WMCS16001.2018-2019.1B
Information Systems

Relational Databases Management Systems

Normalisation, Triggers, Stored Procedures and Functions

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Case Scenario

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.

Gallery Customer History Form

Customer Name

Jackson, Elizabeth
123 – 4th Avenue
Fonthill, ON
L3J 4S4

Phone (206) 284-6783

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

Considering the unnnormalized schema

customer
[custno, cust_name, cust_addr, cust_phone, (artist_id, artist_name, art_code, art_title, pur_date, price)]

The above relation allows multiple values of the attributes within the brackets for each set of (custno, cust_name, cust_addr, cust_phone)

Tasks

1. Normalize the schema up to the third normal form and create it in postgresql. For each table, indicate the primary and foreign keys. Provide the scripts to generate the schema.

2. Create triggers (and procedures/functions if necessary) in the appropriate tables to set to uppercase the customer and the artists' names with every insert or update.

3. Create a trigger that checks that the selling price is greater than 0.