Database Design

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Gallery Customer History Form

        Customer Name

        Jackson, Elizabeth          Phone  (206) 284-6783
        123 – 4ᵗʰ Avenue
        Fonthill, ON
        L3J 4S4

Purchases Made

Artist                  Title                       Purchase Date     Sales Price

03 - Carol Channing   Laugh with Teeth              09/17/2000         7000.00
15 - Dennis Frings    South toward Emerald Sea      05/11/2000         1800.00
03 - Carol Channing    At the Movies                02/14/2002         5550.00
15 - Dennis Frings    South toward Emerald Sea      07/15/2003         2200.00
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The Gill Art Gallery wishes to maintain data on their customers, artists and paintings. They may have several paintings by each artist in the gallery at one time. Paintings may be bought and sold several times. In other words, the gallery may sell a painting, then buy it back at a later date and sell it to another customer.

What are the entities?

- *Art*
- *Artist*
- *Customer*
- *Address*
- *Phone Number*
- *Price*
- *Date of transaction*

Artist
- Artist_id
- Artist name

Art
- Art_id
- Artist_id
- Title
- Available
- Price (current)

Customer
- Customer_id
- Customer_name
- Phone number
- Address

Transaction
- Invoice_number
- Art_id
- Customer_id
- Date of transaction
- Price (at date of transaction)

SELECT customer_name, phone_number, address
FROM customer
WHERE customer_id = ?;

SELECT *
FROM transaction
WHERE customer_id = ?
ORDER BY date_of_transaction ASC;

Terms

3NF (Third Normal Form)
IDEMPOTENT - Same result if action repeated multiple times

The Relational Attestment to 3NF

The Database Designer's Swearing In Ceremony

Raise your left mouse button finger and repeat after me:

"I solemnly swear that all attributes will be related to,
The KEY,
The WHOLE Key,
And NOTHING BUT the Key.

So help me Codd"

Your finger may now be rested