Inventory Control Management Database

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Section I: Project Description

It is possible for organizations of all sizes that make and sell products to experience inventory control challenges. Common challenge areas include tracking location of raw materials and finished goods, logistics, spoilage/waste, and storage costs, all of which affect the bottom line. I would like to propose a database that takes multiple factors into account for each system transaction so as to minimize costs and losses, and improve inventory control so the business can focus on better matching supply with demand. More specifically, this database helps the company link their inventory management activities more closely to their primary business processes, such as testing, producing, stocking, selling, and delivering products.

Section II: Use Cases

I. Buy Raw Materials

Use case title	Buy Raw Materials
Actors	Factory, Suppliers
Description	This use case begins when the **factory** buys **raw material units** of certain **types** for **production** by placing a **supply order** with the **supplier** who provides the **raw materials** to the **factory** for use in **production**.

II. Production Batch and Storage

Use case title	Production Batch
Actors	Factory, Warehouse
Description	This use case begins when the **factory** uses **raw materials** to produce finished **product units** of certain **types** in **production batches** and then sends them to a **warehouse** for storage prior to sale.

III. Sell Products to Customer

Use case title	Sell Products
Actors	Store, Website, Customer
Description	This use case begins when the **customer** places a **purchase order** by the help of **salesperson** for one or many **product units** by shopping on the company **website** or visiting a **store** in which **product units** are held. The **purchase order** is paid with **payments** of varying **type** with a specific **tax rate**, from

	customers which are of many **types** such as business, consumer, government, or military.

IV. Product Delivery

Use case title	Deliver Products
Actors	Purchase Order, Customer, Logistics Provider
Description	Continuing from the previouse case, the **purchase order** allows the **customer** to request **product**(s) **delivery** ,in which a third party **logistics providers** for different **regions**, to the **customer address**.

V. Product Development

Use case title	Product Development
Actors	Factory, Tests
Description	This use case begins when the **factory** runs **tests** to **test products** in special **test batches (iterations),** that will be used to develop a **final product** for putting into actual **production**.

VI. Returned Defective Items

Use case title	Returned Defects
Actors	Factory
Description	This use case begins when the **factory** detects **returned defective items** to detect the **defect type** and make a **decision** if it will be fixable or scrap.

VII. Company responsible of the whole production process

Use case title	Company responsible of the production process
Actors	Company, employee
	The **company** manages all the production processes through its **departments** and **employees**.The **manager** of the **department** **supervises** the employee's work to make sure that the **projects** of the company are well.

Section III: Database Requirements (Business Rules)

1. Company
    a. A company shall rent at least one factory
    b. A company shall have at least one employee
    c. A company shall rent at least one warehouse
    d. A company shall have at most one website
    e. A conpany shall have at least one department
    f. A company shall have one ID
    g. A company shall have one name
    h. A company shall have one founded date
    i. A company shall have about description

2. Employee
        a. An employee shall work in many companies
        b. An employee shal manage at most one department
        c. An employee shall be supervised by one supervisor
        d. Employee shall participate in many projects
        e. An employee shall have a unique ID
        f. An employee shall have a date of birth
        g. An employee shall have a first name
        h. An employee shall have a last name
        i. An employee shall have a salary

3. Department
    a. A department shall be managed by one employee
    b. A department shall belong to only one company
    c. A department shall have a unique ID
    d. A department shall have a name
    e. A department shall have a specific number of employees

4. Labor
    a. A labor shall have many companies
    b. A labor shall have at least one employee
    c. A labor shall have a unique ID
    d. A labor shall have a contract

5. Project
    a. A project shall have at least one employee
    b. A project have an id
    c. A project have a name

6. Participation
    a. Participation is linked to a project
    b. Participation is linked to an employee

7. Supplier
    a. A supplier shall fulfill many supply orders
    b. A supplier shall supply by at least one raw material unit
    c. A supplier shal have one supplier ID
    d. A supplier shall have one name
    e. A supplier shall have a description

8. SupplyItems
    a. SupplyItem can belong to at least one supplier
    b. SupplyItem shall be linked to at least one raw material unit

9. Supply Order
    a. A supply order shall contain at least one raw material unit
    b. A supply order shall have at least one supply line item
    c. A supply order shall be fulfilled by only one supplier
    d. A supply order shall be linked to one factory
    e. A supply order shall have date ordered

10. Supply Line Item
    a. A supply line item shall refer to one raw material unit
    b. A supply line item shall be linked to one supply order
    c. A supply line item shall have a unique ID
    d. A supply line item shall specify the quantity

11. Raw Material Unit
    a. A raw material unit shall be identified by one and only one SKU
    b. A raw material unit shall be linked to one raw material type
    c. A raw material unit shall come from at least one supplier
    d. A raw material unit shall be linked to many supply orders
    e. A raw material unit shall be refered to by many supply line item
    f. A raw material unit shall have one description
    g. A raw material unit shall have one price

12. Raw Material Type
    a. A raw material type shall be linked to many raw material units
    b. A raw material type shall have one ID
    c. A raw material type shall have one description

13. Factory

a. A factory shall be related to one company at a time
b. A factory shall place many supply orders
c. A factory shall detect many returned defective items
d. A factory shall run many tests
e. A factory shall make many product batch
f. A factory shall have one ID
g. A factory shall have one name
h. A factory shall have one size

14. Production
    a. Production can be done by at least one factory
    b. Production can be linked to at least one Product batches

15. Product Batch
    a. A product batch shall be linked to at least one factory
    b. A product batch shall be linked to at least one product unit
    c. A product batch shall stocked in many warehouses
    d. A product batch shall have a unique ID
    e. A product batch shall have a date
    f. A product batch shall have a description

16. Product Batch Items
    a. Product batch items shall be related to at least one product batch
    b. Product batch items shall be related to at least one product unit
    c. Product batch items shall have a specific quantity

17. Product Unit
    a. A product unit shall be related to at least one product batch
    b. A product unit shall be linked to one product type
    c. A product unit shall be related to many returned defect items
    d. A product unit shall be listed on many websites
    e. A product unit shall be related to many line items
    f. A product unit shall be related to many purchase orders
    g. A product unit shall be identified by a name
    h. A product unit shall be identified by one and only one SKU
    i. A product unit shall have a price
    j. A product unit shall have a description

18. Product Type
    a. A product type shall be linked to many product units
    b. A product type shall have a unique ID
    c. A product type shall have a description

19. Part
    a. Part shall be related to many product units
    b. Part shall have an id
    c. Part shall have a name

20. Assembling
    a. Assembling shall be linked to at least one part
    b. Assembling shall be linked to many product units

21. Returned Defective Item
    a. A returned defect item shall be detected by one factory
    b. A returned defect item shall be linked to one product unit
    c. A returned defect item shall have at least one defect type
    d. A returned defect item shall have one decision
    e. A returned defect item shall have a unique defect ID
    f. A returned defect item shall have a description

22. Defect Level
    a. A defect level shall be related to many returned defect items
    b. A defect level shall be related to at least one defect type
    c. A defect level shall have one decision
    d. A defect level shall have a unique ID

23. Defect Type
    a. A defect type shall have many returned defect items
    b. A defect type shall have a unique code
    c. A defect type shall have a description

24. Decision
    a. A decision shall have many returned defect items
    b. A decision shall have a unique ID
    c. A decision shall have a description

25. Test
    a. A test shall be runned by one factory
    b. A test shall test many test batches
    c. A test shall have a unique ID
    d. A test shall have an instruction

26. TestRun
    a. Test run can be done by many factories
    b. Test run can be related to many tests

27. Product Testing

a. Product testing shall be related to at least one test
b. Product testing shall be related to many test batches
c. Product testing shall have a unique ID
d. Product testing shall have one status at a time

28. Test Batch
    a. A test batch shall be tested by at least one test
    b. A test batch shall have at least one test unit
    c. A test batch shall have a unique ID
    d. A test batch shall have a date
    e. A test batch shall have a description

29. Test Batch Reference
    a. A test batch reference shall be related to at least one test batch
    b. A test batch reference shall be related to at least one test unit

30. Test Unit
    a. A test unit shall be related to at least one test batch
    b. A test unit shall have at least one test unit type
    c. A test unit shall have a unique SKU
    d. A test unit shall have a name
    e. A test unit shall have a description

31. Warehouse
    a. A warehouse shall have many product batches
    b. A warehouse shall send stocks to at least one store
    c. A warehouse shall be related to one company at a time
    d. A warehouse shall have a unique ID
    e. A warehouse shall have a name
    f. A warehouse shall have a size

32. Stock
    a. A stock shall be related to many product batches
    b. A stock shall be stocked in many warehouses
    c. A stock shall have a unique ID

33. Assignement
    a. An assignement shall be done by at least one warehouse
    b. An assignement shall send to at least one store
    c. An assignement shall have a date
    d. An assignement a quantity

34. Store
    a. A store shall stock from at least one warehouse

b. A store shall have many salesperson
c. A store shall have a unique ID
d. A store shall have a name
e. A store shall have a description

35. Salesperson
    a. A salesperson shall prepare many purchase_orders
    b. A salesperson shall work to at least one store
    c. A salesperson shall have an id
    d. A salesperson shall have a name

36. Store_saleperson
    a. Store_salesperson shall be linked to at least stores
    b. Store_salesperson shall be linked to many salespersons

37. Customer
    a. A customer shall have at least one address
    b. A customer shall browse many websites
    c. A customer shall place many purchase orders
    d. A customer shall return many purchase orders
    e. A customer shall have at least one customer type
    f. A customer shall have a unique ID
    g. A customer shall have a first name
    h. A customer shall have a last name
    i. A customer shall have a unique email

38. Customer Associated Type
    a. Customer Associated Type shall be related to at least one Customer type
    b. Customer associated type shall be linked to many Customers

39. Customer Type
    a. A customer type shall be linked to many customers
    b. A customer type shall have a unique ID
    c. A customer type shall have a description

40. Browsing
    a. A browsing shall be related to many customers
    b. A browsing shall be related to many websites
    c. A browsing shall have a date
    d. A browsing shall have a time

