

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,DATE,GAL_ID,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))

2NF

ARTWORK(ART_NO,ARTIST_CODE,ART_TITLE,DATE_ADDED)

ARTIST(ARTIST_CODE, (ARTIST_FNAME,ARTIST_LNAME))

MOVEMENT(ART_NO,ARTIST_CODE,DATE,ART_STATUS)

Transitive Dependencies:

(GAL_ID→GAL_NAME)

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
EXHIBIT(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
EXHIBIT(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,ARTIST_CODE→ART_TITLE,DATE_ADDED)

(ARTIST_CODE→ARTIST_FNAME,ARTIST_LNAME)

2NF
ARTWORK(ART_NO,ARTIST_CODE,ART_TITLE,DATE_ADDED)
EXHIBIT(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 Dependencies:

(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)
EXHIBIT(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)
EXHIBIT(ART_NO,ARTIST_CODE,EXH_START→EXH_END,EXH_FEAT)

