**Customer Details View**

**Initial Table:**

**CustomerNumber (PK),** Name, Address, City, Province, PostalCode, HomePhone

**1NF:**

**CustomerNumber (PK),** FirstName, LastName, Address, City, Province, PostalCode, HomePhone

**2NF:**

(no changes)

**3NF**:

(no changes)

Table

Description automatically generated

**Customer Orders View**

**Initial Table:**

CustomerName, CustomerNumber, Address, Phone, Date, **OrderNumber (PK)**, (ItemNumber, Description, Quantity, HistoricalPrice, CurrentPrice, Amount), Subtotal, GST, Total

**1NF:**

CustomerFirstName, CustomerLastName, CustomerNumber, StreetAddress, City, Province, PostalCode, Phone, Date, **OrderNumber (PK)**, Subtotal, GST, Total

**ItemNumber (PK),** Description, Quantity, HistoricalPrice, CurrentPrice, Amount, ***OrderNumber (PK) (FK)***

**2NF:**

CustomerFirstName, CustomerLastName, CustomerNumber, StreetAddress, City, Province, PostalCode, Phone, Date, **OrderNumber (PK)**, Subtotal, GST, Total

***ItemNumber (PK) (FK*)**, Quantity, HistoricalPrice, Amount, ***OrderNumber (PK) (FK)***

**ItemNumber (PK)**, Description, CurrentPrice

**3NF:**

**CustomerNumber (PK),** CustomerFirstName, CustomerLastName, StreetAddress, City, Province, PostalCode, Phone

*CustomerNumber (FK),* Date, **OrderNumber (PK)**, Subtotal, GST, Total

***ItemNumber (PK) (FK*)**, Quantity, HistoricalPrice, Amount, ***OrderNumber (PK) (FK)***

**ItemNumber (PK)**, Description, CurrentPrice

**ESP 2:  
Customer Payments Against Orders (Payments Log view)**

**0NF:**

CustomerName, CustomerNumber, **OrderNumber (PK)**, OrderDate, OrderTotal, (Date, PaymentAmount, PaymentNumber, BalanceOwing, PaymentType, DepositBatch#)

**1NF:**

CustomerFirstName, CustomerLastName, CustomerNumber, **OrderNumber (PK)**, OrderDate, OrderTotal

Date, PaymentAmount, **PaymentNumber (PK)**, BalanceOwing, PaymentType, DepositBatch#, ***OrderNumber (PK) (FK)***

**2NF:**

(no changes)

**3NF:**

**CustomerNumber (PK),** CustomerFirstName, CustomerLastName

*CustomerNumber (FK),* **OrderNumber (PK)**, OrderDate, OrderTotal

Date, PaymentAmount, **PaymentNumber (PK)**, BalanceOwing, PaymentType, DepositBatch#, ***OrderNumber (PK) (FK)***

**ESP3:**

**Inventory Control**

**0NF:**

**Item# (PK)**, ItemDescription, CurrentSalePrice, (Date, SupplierNumber, PONumber, Quantity, Cost), InStockCount, ReorderThreshold

**1NF:**

**Item# (PK)**, ItemDescription, CurrentSalePrice, InStockCount, ReorderThreshold

Date, SupplierNumber, **PONumber (PK),** Quantity, Cost,***Item# (PK) (FK)***

**2NF:**

**Item# (PK)**, ItemDescription, CurrentSalePrice, InStockCount, ReorderThreshold

***PONumber (PK) (FK)*,** Quantity, Cost,***Item# (PK) (FK)***

**PONumber (PK),** Date, SupplierNumber

**3NF:**

**(no changes)**

**Inventory Control – ALTERNATE SOLUTION**

**0NF:**

(Item#, ItemDescription, CurrentSalePrice), Date, SupplierNumber, **PONumber (PK)**, (Quantity, Cost, InStockCount, ReorderThreshold)

**1NF:**

**Item# (PK),** ItemDescription, CurrentSalePrice, ***PONumber (PK) (FK),***Quantity, Cost, InStockCount, ReorderThreshold

Date, SupplierNumber, **PONumber (PK)**

**2NF:**

***Item# (PK) (FK)*,** ***PONumber (PK) (FK),***Quantity, Cost

**Item# (PK),** ItemDescription, CurrentSalePrice, InStockCount, ReorderThreshold

Date, SupplierNumber, **PONumber (PK)**

**3NF:**

(no changes)

**Purchase Orders**

**0NF:**

**PO# (PK),** SupplierName, SupplierNumber, Address, City, Phone, OrderDate, (Item#, SupplierItem#, SupplierDescription, Quantity, Cost, Amount), Subtotal, GST, Total

**1NF:**

**PO# (PK),** SupplierName, SupplierNumber, Address, City, Province, PostalCode, Phone, OrderDate, Subtotal, GST, Total

**Item# (PK),** SupplierItem#, SupplierDescription, Quantity, Cost, Amount, ***PO# (PK) (FK)***

**2NF:**

**(no changes)**

**3NF:**

**PO# (PK),** *SupplierNumber (FK),* OrderDate, Subtotal, GST, Total

**SupplierNumber (PK),** SupplierName, Address, City, Province, PostalCode, Phone

**Item# (PK),** SupplierItem#, SupplierDescription, Quantity, Cost, Amount, ***PO# (PK) (FK)***

**Cheque Register**

**0NF:**

ChequeDate, **Cheque# (PK),** ChequeAmount, Supplier#, SupplierName, (PO#, PODate)

**1NF:**

ChequeDate, **Cheque# (PK),** ChequeAmount, Supplier#, SupplierName

**PO# (PK)**, PODate, *Cheque# (FK)*

**2NF:**

(no changes)

**3NF:**

ChequeDate, **Cheque# (PK),** ChequeAmount, *Supplier# (FK)*

**Supplier# (PK),** SupplierName

**PO# (PK)**, PODate, *Cheque# (FK)*

**Cheque Register – ALTERNATE SOLUTION**

**0NF:**

ChequeDate, Cheque#, ChequeAmount, Supplier#, SupplierName, **PO# (PK)**, PODate

**1NF:**

No repeating groups so no changes

**2NF:**

No composite PK so no changes

**3NF:**

2 sets of transitive dependencies: ChequeDate, ChequeAmount, and Supplier# depends on Cheque#, and SupplierName depends on Supplier#:

Cheque# (FK), **PO# (PK)**, PODate

**Cheque# (PK),** ChequeDate, ChequeAmount, *Supplier# (FK)*

**Supplier# (PK),** SupplierName