41. Website
    a. A website shall be related to one company

b. A website shall lists at least one product unit
c. A website shall be browsed by many customers
d. A website shall have a unique URL
e. A website shall have a domain

42. List
    a. List shall have at least one product unit
    b. List shall have many websites

43. Purchase order
    a. A purchase order shall contain at least one product unit
    b. A purchase order shall contain at least one line item
    c. A purchase order shall be placed by one customer
    d. A purchase order shall be returned by one customer
    e. A purchase order shall be associated with at least one payment
    f. A purchase order shall have at most delivery request
    g. A purchase order shall be linked to many return details
    h. A purchase order shall be fulfilled by one salesperson
    i. A purchase order shall have a unique ID
    j. A purchase order shall have a date

44. Line Item
    a. A line item shall refer to one product unit
    b. A line item shall be linked to one purchase order
    c. A line item shall have one unique ID
    d. A line item shall have a quantity item
    e. A line item shall have a discount

45. Tax rate
    a. Tax rate can be related to many payments
    b. Tax rate has an id
    c. Tax rate has a percentage

46. Payment
    a. A payment shall be linked to only one purchase order
    b. A payment shall have only one payment type
    c. A payment shall have one tax rate
    d. A payment shall have a unique ID
    e. A payment shall have an amount

47. Payment type
    a. A payment type shall be used in many payments
    b. A payment type is credit card or check
    c. A payment type shall have a unique payment type ID

d. A payment type shall have a description

48. Credit card payment type
    a. A credit card payment type shall have a unique card number
    b. A credit card payment type shall have one bank assignation code
    c. A credit card payment type shall have one expiration date
    d. A credit card payment type shall have one CVV

49. Bank Chech payment type
    a. A bank check payment type shall have one unique account number
    b. A bank check payment type shall have one bank code
    c. A bank check payment type shall have one routing number

50. Delivery
    a. A delivery shall be associated with one purchase order
    b. A delivery shall be associated with one logistic provider
    c. A delivery shall have a delivery date
    d. A delivery shall have a unique ID
    e. A delivery shall have a status

51. Logistic provider
    a. A logistics provider shall have many deliveries
    b. A logistic provider shall deliver in at least one region
    c. A logistic provider shall have a unique ID
    d. A logistic provider shall have a name

52. Delivery Limit
    a. A delivery limit shall be associated by many logistic providers
    b. A delivery limit shall have at least one region

53. Region
    a. A region shall have many logistic providers
    b. A region shall have a unique ID
    c. A region shall have a name

54. Return Details
    a. Return details shall be linked to one purchase orders
    b. Return details shall have a unique return ID
    c. Return details shall have a quantity
    d. Return details shall have have a reason

55. Address
    a. An address shall be associated with many customers
    b. An address shall have a unique address ID

c. An address shall have a city
d. An address shall have a state
e. An address shall have a country
f. An address shall have a zip code

56. Customer Address
    a. A customer address shall be associated with at least one address
    b. A customer address shall be associated with many customers

57. Rent_factory
    a. Rent factory shall be linked to one factory
    b. Rent factory shall be linked to one company
    c. Rent_factory shall have an id

58. Rent_warehouse
    a. Rent warehouse shall be linked to one warehouse
    b. Rent warehouse shall be linked to one company
    c. Rent_warehouse shall have an id

Section IV: Detailed list on Main Entities, Attributes and Keys

1. Company (Strong)
   - Company_ID: Key, numeric
   - CompanyName: multivalue, alphanumeric
   - About: alphanumeric
   - FoundedDate: composite, date

2. Labor (Weak)
   - Labor_ID: key, numeric
   - Contract: alphanumeric
   - Employee: weak key, numeric
   - Company: weak key, numeric

3. Employee (Strong)
   - Employee_ID: key, numeric
   - Employee_FirstName: multivalue, alphanumeric
   - Employee_LastName: multivalue, alphanumeric
   - DOB: composite, date
   - Salary: numeric

4. Department (weak)
   - Dept_ID: key, numeric
   - Dept_Name: multivalue, alphanumeric
   - Nb_Of_Employees: derived, numeric
   - Company: weak attribute, numeric
   - Employee: weak attribute, numeric

5. Project (strong)
   - Project_id: key, numeric
   - Project_name: alphanumeric

6. Participation (weak)
   - Project: weak key, numeric
   - Employee: weak key, numeric

7. Supplier (Strong)
   - Supplier_ID: key, numeric
   - Supplier_Name: multivalue, alphanumeric
   - Supplier_Descr: alphanumeric

8. SupplyItem (weak)
    - Supplier: weak key, numeric
    - RawMaterialUnit: weak key, numeric

9. SupplyOrder (Weak)
    - SupplyOrder_ID: key, numeric
    - SupplyOrder_Date: composite, date
    - Supplier: weak key, numeric
    - Factory: weak key, numeric

10. SupplyLineItem (Weak)
    - SupplyLineItem_ID: key, numeric
    - SupplyLineItem_Quant: numeric
    - RawMaterial_SKU: weak key, numeric
    - Supply_order: weak key, numeric

11. RawMaterialUnit (weak)
    - RawMaterial_SKU: key, numeric
    - RawMaterial_Descr: alphanumeric
    - RawMaterial_Price: numeric
    - RawMaterialType: weak key, numeric

12. RawMaterialType (Strong)
    - RawMaterialType_ID: key, numeric
    - RawMaterialType_Descr: alphanumeric

13. Factory (Strong)
    - Factory_ID: key, numeric
    - Factory_Name: multivalue, alphanumeric
    - Factory_Size: numeric

14. RentFactory (Weak)
    - RentFactory_ID: primary key, numeric
    - Company: Unique key, numeric
    - Factory: foreign key, numeric

15. Test (Strong)
    - Test_ID: key, numeric
    - Test_Instruction: alphanumeric

16. TestRun (Weak)
    - Factory: weak key, numeric
    - Test: weak key, numeric

17. ProductsTesting (Weak)
    - ProductTesting_ID: key, numeric
    - ProductTesting_Status: alphanumeric
    - Test: weak key, numeric
    - TestBatch: weak key, numeric

18. TestBatch (Strong)
    - TestBatch_ID: key, numeric
    - TestBatch_Date: composite, date
    - TestBatch_Descr: alphanumeric

19. TestBatchReference (Weak)
    - TestBatch: weak key, numeric
    - TestUnit: weak key, numeric

20. TestUnit (Strong)
    - TestUnit_SKU: key, numeric
    - TestUnit_Name: multivalue,alphanumeric
    - TestUnit_Descr: alphanumeric

21. ReturnedDefectiveItems (weak)
    - Defect_ID: key, numeric
    - Defect_Descr: alphanumeric
    - Product_unit: weak key, numeric
    - Decision:weak key, numeric

22. DefectLevel (Weak)
    - DefectLevel_id: key, numeric
    - ReturnDefect: weak key, numeric
    - DefectType: weak key, numeric

23. DefectType (Strong)
    - DefectType_Code: key, numeric
    - DefectType_Descr: alphanumeric

24. Decision (Strong)
    - Decision_ID: key, numeric
    - Decision_Descr: alphanumeric

25. Production (weak)
    a. Factory: weak key, numeric
    b. ProductBatch: weak key, numeric

26. ProductBatch (Strong)
    - ProductBatch_ID: key, numeric
    - ProductBatch_Date: composite, date
    - ProductBatch_Descr: alphanumeric

27. ProductBatchItems (Weak)
    - ProductBatch: weak key, numeric
    - ProductUnit: weak key, numeric
    - Quantity: numeric

28. Product unit (weak)
    - ProductUnit_SKU: key, numeric
    - ProductUnit_Name: multivalue, alphanumeric
    - ProductUnit_Descr: alphanumeric
    - ProductUnit_Price: numeric
    - Product_type: weak key, numeric

29. Product type (Strong)
    - ProductType_ID: key, numeric
    - ProductType_Descr: alphanumeric

30. Part (strong)
    - Part_id: key, numeric
    - Part_name: alphanumeric

31. Assembling (weak)
    - Part:weak key, numeric
    - Product_unit: weak key, numeric

32. Stock (Weak):
    - Stock_ID: key, numeric
    - ProductBatch: weak key, numeric
    - Warehouse: weak key, numeric

33. Warehouse (Strong)
    - Warehouse_ID: key, numeric
    - Warehouse_Name: multivalue, alphanumeric
    - Warehouse_Size: numeric

34. RentWarehouse (weak)
    - RentWarehouse_ID: primary key, numeric
    - Company: Unique key, numeric
    - Warehouse: foreign key, numeric

35. Assignment (Weak)
    - Warehouse: weak key, numeric
    - Store: weak key, numeric
    - Assignement_Date: composite, date
    - Assignment_QT: numeric

36. Store (Strong)
    - Store_ID: key, numeric
    - Store_Name: multivalue, alphanumeric
    - Store_Descr: alphanumeric

37. Salesperson (strong)
    - sales_person_id: key, numeric
    - salesperson_name: alphanumeric

38. store_Salesperson (weak)
    - store: weak key, numeric
    - salesperson: weak key, numeric

39. Website (weak)
    - Website_URL: key, numeric
    - Domain: alphanumeric
    - Company: weak key, numeric

40. List (weak)
    - Website: weak attribute, numeric
    - Product unit: weak attribute, numeric

41. Browsing (Weak)
    - Website: weak key, numeric
    - Customer: weak key, numeric
    - Browsing_Date: composite, date
    - Browsing_Time: composite, time

42. Customer (Strong)
    - Customer_ID: key, numeric
    - Customer_FirstName: multivalue, alphanumeric
    - Customer_LastName: multivalue, alphanumeric
    - Email: key, alphanumeric

43. Customer associated type (weak)
    - Customer: weak key, numeric
    - Customer type: weak key, numeric

44. Customer Type (Strong)
    - CustomerType_ID: key, numeric
    - CustomerType_Descr: alphanumeric

45. Purchase order (Weak)
    - PurchaseOrder_ID: key, numeric
    - PurchaseOrder_Date: composite, date
    - Customer: weak key, numeric
    - Salesperson: weak key, numeric

