# The StockIt Context Data Model:

**If there is stock**

**Wants to buy product**

**Customer**

**Employee**

**Has placed**

**Order**

**Performs transaction as**

**Sales**

**has placed Has placed** **Sold**

**performs**

**Verify Special order**

**Branch**

**Is stored as**

**Stock**

**Ordered Product**

**Has been sold as** **Is stored as**

**Was placed**

**Inventory Product**

**Special order**

**Entity Relationship diagram descriptions:**

* If there is stock then one customer can go to one employee to buy a product.
* One employee can then perform one sales transaction for the customer.
* If the product is not in stock then one customer can place zero or more orders.
* One or more ordered products can then be sold to the company who can then sell zero to more ordered products as a inventory product to the customer or if it was already ordered but the customer does not want it anymore the inventory product can be stored as stock.
* Zero or more branches can place one order then the ordered product can be stored as stock in that branch.
* Employees verify promotion.
* Employees verify special order of a customer and stock is added and updated by a employee.
* Employees makes stock inquiry by supplier and cancel orders, review orders and verify stock.
* Customers places special orders and employees email customers to verify special order and places orders through employees.

# The StockIt Key-Based Data Model:

A key-based data model is a step further than the context data model and it shows what are the important attributes of the entity, here is the definition,” a data model that includes entities and relationships with precise cardinalities resolving non-specific relationships into associative entities, and also including primary and alternate keys.”(Bentley, Whitten.2016,286).

**If there is stock**

**Wants to buy product**

**Employee**

Employee\_Number{PK1}

**Customer**

Customer\_Number{PK1}

**Order**

Order\_Number{PK1}

**Performs transaction as**

**Sales**

Sales\_Number{PK1}

**has placed Has placedSold**

**performs**

**Branch**

Branch\_Number{PK1}

**Verify Special order**

Special\_Number{PK1}

**Is stored as**

**Stock**

Stock\_Number{PK1}

**Ordered Product**

**Order\_Number{FK1}**

**Product\_Number{FK2}**

**Has been sold asIs stored as**

**Was placed**

**Special order**

SpecialOrder\_Number{PK1}

**Inventory Product**

Product\_Number{PK1}

## The StockIt Fully Attributed Data Model:

This data model represents all of the attributes and keys that will be part of each entity. “A data model that includes all entities, attributes, relationships, sub setting criteria, and precise cardinalities.”(Bentley, Whitten.2016,286).

**Employee**

* Name

First name

Last name

* SAID
* EmployeeID
* ContactNumber
* Email
* EmploymentCtatus
* DateOfEmployment
* Branch
* BranchManager

**Customer**

* CustomerName

First name

Last name

* CustomerID
* Address
* CustomerEmail
* CustomerCell

**Order**

* Order ID
* Amount
* ItemName
* OrderDate
* Branch
* OrderAddress

**Performs transaction as**

**Sales**

* ItemsName
* Amount
* ItemsID
* ItemsPrice

**Has placed**  **sold** **performs**

**Is stored as**

**Branch**

* ManagerName

First name

Last name

* ManagerCell
* ManagerEmail
* ManagerID
* StockCapital
* AmountOfEmployees
* Location

**Stock**

* ItemName
* ItemCount
* Brand
* AmountSold
* Price

**Verify Special order**

* ItemName
* Amount
* Brand
* Price
* OrderID

**Has been sold as**

**Is stored as**

**Inventory Product**

* ItemName
* OrderID
* Amount
* Brand
* Price

**has placed**

**Ordered Product**

* OrderID
* ItemName
* Amount
* OrderDate
* Brand

**Was placed**

**Special order**

* OrderID
* ItemName
* OrderDate
* Amount
* Brand
* OrderAddress