# Lab 10 – Normalization

# (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:

***Save your lab file as a PDF file. You need to submit a single PDF file for this lab. The name of the file must be as follow:***

L10_ID_LASTNAME.pdf

# 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.

# Lab 10 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 [OrderNo, Orderdate, CustNo, CustLname, (PartNo, PartDesc,QtyOrd, Price)]

**1NF:**

ORDER [**OrderNo**, **PartNo**, Orderdate, CustNo, CustLname ,PartDesc, QtyOrd, Price]

**2NF:**

ORDER [**OrderNo(PK)**, **CustNo(FK)**, Orderdate, CustNo, CustLname]
PART[**PartNo**, PartDesc,Price]
ORDER_PART[**OrderNo(PK,FK), PartNo(PK,FK),** QtyOrd]

**3NF:**
ORDER [**OrderNo(PK)**, Orderdate,**CustNo(FK)**]
CUSTOMER[**CustNo**, CustLname]
PART[**PartNo**, PartDesc,Price]