46. LineItem (Weak):
    - LineItem: key, numeric
    - ProductUnit: weak key, numeric
    - QT_item: numeric
    - Discount: numeric
    - Purchase_order: weak key, numeric

47. Payment (Weak)
    - Payment_ID: key, numeric
    - Amount: numeric
    - PaymentType: weak key, numeric
    - PurchaseOrder: weak key, numeric
    - Tax_rate: weak key, numeric

48. Tax rate (strong)
    - Tax_rate_id: key, numeric
    - Percentage: numeric

49. Payment type (Strong)
    - PaymentType_ID: key, numeric
    - PaymentType_descr: alphanumeric

50. Credit Card (Weak)
    - Card_Number: key, numeric
    - Bank: alphanumeric
    - Expiration_Date: composite, date
    - CVV: numeric
    - PymentType_ID: weak key, numeric

51. Bank Check (Weak)
    - Account_Number: key, numeric
    - Bank: alphanumeric
    - Routing: numeric
    - PaymentType_ID: weak key, numeric

52. Delivery (Weak)
    - Delivery_ID: key, numeric
    - Delivery_Status: alphanumeric
    - Delivery_Date: composite, date
    - LogisticProvider: weak key, numeric
    - PurchaseOrder_ID: weak key, numeric

53. Logistic Provider (Strong)
    - LogisticProvider_ID: key, numeric
    - LogisticProvider_Name: multivalue, alphanumeric

54. Delivery Limit (Weak)
    - LogisticProvider: weak key, numeric
    - Region: weak key, numeric

55. Region (Strong)
    - Region_ID: key, numeric
    - Region_Name: multivalue, alphanumeric

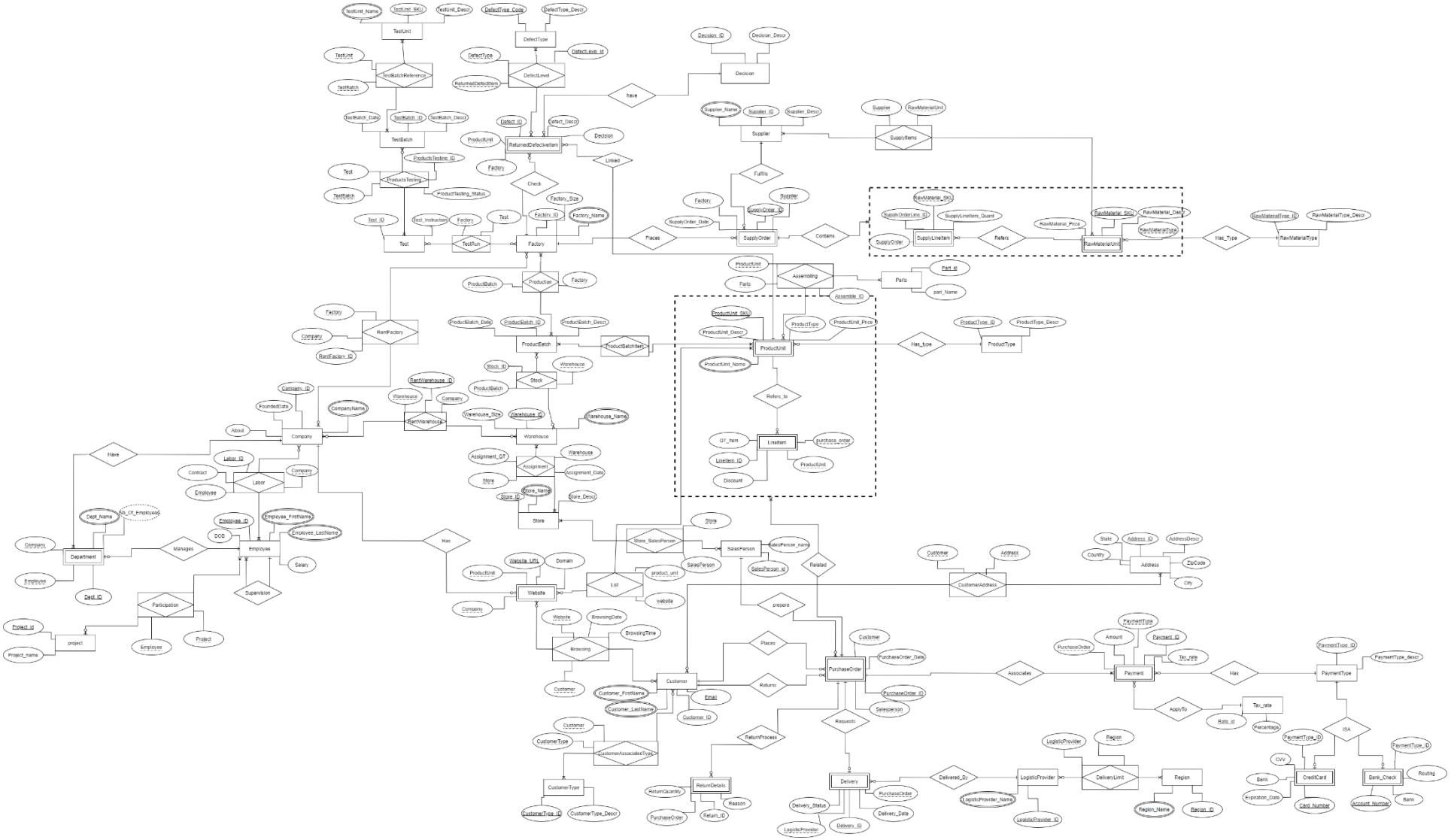
56. Address (Strong)
    - Address_ID: key, numeric
    - AddressDescr: alphanumeric
    - City: alphanumeric
    - State: alphanumeric
    - Country: alphanumeric
    - ZipCode: numeric

57. CustomerAddress (Weak)
    - Customer: weak key, numeric
    - Address: weak key, numeric

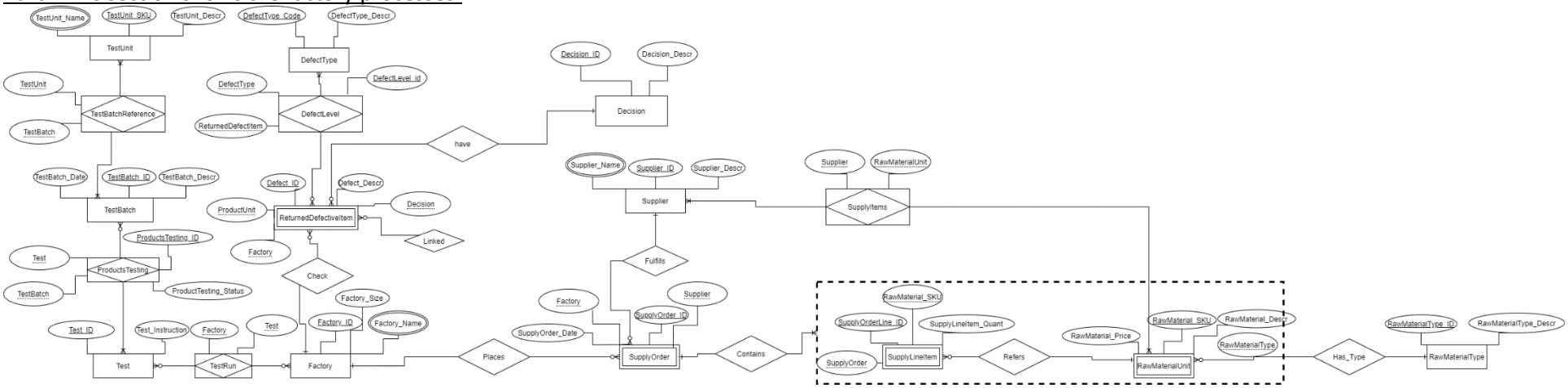
58. ReturnDetails (Weak)
    - Return_ID: key, numeric
    - Reason: alphanumeric
    - ReturnQuantity: numeric
    - PurchaseOrder: weak key, numeric

Section V: Entity Relationship Diagram (ERD)

