ESP - Part 6

> The markdown for this file can be found in the source repository.

Pickup Driver Details View

ESP has two employees in the city who do local parts pickup from their suppliers and receiving at the end of the day. Each driver covers a different area of the city, and they begin the morning by dividing the pickups and summarizing their pickup sheets. By mid-morning, they head out to do their pickups and they return by mid-afternoon, at which time they check in their pickup sheets and stock the shelves.

The following is a sample pickup sheet for one of the drivers.

Driver: Hott, Rodney   **Date**: Oct 12, 2000

Supplier	Address	PO#	Item #	Qty	P/U Qty
(7) Nuts and Bolts	11123 – 114 Ave	242	H23	2	2
			H45	1	1
			M50	100	100
		244	M50	100	100
			R94	8	0
(14) RHP	9236 Parsons Rd	243	J49K	5	5
			R92	1	0
		247	QA-N4	500	250

Analysis

0NF – Identify Meta-data

PickupSheet (**PickupSheetId**[†], DriverId[‡], DriverFirstName, DriverLastName, Date **SupplierId, SupplierName, Address PurchaseOrderNumber, ItemNumber, Quantity, PickupQuantity**)

> **Notes:** † - PickupSheetId is a technical key that was introduced in 0NF to uniquely identify each pickup sheet. ‡ - DriverId is a technical key that was introduced in 3rd Normal Form and "back-filled" to 0NF.

1NF – Separate Repeating Groups

PickupSheet (**PickupSheetId**, DriverId, DriverFirstName, DriverLastName, Date)

PickupLocation (**PickupSheetId, SupplierId**, SupplierName, Address)

PickupOrder (**PickupSheetId†, SupplierId, PurchaseOrderNumber**)

PickupItem (**PickupSheetId†, SupplierId, PurchaseOrderNumber, ItemNumber**, Quantity, PickupQuantity)

2NF – Identify Partial Dependencies

PickupLocation (**PickupSheetId, SupplierId**)

Supplier (**SupplierId**, SupplierName, Address)

3NF – Identify Transitive Dependencies

PickupSheet (**PickupSheetId**, <u>DriverId[‡]</u>, Date)

Driver (**DriverId[‡]**, DriverFirstName, DriverLastName)

ERD

Supplier (**SupplierId**, SupplierName, Address)

3NF – Identify Transitive Dependencies

PickupSheet (**PickupSheetId**, <u>DriverId[‡]</u>, Date)

Driver

PK	DriverId
	DirverFirstName
	DriverLastName

Supplier

PK	SupplierID
	SupplierName

PickupSheet

PK	PickupSheetId
FK	DriverId
	Date

PickupLocation

PK, FK1	PickupSheetId
PK, FK2	SupplierId

PickupOrder

PK, FK1	PickupSheetId
PK, FK1	SupplierId
PK	PurchaseOrderNumber

PickupItem

PK, FK1	PickupSheetId
PK, FK1	SupplierId
PK, FK1	PurchaseOrderNumber
PK	ItemNumber
	Quanity
	PickupQuantity