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Lab 10 – Normalization 2

(2NF, 3NF)

Objective:

Students will learn:

- To continue the **normalization** of user views from **1NF** to **2NF and 3NF**
- How to identify and remove **partial dependencies**
- How to identify and remove **transitive dependencies**

Submission:

You only need to submit the final part of this lab, Your name and student ID MUST be in the PDF file or you will receive a mark of zero.

Definitions:

Definition**:** A relation is in 1NF if it contains no multi-valued dependencies (also known as repeating groups).

Definition**:** A relation is in 2NF it is in 1NF and it contains no Partial Dependencies.

Definition: A Partial Dependency occurs when a non-key attribute(s) is dependent on (or is determined by) a part of a composite primary key.

Definition**:** A relation is in 3NF it is in 2NF and it contains no Transitive Dependencies.

Definition**:** A Transitive Dependency occurs when a non-key attribute (s) is dependent on (or is determined by) another non-key attribute.

Instructions:

Lab 9 Submission:

For the following User View, determine the 1, 2 and 3NF and hand in this page to your instructor. The UNF relation has been provided.

Premiere Corporation
Order Detail Report

Order Number	Order Date	Cust Number	Cust Last Name	Part Number	Part Desc	Qnty Ordered	Quoted Price
12489	2016-09-02 124	124	Adams	AX12	Iron	11	14.95
12491	2016-09-02 311	311	Charles	BT04	GasGrill	3	440.00
				BZ66	Washer	1	399.99
				CX11	MiniBlender	1	11.98
12494	2016-09-04	315	Daniels	CB03	Bike	4	279.96
12495	2016-09-04	256	Samuels	CX11	MiniBlender	2	23.96
12498	2016-09-05	522	Nelson	AZ52	Dartboard	2	12.96
				BA74	Basketbal	4	24.96
12500	2016-09-05	124	Adams	BT04	GasGrill	1	149.99
12504	2016-09-05	522	Nelson	CZ81	Treadmill	2	325.98

UNF:
Order [**CK** OrderNo, Orderdate, CustNo, CustLname, (PartNo, PartDesc, QtyOrd, Price)]

1NF:

[CK OrderNo, Orderdate, custNo, CustLname, (PartNo, PartDesc, QtyOrd, Price)]

Partial dependency are:-
1) Customer No → Customer Name
2) Part Number → Part Description
3) Order Number → Order Date

2NF:

Customer [Customer Number, Customer Name]
Part [Part Number, Part Description]

Order [Order number, Order Date, Customer Number (PK)]
BrOrderParts [Order number (PK, FK), Part number (PK, FK), Qty ordered, quoted Price]

3NF:

The above 2NF is in 3NF forms, because there is no transitional dependency in this phase.

Customer [Customer Number, Customer Name]
Part [Part Number, Part Description]
Order[Order number, Order Date, Customer Number (FK)]
BrOrderParts [Order number (PK, FK) , Part Number (PK, FK), Qty ordered, quoted Price]