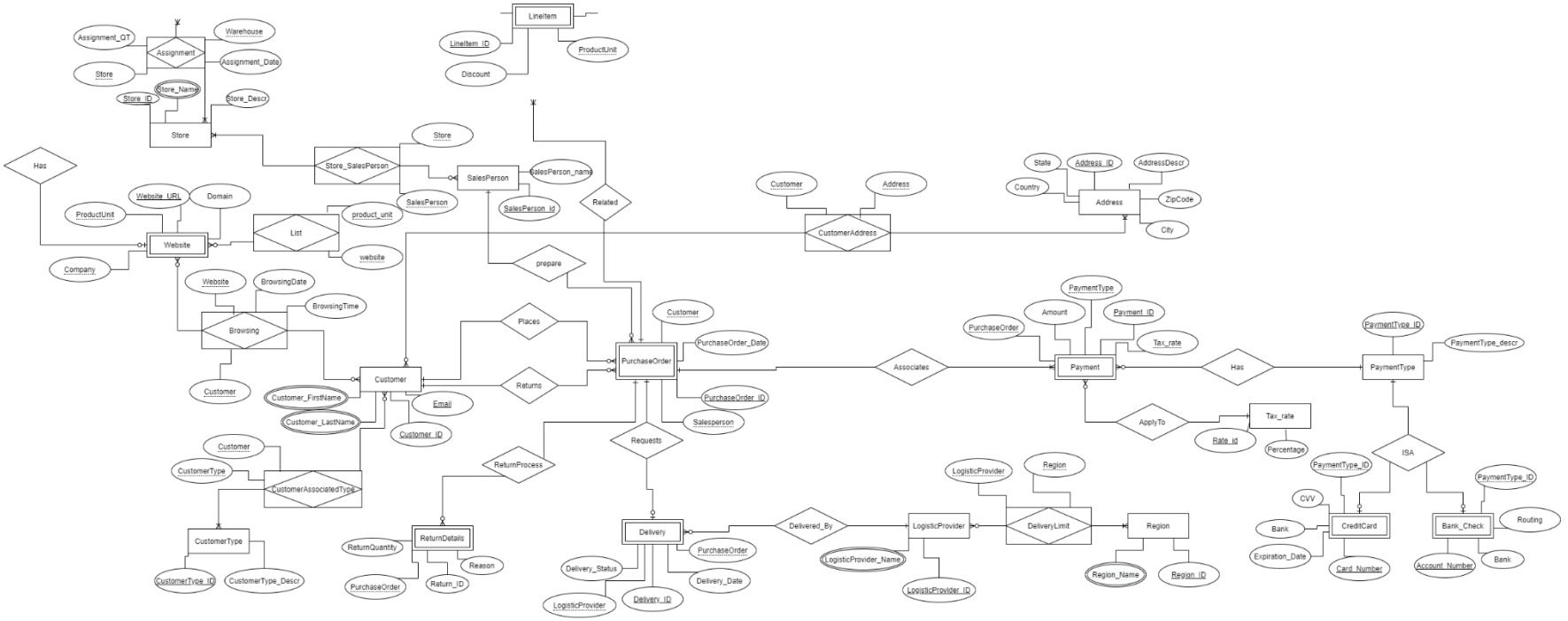
Complete ERD



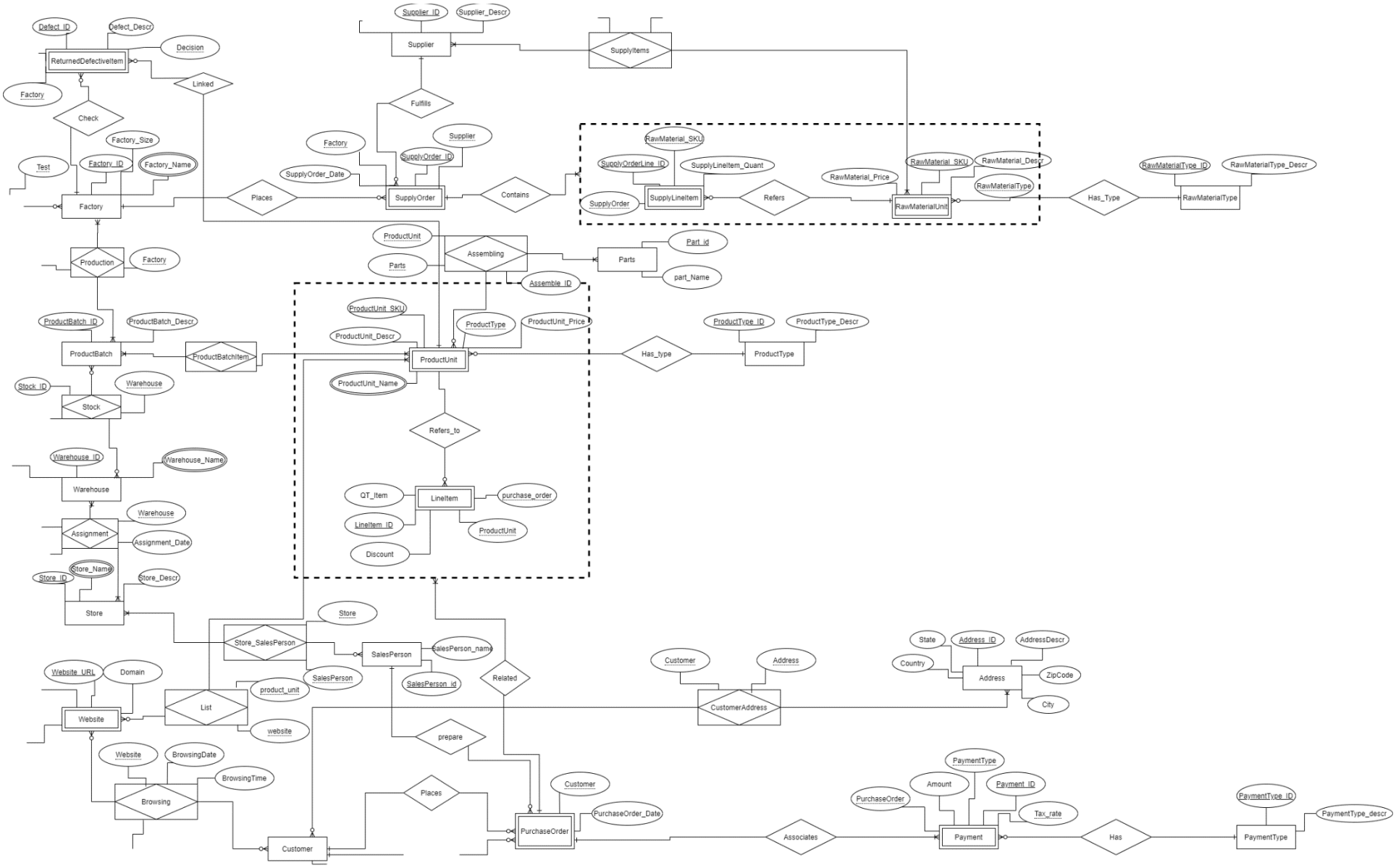
Part I:This section shows the factory processes.



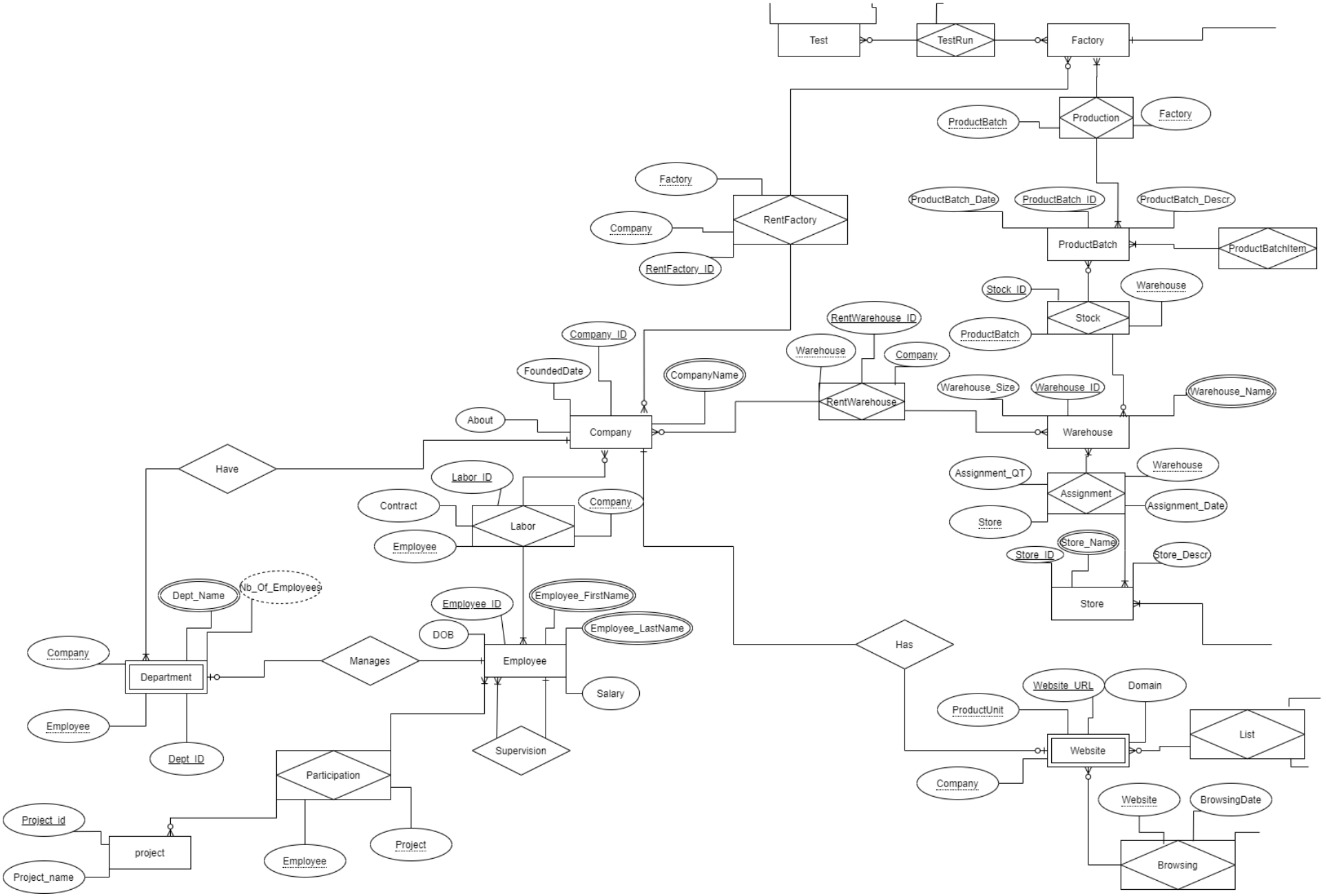
Part II: This section show when customer make a purchase order from website or store with the payment and delivery process



Part III: This section show the relation between the product with defective item and between product, line item and purchase order.



Part IV: This section show the company part, factory part and warehouse part.



