WMCS009-05.2020.2021.1B
Information Systems

Relational Databases Management Systems

Normalisation, Triggers, Stored Procedures and Functions

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Assignment 1
Deadline: 20th November at 12:00h
Submit to Nestor

university of groningen

Case Scenario

The Azzopardi Auction Store wishes to maintain data on their customers, suppliers and products. They may have several products by each supplier in the store at the same time.

Auction Customer History Form

Customer name

Keith, Borg
1, Main street
Groningen, the Netherlands

Phone (+31) 546798743

Purchases made

Supplier	Product	Purchase Date	Sales Price
04 - Twanny Cortis	101 - Painting XYZ	06-07-2015	EUR5000
01 - Anna Xuereb	102 - Car ABC	10-11-2016	EUR15000
02 - Josephine Borg	103 - Vase 123	01-09-2017	EUR3500
01 - Anna Xuereb	104 - Tractor V	05-08-2018	EUR10000

Considering the unnormalized schema

customer
[custno, cust_name, cust_addr, cust_phone, (supplier_id, supplier_name, product_code, product_title, purchase_date, sales_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 and Deliverable

Tasks

1. Normalize the schema, step by step (i.e one normalization step at a time), up to the BCNF and create it in postgresql. For each table, indicate the primary and foreign keys. Provide the scripts that generate the schema. [5 points]

2. Create triggers (and procedures/functions if necessary) in the appropriate tables to set to uppercase the customers' and the suppliers' names with every insert or update. [1 point]

3. Create a trigger that checks that the selling price is greater than 0. [1 point]

4. Create a trigger that sets the sales_price of a product to 90% of its original price with every 10th item purchased by the same customer. [2 points]

Deliverable

• A document with 4 clear headings addressing the above four tasks.

• Readability and presentation of document account for 1 point