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CSCI 403 Database Mangement Project 7

Attributes: {composer, era, era-dates, birthplace, continent, work, setting}

key : {composer, era, work}

Functional Dependences:

{composer} → {birthplace}

{composer, work} → {setting}

{era} → {era-dates}

{birthplace} → {continent}

Solution:

Step 1:

1. starting Schema: R

2. Decompose on : {composer} → {birthplace, continent}   ⟶ Since the closure of composer encapsulates continent.

Results:

R1: {composer, era, era-dates, work, setting}

R2: {composer, birthplace, continent} *

Step 2:

1. Starting Schema: R1

2. Decompose on : {composer, work} → {setting}

Results:

R3: {composer, work, era, era-dates}

R4: {composer, work, setting} *

Step 3:

1. Starting Schema: R3

2. Decompose on: {era} → {era-dates}

Results:

R5 : {composer, work, era} *

R6: {era, era-dates} *

Final Database:

R5: {composer, work, era}

FD: {composer, work, era} → {composer, work, era}

R2: {composer, birthplace, continent}

FD: {composer} → {birthplace, continent}

R4: {composer, work, setting}

FD: {composer, work} → {setting}

R6: {era, era-dates}

FD: {era} → {era-dates}