

(ART\_NO,ARTIST\_CODE🡪ART\_TITLE,DATE\_ADDED)

(ARTIST\_CODE🡪ARTIST\_FNAME,ARTIST\_LNAME)

(GAL\_ID🡪GAL\_NAME)

(ART\_NO,ARTIST\_CODE,DATE🡪ART\_STATUS)

**SAMPLE 2**

UNF

(ART\_NO,ART\_TITLE,ARTIST\_CODE,(ARTIST\_FNAME,ARTIST\_LNAME),DATE\_ADDED,DATE,ART\_STATUS,GAL\_ID,GAL\_NAME,(GAL\_STREET,GAL\_TOWN,GAL\_STATE), GAL\_OPENS,GAL\_CLOSES,EXH\_START, EXH\_END,EXH\_FEAT)

1NF

(ART\_NO,ARTIST\_CODE,EXH\_START,GAL\_ID,ART\_TITLE,(ARTIST\_FNAME,ARTIST\_LNAME),DATE\_ADDED,

DATE,ART\_STATUS,(GAL\_STREET,GAL\_TOWN,GAL\_STATE),GAL\_NAME,GAL\_OPENS,GAL\_CLOSES,

EXH\_END,EXH\_FEAT)

Partial Dependencies:

(ART\_NO,ATIST\_CODE🡪ART\_TITLE,DATE\_ADDED)

(ARTIST\_CODE🡪ARTIST\_FNAME,ARTIST\_LNAME)

2NF

ARTWORK(ART\_NO,ARTIST\_CODE,ART\_TITLE,DATE\_ADDED)

EXHIBITION(ART\_NO,ARTIST\_CODE,EXH\_START,GAL\_ID,GAL\_NAME,(GAL\_STREET,GAL\_TOWN,GAL\_STATE), GAL\_OPENS,GAL\_CLOSES,EXH\_END,EXH\_FEAT)

ARTIST(ARTIST\_CODE ARTIST\_FNAME,ARTIST\_LNAME)

Transitive Depenencies:

(GAL\_ID🡪GAL\_NAME,(GAL\_STREET,GAL\_TOWN,GAL\_STATE)GAL\_OPENS, GAL\_CLOSES)

3NF

GALLERY(GAL\_ID,GAL\_NAME,(GAL\_STREET,GAL\_TOWN,GAL\_STATE),GAL\_OPENS,GAL\_CLOSES)

ARTWORK(ART\_NO,ARTIST\_CODE,ART\_TITLE,DATE\_ADDED)

EXHIBITION(ART\_NO,ARTIST\_CODE,EXH\_START,EXH\_END,EXH\_FEAT)

ARTIST(ARTIST\_CODE, ARTIST\_FNAME,ARTIST\_LNAME)

Full Dependencies:

(GAL\_ID🡪GAL\_NAME,GAL\_STREET,GAL\_STATE,GAL\_OPENS,GAL\_CLOSES)

(ART\_NO,ARTIST\_CODE,🡪ART\_TITLE,DATE\_ADDED)

(ART\_NO,ARTIST\_CODE,EXH\_START🡪,EXH\_END,EXH\_FEAT)

(ARTIST\_CODE🡪 ARTIST\_FNAME,ARTIST\_LNAME)

**Attribute Synthesis** between **SAMPLE 1** and **SAMPLE 2**

ARTWORK(ART\_NO,ARTIST\_CODE🡪ART\_TITLE,DATE\_ADDED)

ARTIST(ARTIST\_CODE🡪ARTIST\_FNAME,ARTIST\_LNAME)

GALLERY(GAL\_ID🡪 GAL\_NAME,GAL\_STREET,GAL\_STATE,GAL\_OPENS,GAL\_CLOSES)

MOVEMENT(ART\_NO,ARTIST\_CODE,DATE🡪ART\_STATUS)

EXHIBITION(ART\_NO,ARTIST\_CODE,EXH\_START🡪EXH\_END,EXH\_FEAT)