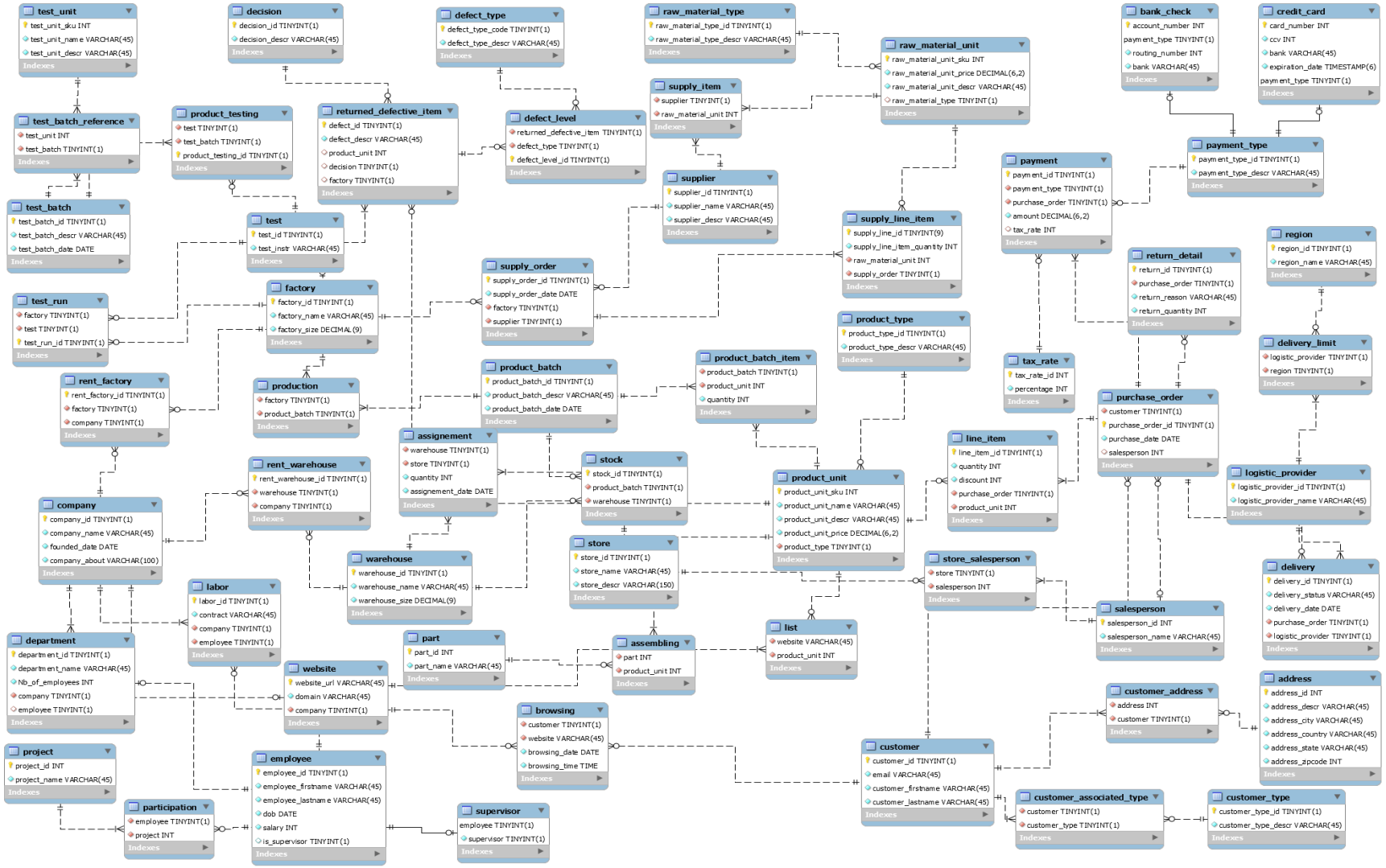
Section VI: Testing Table of conceptual model

Rule	Entity A	Relation	Entiti B	Cardinality	Pass/Fail	Error Description
1	Company	Labor	Employee	M-N	Pass	
2	Employee	Manages	Department	1-M	Fail	An employee can manage at most one department
3	Company	Has	Department	1-M	Fail	Relationship doesn't exist
4	Employee	Supervises	Employee	1-M	Pass	
5	Company	Rents	Factory	M-N	Pass	
6	Company	Rents	Warehouse	M-N	Pass	
8	Company	Has	Website	1-1	Pass	
9	Factory	Places	Supply order	M-N	Pass	A supply order can be placed by only one factory
10	Supplier	Fulfills	Supply order	1-M	Pass	
11	Supplier	Has	Raw material units	M-N	Pass	
12	Supply order	Aggregation	Supply line item and raw material unit	1-M	Pass	
13	Supply line item	Refers to	Raw material unit	M-N	Fail	A supply line item should refer to only one raw material unit
14	Raw material unit	Have	Raw material type	M-1	Pass	
15	Factory	Runs	Test	M-N	Pass	
16	Test	Tests	Test batch	M-N	Pass	
17	Test batch	Linked to	Test unit	1-M	Fail	A test unit shall be linked to more than one test batch
18	Employee	Participate	project	M-N	Pass	
19	Factory	Detects	Returned defective items	1-M	Pass	

20	Returned defective items	Have	Defect type	M-1	Fail	A returned defected item shall have at least one defect type
21	Decision	Relate to	Returned defective item	1-M	Pass	
22	Factory	Makes	Product batch	M-N	Pass	
23	Product batch	Groups	Product unit	M-N	pass	
24	Product unit	Has	Product type	M-1	Pass	
25	Product batch	Stocked	Warehouse	M-N	Pass	
28	Warehouse	supplies	Store	M-N	Pass	
32	Customer	Located	Address	1-1	Fail	An address shall belong to many customers and a customer can have many addresses
33	Store	Has	Salesperson	M-N	Pass	
34	Website	Browsed	Customer	M-N	Pass	
35	Website	Lists	Product unit	1-M	Fail	Product units are listed on many websites
36	Customer	Places	Purchase order	1-M	Pass	
37	Customer	Returns	Purchase order	1-M	Pass	
38	Customer	Has	Customer type	M-N	Pass	
39	Purchase order	Associated with	Payment	1-M	Pass	
40	Payment	Has	Payment type	M-1	Pass	
41	Payment type	ISA	Credit card or bank check	1-1	Pass	
42	Purchase order	Requests	Delivery	1-1	Pass	
43	Delivery	Delivered by	Logistic provider	M-1	Pass	
44	Logistic provider	Is limitied to	Region	M-N	Pass	
45	Purchase order	Linked to	Payment, customer, and product unit	1-M	Fail	We cannot link more than 2 entities to same relationship
46	Purchase order	Aggregation	Line item and product unit	1-M	Pass	

47	Line item	Refers to	Product unit	M-1	Pass	
48	Salesperson	Fulfills	Purchase order	1-M	Pass	
50	Tax rate	Applied	Payment	1-M	Pass	
51	Returned defective item	Linked	Product unit	M-N	Fail	Defective item is linked to only one product unit
52	Product unit	Has	Parts	M-N	Pass	

Section VII: Database Model



This table shows the itemized description of all the entities that implement ON DELETE AND ON UPDATE:

Table	Key	On delete	On update	Reason
Department	Company_id	Cascade	Cascade	The entity department is related to one company therefore it will be modified or deleted if the table company is modified or deleted
Department	Employee_id	Set null	Cascade	A department can have only one manager (employee) it should be updated if a manager record got updated and set null if a manager got deleted
Participation	Employee_id Project_id	Cascade	Cascade	This middle table relate many employees to many projects. If we delete/update an project or employee record it will delete/update it's reference in participation table
Customer_address	Customer_id Address_id	Cascade	Cascade	The records in customer_address will be updated or deleted if a

				customer or an address got deleted/updated
Assigment	Warehouse_id Product_batch_id	Cascade	Cascade	The records in assignment will be updated/deleted if a warehouse or a product_batch got updated/deleted
Browsing	Website_url Customer_id	Cascade	Cascade	This middle table relate many customers to many websites. Deleting/updating a website or customer record will delete/update their reference in browsing table
List	Website_url Product_unit_sku	Cascade	Cascade	This middle table relate many product_units to many websites.Deleting/updating a website or product_unit record will delete/update their reference in list table
Labor	Company_id Employee_id	Cascade	Cascade	This middle table relate many employees to many companies. Deleting/updating a company or an employee

				record will delete/update their reference in labor table
Production	Factory_id Product_batch_id	Cascade	Cascade	This middle table relate many product_batches to many factories. Deleting/updating a factory or product_batch record will delete/update their reference in production table
Product_batch_item	Product_batch_id Product_unit_sku	Cascade	Cascade	This middle table relate many product_batches to many product_units. Deleting/updating a product_unit or product_batch record will delete/update their reference in product_batch_item table
Assembling	Part_id Product_unit_sku	Cascade	Cascade	This middle table relate many parts to many product_units. If we delete/update a part or a product_unit record it will delete/update it's reference in assembling table

Supply_item	Supplier -id Raw_material_unit_sku	Cascade	Cascade	This middle table relate many suppliers to many raw_material_units. Deleting/updating a supplier or raw_material_unit record will delete/update their reference in supply_item table
Supply_order	Factory_id Supplier_id	Cascade	Cascade	A factory can make many supply order and when deleteing/updating a factory we need to delete/update the supply order. Same with supplier can fulfill many supply orders.
Supply_line_item	Raw_material_unit_sku	Restrict	Restrict	Deleting/updating a raw material unit should be restricted when supply line item refers to it.
Supply_line_item	Supply_order_id	Cascade	Restrict	Supply_line_item is related to only one supply_order and deleting the supply_order record will delete the supply

				line item but we cannot update it once order is made
Raw_material_unit	Raw_material_type	Cascade	Cascade	A raw_material_unit can have only one type and it should be deleted/updated if a type record got deleted/updated
Test_run	Factory_id Test_id	Cascade	Cascade	This middle table relate many factories to many tests. Deleting/updating a factory or test record will delete/update their reference in test_run table
Test_batch_reference	Test_batch_id Test_unit_sku	Cascade	Cascade	This middle table relate many test_batches to many test_units.Deleting/updating a test_unit or product_batch record will delete/update their reference in test_batch_reference table
Returned_defective_item	Factory_id	Cascade	Cascade	A defective item can be checked by only one factory therefore deleting/updating a factory record will also

				delete/update it's reference in returned_defective_item table
Returned_defective_item	Decision_id	Cascade	Restrict	A defective item can have only one decision therefore deleting a decision record will also delete it's reference in returned_defective_item table but we cannot update it after decision is made
Returned_defective_item	Product_unit_sku	Cascade	Cascade	A defective item is related to only one product_unit therefore deleting/updating a product_unit record will also delete/update it's reference in returned_defective_item table
Defect_level	defect_id Defect_type_code	Cascade	Cascade	This middle table relate many returned_defective_items to many defect_types. Deleting/updating a defect_type or returned_defective_item record will delete/update their reference in defect_level table

