Week 10 Assignment

By

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Advance databases

Professor.MAZIAR

1. We want to design a database for the ‘Good News Grocers’ table. You have to do it step by step and present each table at 1st, 2nd, 3rd normal forms.

**Good News Grocers**

**User View 1 - Price Update List**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Department** | **Product**  **Code** | **Aisle**  **Number** | **Price** | **Unit of Measure** |
| Produce | 4081 | 1 | 0.35 | lb |
| Produce | 4027 | 1 | 0.90 | ea |
| Produce | 4108 | 1 | 1.99 | lb |
|  |  |  |  |  |
| Butcher | 331100 | 5 | 1.50 | lb |
| Butcher | 331105 | 5 | 2.40 | lb |
| Butcher | 332110 | 5 | 5.00 | lb |
|  |  |  |  |  |
| Freezer | 411100 | 6 | 1.00 | ea |
| Freezer | 521101 | 6 | 1.00 | ea |
| Freezer | 866503 | 6 | 5.00 | ea |
| Freezer | 866504 | 6 | 5.00 | ea |

This report is used by the department managers to update the prices that are displayed in the grocery store for these products.

UNF  
  
Department(Department, Aisle\_Number(Product\_Code, Price, Unit\_Measure)

1NF

Department(Department\_ID, Department\_Name, Aisle\_Number)

Department\_Product(Department, Product\_Code, Price, Unit\_Measure)\

2NF  
Department(Department\_ID, Department\_Name, Asile\_Number)

Product(Product\_Code, Price, Unit\_Measure, Department\_ID(Foreign Key)

3NF

After examing the relationship between department and product, we find out that is a onemany relationship(1-M relationship), so we don’t need the composite table(department\_product). Therefore, we can eliminate the foreign key in the product table.

2- 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 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

UNF:

Customer(customer\_number, customer\_name, customer\_address, customer\_phone,(artist\_id, artist\_name, art\_title, purchase\_date))

1NF:

Customer(customer\_number, customer\_name, customer\_address, customer\_phone)

Customer\_art(customer\_number, art\_code, purchase\_date, artist\_id, artist\_name, artist\_price, art\_title)

2NF:

Customer(customer\_number, customer\_name, customer\_address, customer\_phone)

Customer\_art(customer\_number, art\_code, purchase\_date, price)

Art(art\_code, art\_title, artist\_id, artist\_name)

3NF:

Customer(customer\_number, customer\_name, customer\_street, customer\_city, customer\_province, customer\_postalcode, customer\_phone)

Customer\_Art(customer\_number, art\_code, purchase\_date, price)

Art(art\_code, art\_title, artist\_id(Foreign Key))

Artist(artist\_id, artist\_firstname, artist\_lastname)