Customer_Associated_type	Customer_id Customer_type_id	Cascade	Cascade	This middle table relate many customers to many customer_types. Deleting/updating a customer or customer_type record will delete/update their reference in customer_associated_type table
Payment	Purchase_order_id	Cascade	Cascade	A payment is related to one purchase order. It's set to be on delete/update cascade with purchase order
Payment	Payment_type_id	Cascade	Cascade	A payment is related to one payment_type. It's set to be on delete/update cascade with payment_type
Payment	Tax_rate_id	No action	Cascade	A payment can have only one tax_rate applied so if a tax_rate record got deleted we won't do any action but if it is updated it will update it's reference in payment

Bank check	Payment_type_id	Cascade	Cascade	Bank check is the child of parent table payment type. It will be automatically deleted/updated with parent table
Credit card	Payment_type_id	Cascade	Cascade	Credit card is the child of parent table payment type. It will be automatically deleted/updated with parent table
Purchase order	Customer_id	Cascade	Cascade	Purchase order is done by one customer and it will be directly related with any update or delete to customer table
Purchase_order	Salesperson_id	Set null	Cascade	If a salesperson got deleted it will be set null in purchase_order table but will be updated.
delivery	Purchase_order_id	Cascade	Restrict	A delivery is linked to one purchase order therefore it will be deleted if a purchase_order record got

				deleted but it cannot be updated
delivery	Logistic_provider_id	Cascade	Cascade	A delivery is delivered by one logistic_provider therefore it will be deleted/updated if a logistic_provider record is deleted/updated
Delivery_limit	Logistic_provider_id Region_id	Cascade	Cascade	This middle table relate many logistic _providers to regions. Deleting/updating a logistic_provider or region record will delete/update their reference in delivery_limit
stock	Warehouse_id Product_batch_id	Cascade	Cascade	This middle table relate many warehouses to many product_batches. Deleting/updating a warehouse or product_batch record will delete/update their reference in stock
Line_item	Product_unit_sku	Restrict	Restrict	Deleting/updating a product unit should be restricted when line item refers to it.

Line_item	Purchase_order_id	Cascade	Restrict	ine_item is related to only one purchase_order and deleting the purchase_order record will delete the line_item but we cannot update it once order is made
Return_details	Purchase_order_id	Cascade	Cascade	Line_item is directly related to one purchase_order therefore it will be deleted/updated with table purchase_order
Rent_factory	Factory_id Company_id	Cascade	Cascade	This middle table relate many companies to many factories. If we delete/update an factory or company record it will delete/update it's reference in rent_fatory table
Rent_warehouse	Warehouse_id Company_id	Cascade	Cascade	This middle table relate many companies to many warehouses. If we delete/update an warehouse or company record it will delete/update it's reference in rent_fatory table

website	Company_id	Cascade	Cascade	A website is related to only one company and it will be deleted/updated if a company record got deleted/updated
Store_salesperson	Store_id Salesperson_id	Cascade	Cascade	This middle table relate many stores to many salespersons. If we delete/update an store or salesperson record it will delete/update it's reference in store_salesperson table
Product_unit	Product_type_id	Cascade	Cascade	A product_unit can have only one type and it should be deleted/updated if a type record got deleted/updated
Product_testing	Test_id Test_batch_id	Cascade	Cascade	This middle table relate many tests to many test_batches. If we delete/update antest or test_batch record it will delete/update it's reference in store_salesperson table
Supervisor	Employee_id	No action	No action	Deleting or updating an employee should not affect the supervisor table

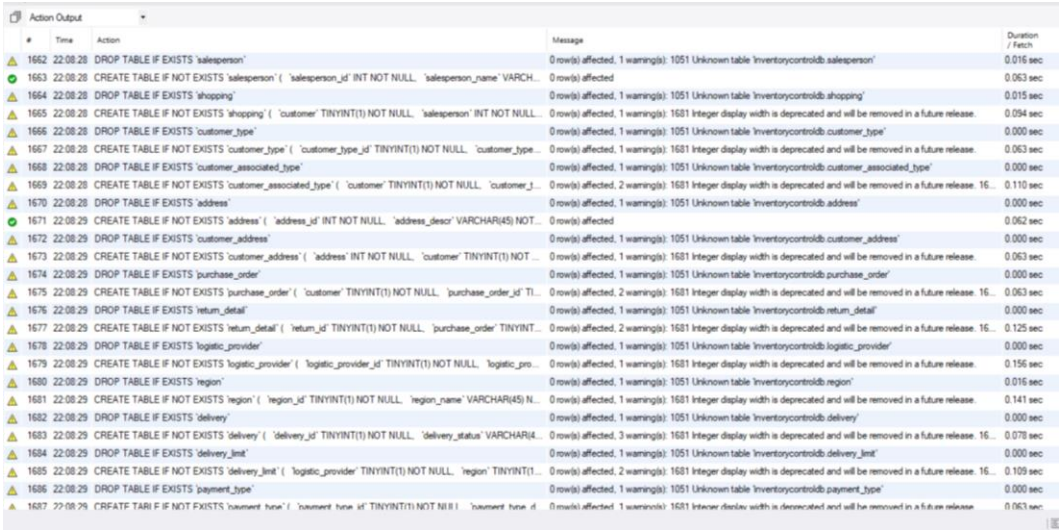
Section VIII: Forward Engineering

#	Time	Action	Message	Duration / Fetch
1584	22:08:22	SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0	0 row(s) affected	0.000 sec
1585	22:08:22	SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0	0 row(s) affected	0.000 sec
1586	22:08:22	SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES...	0 row(s) affected	0.000 sec
1587	22:08:22	DROP DATABASE Inventor	SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION	
1588	22:08:24	CREATE DATABASE InventoryControlDB	1 row(s) affected	0.031 sec
1589	22:08:24	USE InventoryControlDB	0 row(s) affected	0.000 sec
1590	22:08:24	DROP TABLE IF EXISTS `factory`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.factory'	0.000 sec
1591	22:08:24	CREATE TABLE IF NOT EXISTS `factory` (`factory_id` TINYINT(1) NOT NULL, `factory_name` VARCHAR(45) ...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.156 sec
1592	22:08:24	DROP TABLE IF EXISTS `product_type`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.product_type'	0.016 sec
1593	22:08:24	CREATE TABLE IF NOT EXISTS `product_type` (`product_type_id` TINYINT(1) NOT NULL, `product_type_des...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.078 sec
1594	22:08:24	DROP TABLE IF EXISTS `product_unit`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.product_unit'	0.000 sec
1595	22:08:24	CREATE TABLE IF NOT EXISTS `product_unit` (`product_unit_sku` INT NOT NULL, `product_unit_name` VAR...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.062 sec
1596	22:08:24	DROP TABLE IF EXISTS `decision`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.decision'	0.000 sec
1597	22:08:24	CREATE TABLE IF NOT EXISTS `decision` (`decision_id` TINYINT(1) NOT NULL, `decision_descr` VARCHAR(...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.047 sec
1598	22:08:24	DROP TABLE IF EXISTS `returned_defective_item`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.returned_defective_item'	0.015 sec
1599	22:08:24	CREATE TABLE IF NOT EXISTS `returned_defective_item` (`defect_id` TINYINT(1) NOT NULL, `defect_descr`...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.110 sec
1600	22:08:24	DROP TABLE IF EXISTS `defect_type`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.defect_type'	0.015 sec
1601	22:08:24	CREATE TABLE IF NOT EXISTS `defect_type` (`defect_type_code` TINYINT(1) NOT NULL, `defect_type_des...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.063 sec
1602	22:08:24	DROP TABLE IF EXISTS `defect_level`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.defect_level'	0.015 sec
1603	22:08:24	CREATE TABLE IF NOT EXISTS `defect_level` (`returned_defective_item` TINYINT(1) NOT NULL, `defect_typ...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.094 sec
1604	22:08:24	DROP TABLE IF EXISTS `test`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.test'	0.016 sec
1605	22:08:24	CREATE TABLE IF NOT EXISTS `test` (`test_id` TINYINT(1) NOT NULL, `test_instr` VARCHAR(45) NOT NULL...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.109 sec
1606	22:08:24	DROP TABLE IF EXISTS `test_run`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.test_run'	0.016 sec
1607	22:08:24	CREATE TABLE IF NOT EXISTS `test_run` (`factory` TINYINT(1) NOT NULL, `test` TINYINT(1) NOT NULL, `t...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.172 sec
1608	22:08:25	DROP TABLE IF EXISTS `test_batch`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.test_batch'	0.015 sec
1609	22:08:25	CREATE TABLE IF NOT EXISTS `test_batch` (`test_batch_id` TINYINT(1) NOT NULL, `test_batch_descr` VAR...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.063 sec

#	Time	Action	Message	Duration / Fetch
1610	22:08:25	DROP TABLE IF EXISTS `product_testing`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.product_testing'	0.000 sec
1611	22:08:25	CREATE TABLE IF NOT EXISTS `product_testing` (`test` TINYINT(1) NOT NULL, `test_batch` TINYINT(1) NO...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.078 sec
1612	22:08:25	DROP TABLE IF EXISTS `test_unit`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.test_unit'	0.000 sec
1613	22:08:25	CREATE TABLE IF NOT EXISTS `test_unit` (`test_unit_sku` INT NOT NULL, `test_unit_name` VARCHAR(45) ...	0 row(s) affected	0.063 sec
1614	22:08:25	DROP TABLE IF EXISTS `test_batch_reference`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.test_batch_reference'	0.015 sec
1615	22:08:25	CREATE TABLE IF NOT EXISTS `test_batch_reference` (`test_unit` INT NOT NULL, `test_batch` TINYINT(1) ...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.094 sec
1616	22:08:25	DROP TABLE IF EXISTS `supplier`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.supplier'	0.016 sec
1617	22:08:25	CREATE TABLE IF NOT EXISTS `supplier` (`supplier_id` TINYINT(1) NOT NULL, `supplier_name` VARCHAR(4...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.062 sec
1618	22:08:25	DROP TABLE IF EXISTS `supply_order`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.supply_order'	0.016 sec
1619	22:08:25	CREATE TABLE IF NOT EXISTS `supply_order` (`supply_order_id` TINYINT(1) NOT NULL, `supply_order_date`...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.047 sec
1620	22:08:25	DROP TABLE IF EXISTS `raw_material_type`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.raw_material_type'	0.000 sec
1621	22:08:25	CREATE TABLE IF NOT EXISTS `raw_material_type` (`raw_material_type_id` TINYINT(1) NOT NULL, `raw_mat...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.047 sec
1622	22:08:25	DROP TABLE IF EXISTS `raw_material_unit`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.raw_material_unit'	0.000 sec
1623	22:08:25	CREATE TABLE IF NOT EXISTS `raw_material_unit` (`raw_material_unit_sku` INT NOT NULL, `raw_material_u...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.062 sec
1624	22:08:25	DROP TABLE IF EXISTS `supply_item`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.supply_item'	0.000 sec
1625	22:08:25	CREATE TABLE IF NOT EXISTS `supply_item` (`supplier` TINYINT(1) NOT NULL, `raw_material_unit` INT NOT...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.203 sec
1626	22:08:26	DROP TABLE IF EXISTS `supply_line_item`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.supply_line_item'	0.000 sec
1627	22:08:26	CREATE TABLE IF NOT EXISTS `supply_line_item` (`supply_line_id` TINYINT(9) NOT NULL, `supply_line_item...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.281 sec
1628	22:08:26	DROP TABLE IF EXISTS `product_batch`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.product_batch'	0.016 sec
1629	22:08:26	CREATE TABLE IF NOT EXISTS `product_batch` (`product_batch_id` TINYINT(1) NOT NULL, `product_batch...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.172 sec
1630	22:08:26	DROP TABLE IF EXISTS `production`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.production'	0.015 sec
1631	22:08:26	CREATE TABLE IF NOT EXISTS `production` (`factory` TINYINT(1) NOT NULL, `product_batch` TINYINT(1) N...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.094 sec
1632	22:08:26	DROP TABLE IF EXISTS `product_batch_item`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.product_batch_item'	0.000 sec
1633	22:08:26	CREATE TABLE IF NOT EXISTS `product_batch_item` (`product_batch` TINYINT(1) NOT NULL, `product_unit`...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.063 sec
1634	22:08:26	DROP TABLE IF EXISTS `warehouse`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.warehouse'	0.015 sec
1635	22:08:26	CREATE TABLE IF NOT EXISTS `warehouse` (`warehouse_id` TINYINT(1) NOT NULL, `warehouse_name` VA...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.094 sec

Action Output

#	Time	Action	Message	Duration / Fetch
1636	22:08:26	DROP TABLE IF EXISTS `stock`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.stock'	0.015 sec
1637	22:08:26	CREATE TABLE IF NOT EXISTS `stock` (`stock_id` TINYINT(1) NOT NULL, `product_batch` TINYINT(1) NOT...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.219 sec
1638	22:08:27	DROP TABLE IF EXISTS `company`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.company'	0.015 sec
1639	22:08:27	CREATE TABLE IF NOT EXISTS `company` (`company_id` TINYINT(1) NOT NULL, `company_name` VARCH...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.157 sec
1640	22:08:27	DROP TABLE IF EXISTS `rent_factory`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.rent_factory'	0.000 sec
1641	22:08:27	CREATE TABLE IF NOT EXISTS `rent_factory` (`rent_factory_id` TINYINT(1) NOT NULL, `factory` TINYINT(1) ...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.109 sec
1642	22:08:27	DROP TABLE IF EXISTS `rent_warehouse`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.rent_warehouse'	0.016 sec
1643	22:08:27	CREATE TABLE IF NOT EXISTS `rent_warehouse` (`rent_warehouse_id` TINYINT(1) NOT NULL, `warehouse` ...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.109 sec
1644	22:08:27	DROP TABLE IF EXISTS `employee`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.employee'	0.000 sec
1645	22:08:27	CREATE TABLE IF NOT EXISTS `employee` (`employee_id` TINYINT(1) NOT NULL, `employee_firstname` VA...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.062 sec
1646	22:08:27	DROP TABLE IF EXISTS `supervisor`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.supervisor'	0.016 sec
1647	22:08:27	CREATE TABLE IF NOT EXISTS `supervisor` (`employee` TINYINT(1) NOT NULL, `supervisor` TINYINT(1) NO...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.063 sec
1648	22:08:27	DROP TABLE IF EXISTS `labor`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.labor'	0.015 sec
1649	22:08:27	CREATE TABLE IF NOT EXISTS `labor` (`labor_id` TINYINT(1) NOT NULL, `contract` VARCHAR(45) NOT NU...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.094 sec
1650	22:08:27	DROP TABLE IF EXISTS `department`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.department'	0.000 sec
1651	22:08:27	CREATE TABLE IF NOT EXISTS `department` (`department_id` TINYINT(1) NOT NULL, `department_name` V...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.062 sec
1652	22:08:27	DROP TABLE IF EXISTS `store`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.store'	0.000 sec
1653	22:08:27	CREATE TABLE IF NOT EXISTS `store` (`store_id` TINYINT(1) NOT NULL, `store_name` VARCHAR(45) NOT ...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.063 sec
1654	22:08:28	DROP TABLE IF EXISTS `website`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.website'	0.000 sec
1655	22:08:28	CREATE TABLE IF NOT EXISTS `website` (`website_url` VARCHAR(45) NOT NULL, `domain` VARCHAR(45) ...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.093 sec
1656	22:08:28	DROP TABLE IF EXISTS `assignement`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.assignement'	0.016 sec
1657	22:08:28	CREATE TABLE IF NOT EXISTS `assignement` (`warehouse` TINYINT(1) NOT NULL, `store` TINYINT(1) NOT ...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.094 sec
1658	22:08:28	DROP TABLE IF EXISTS `customer`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.customer'	0.015 sec
1659	22:08:28	CREATE TABLE IF NOT EXISTS `customer` (`customer_id` TINYINT(1) NOT NULL, `email` VARCHAR(45) NO...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.078 sec
1660	22:08:28	DROP TABLE IF EXISTS `browsing`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.browsing'	0.000 sec
1661	22:08:28	CREATE TABLE IF NOT EXISTS `browsing` (`customer` TINYINT(1) NOT NULL, `website` VARCHAR(45) NOT ...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.218 sec



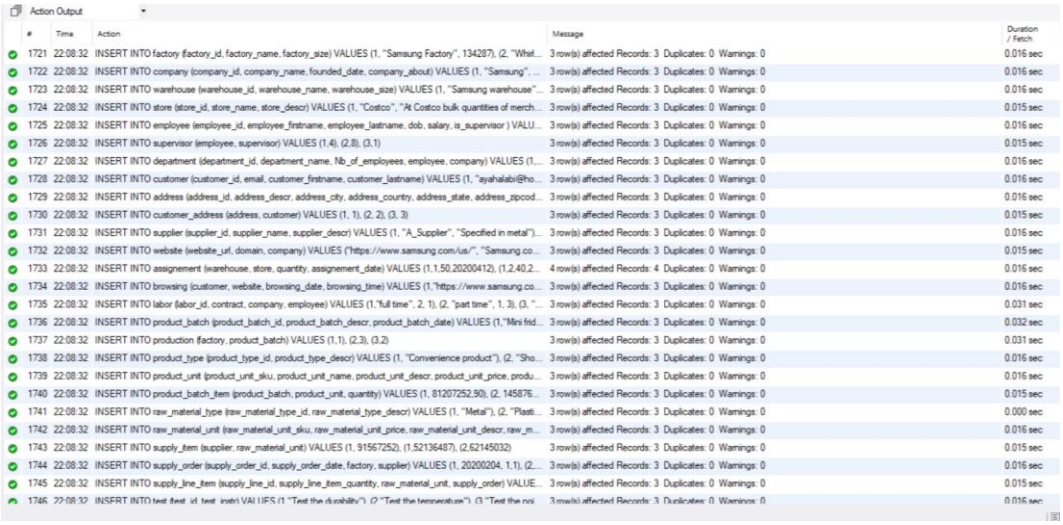
Action Output

#	Time	Action	Message	Duration / Fetch
1662	22:08:28	DROP TABLE IF EXISTS `salesperson`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.salesperson'	0.016 sec
1663	22:08:28	CREATE TABLE IF NOT EXISTS `salesperson` (`salesperson_id` INT NOT NULL, `salesperson_name` VARCH...	0 row(s) affected	0.063 sec
1664	22:08:28	DROP TABLE IF EXISTS `shopping`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.shopping'	0.015 sec
1665	22:08:28	CREATE TABLE IF NOT EXISTS `shopping` (`customer` TINYINT(1) NOT NULL, `salesperson` INT NOT NULL...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.094 sec
1666	22:08:28	DROP TABLE IF EXISTS `customer_type`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.customer_type'	0.000 sec
1667	22:08:28	CREATE TABLE IF NOT EXISTS `customer_type` (`customer_type_id` TINYINT(1) NOT NULL, `customer_type...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.063 sec
1668	22:08:28	DROP TABLE IF EXISTS `customer_associated_type`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.customer_associated_type'	0.000 sec
1669	22:08:28	CREATE TABLE IF NOT EXISTS `customer_associated_type` (`customer` TINYINT(1) NOT NULL, `customer_t...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.110 sec
1670	22:08:28	DROP TABLE IF EXISTS `address`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.address'	0.000 sec
1671	22:08:29	CREATE TABLE IF NOT EXISTS `address` (`address_id` INT NOT NULL, `address_descr` VARCHAR(45) NOT...	0 row(s) affected	0.062 sec
1672	22:08:29	DROP TABLE IF EXISTS `customer_address`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.customer_address'	0.000 sec
1673	22:08:29	CREATE TABLE IF NOT EXISTS `customer_address` (`address` INT NOT NULL, `customer` TINYINT(1) NOT ...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.063 sec
1674	22:08:29	DROP TABLE IF EXISTS `purchase_order`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.purchase_order'	0.000 sec
1675	22:08:29	CREATE TABLE IF NOT EXISTS `purchase_order` (`customer` TINYINT(1) NOT NULL, `purchase_order_id` TI...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.063 sec
1676	22:08:29	DROP TABLE IF EXISTS `return_detail`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.return_detail'	0.000 sec
1677	22:08:29	CREATE TABLE IF NOT EXISTS `return_detail` (`return_id` TINYINT(1) NOT NULL, `purchase_order` TINYINT...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.125 sec
1678	22:08:29	DROP TABLE IF EXISTS `logistic_provider`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.logistic_provider'	0.000 sec
1679	22:08:29	CREATE TABLE IF NOT EXISTS `logistic_provider` (`logistic_provider_id` TINYINT(1) NOT NULL, `logistic_pro...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.156 sec
1680	22:08:29	DROP TABLE IF EXISTS `region`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.region'	0.016 sec
1681	22:08:29	CREATE TABLE IF NOT EXISTS `region` (`region_id` TINYINT(1) NOT NULL, `region_name` VARCHAR(45) N...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.141 sec
1682	22:08:29	DROP TABLE IF EXISTS `delivery`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.delivery'	0.000 sec
1683	22:08:29	CREATE TABLE IF NOT EXISTS `delivery` (`delivery_id` TINYINT(1) NOT NULL, `delivery_status` VARCHAR(4...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.078 sec
1684	22:08:29	DROP TABLE IF EXISTS `delivery_limit`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.delivery_limit'	0.000 sec
1685	22:08:29	CREATE TABLE IF NOT EXISTS `delivery_limit` (`logistic_provider` TINYINT(1) NOT NULL, `region` TINYINT(1...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.109 sec
1686	22:08:29	DROP TABLE IF EXISTS `payment_type`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.payment_type'	0.000 sec
1687	22:08:29	CREATE TABLE IF NOT EXISTS `payment_type` (`payment_type_id` TINYINT(1) NOT NULL, `payment_type_d...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.063 sec

Action Output

#	Time	Action	Message	Duration / Fetch
1688	22:08:30	DROP TABLE IF EXISTS `tax_rate`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.tax_rate'	0.015 sec
1689	22:08:30	CREATE TABLE IF NOT EXISTS `tax_rate` (`tax_rate_id` INT NOT NULL, `percentage` INT NOT NULL, PRI...	0 row(s) affected	0.063 sec
1690	22:08:30	DROP TABLE IF EXISTS `payment`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.payment'	0.000 sec
1691	22:08:30	CREATE TABLE IF NOT EXISTS `payment` (`payment_id` TINYINT(1) NOT NULL, `payment_type` TINYINT(1) ...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.094 sec
1692	22:08:30	DROP TABLE IF EXISTS `credit_card`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.credit_card'	0.000 sec
1693	22:08:30	CREATE TABLE IF NOT EXISTS `credit_card` (`card_number` INT NOT NULL, `ccv` INT NOT NULL, `bank` ...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.047 sec
1694	22:08:30	DROP TABLE IF EXISTS `bank_check`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.bank_check'	0.000 sec
1695	22:08:30	CREATE TABLE IF NOT EXISTS `bank_check` (`account_number` INT NOT NULL, `payment_type` TINYINT(...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.297 sec
1696	22:08:30	DROP TABLE IF EXISTS `order_preperation`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.order_preperation'	0.016 sec
1697	22:08:30	CREATE TABLE IF NOT EXISTS `order_preperation` (`employee` TINYINT(1) NOT NULL, `purchase_order` TI...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.125 sec
1698	22:08:30	DROP TABLE IF EXISTS `line_item`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.line_item'	0.000 sec
1699	22:08:30	CREATE TABLE IF NOT EXISTS `line_item` (`line_item_id` TINYINT(1) NOT NULL, `quantity` INT NOT NULL, ...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.125 sec
1700	22:08:30	DROP TABLE IF EXISTS `list`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.list'	0.016 sec
1701	22:08:30	CREATE TABLE IF NOT EXISTS `list` (`website` VARCHAR(45) NOT NULL, `product_unit` INT NOT NULL, I...	0 row(s) affected	0.109 sec
1702	22:08:31	DROP TABLE IF EXISTS `part`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.part'	0.000 sec
1703	22:08:31	CREATE TABLE IF NOT EXISTS `part` (`part_id` INT NOT NULL, `part_name` VARCHAR(45) NOT NULL, PR...	0 row(s) affected	0.079 sec
1704	22:08:31	DROP TABLE IF EXISTS `assembling`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.assembling'	0.000 sec
1705	22:08:31	CREATE TABLE IF NOT EXISTS `assembling` (`part` INT NOT NULL, `product_unit` INT NOT NULL, INDEX `...	0 row(s) affected	0.094 sec
1706	22:08:31	DROP TABLE IF EXISTS `project`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.project'	0.015 sec
1707	22:08:31	CREATE TABLE IF NOT EXISTS `project` (`project_id` INT NOT NULL, `project_name` VARCHAR(45) NOT N...	0 row(s) affected	0.125 sec
1708	22:08:31	DROP TABLE IF EXISTS `participation`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.participation'	0.000 sec
1709	22:08:31	CREATE TABLE IF NOT EXISTS `participation` (`employee` TINYINT(1) NOT NULL, `project` INT NOT NULL, ...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.313 sec
1710	22:08:31	DROP TABLE IF EXISTS `store_salesperson`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'inventorycontroldb.store_salesperson'	0.000 sec
1711	22:08:31	CREATE TABLE IF NOT EXISTS `store_salesperson` (`store` TINYINT(1) NOT NULL, `salesperson` INT NOT ...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.188 sec
1712	22:08:31	SET SQL_MODE=@OLD_SQL_MODE	0 row(s) affected	0.000 sec
1713	22:08:31	SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS	0 row(s) affected	0.000 sec

Section IX: Inserting Data



Action Output

#	Time	Action	Message	Duration / Fetch
1721	22:08:32	INSERT INTO factory (factory_id, factory_name, factory_size) VALUES (1, "Samsung Factory", 134287), (2, "Whirl...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1722	22:08:32	INSERT INTO company (company_id, company_name, founded_date, company_about) VALUES (1, "Samsung", ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1723	22:08:32	INSERT INTO warehouse (warehouse_id, warehouse_name, warehouse_size) VALUES (1, "Samsung warehouse"...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1724	22:08:32	INSERT INTO store (store_id, store_name, store_descr) VALUES (1, "Costco", "At Costco bulk quantities of merch...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1725	22:08:32	INSERT INTO employee (employee_id, employee_firstname, employee_lastname, dob, salary, is_supervisor) VALU...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1726	22:08:32	INSERT INTO supervisor (employee, supervisor) VALUES (1,4), (2,8), (3,1)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1727	22:08:32	INSERT INTO department (department_id, department_name, Nb_of_employees, employee, company) VALUES (1,...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1728	22:08:32	INSERT INTO customer (customer_id, email, customer_firstname, customer_lastname) VALUES (1, "ayahalabi@ho...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1729	22:08:32	INSERT INTO address (address_id, address_descr, address_city, address_country, address_state, address_zipcod...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1730	22:08:32	INSERT INTO customer_address (address, customer) VALUES (1, 1), (2, 2), (3, 3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1731	22:08:32	INSERT INTO supplier (supplier_id, supplier_name, supplier_descr) VALUES (1, "A_Supplier", "Specified in metal")...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1732	22:08:32	INSERT INTO website (website_url, domain, company) VALUES ("https://www.samsung.com/us/", "Samsung.co...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1733	22:08:32	INSERT INTO assignement (warehouse, store, quantity, assignement_date) VALUES (1,1,50,20200412), (1,2,40,2...	4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0	0.016 sec
1734	22:08:32	INSERT INTO browsing (customer, website, browsing_date, browsing_time) VALUES (1,"https://www.samsung.co...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1735	22:08:32	INSERT INTO labor (labor_id, contract, company, employee) VALUES (1,"full time", 2, 1), (2, "part time", 1, 3), (3, "...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.031 sec
1736	22:08:32	INSERT INTO product_batch (product_batch_id, product_batch_descr, product_batch_date) VALUES (1,"Mini frid...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.032 sec
1737	22:08:32	INSERT INTO production (factory, product_batch) VALUES (1,1), (2,3), (3,2)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.031 sec
1738	22:08:32	INSERT INTO product_type (product_type_id, product_type_descr) VALUES (1, "Convenience product"), (2, "Sho...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1739	22:08:32	INSERT INTO product_unit (product_unit_sku, product_unit_name, product_unit_descr, product_unit_price, produ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1740	22:08:32	INSERT INTO product_batch_item (product_batch, product_unit, quantity) VALUES (1, 81207252,90), (2, 145876...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1741	22:08:32	INSERT INTO raw_material_type (raw_material_type_id, raw_material_type_descr) VALUES (1, "Metal"), (2, "Plasti...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1742	22:08:32	INSERT INTO raw_material_unit (raw_material_unit_sku, raw_material_unit_price, raw_material_unit_descr, raw_m...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1743	22:08:32	INSERT INTO supply_item (supplier, raw_material_unit) VALUES (1, 91567252), (1,52136487), (2,62145032)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1744	22:08:32	INSERT INTO supply_order (supply_order_id, supply_order_date, factory, supplier) VALUES (1, 20200204, 1,1), (2,...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1745	22:08:32	INSERT INTO supply_line_item (supply_line_id, supply_line_item_quantity, raw_material_unit, supply_order) VALUE...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1746	22:08:32	INSERT INTO test (test_id, test_instr) VALUES (1,"Test the durability"), (2,"Test the temperature"), (3,"Test the noi...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec

Action Output

#	Time	Action	Message	Duration / Fetch
1746	22:08:32	INSERT INTO test (test_id, test_instr) VALUES (1,"Test the durability"), (2,"Test the temperature"), (3,"Test the noi...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1747	22:08:32	INSERT INTO test_run (factory, test, test_run_id) VALUES (1, 1, 1), (2,1,2), (3,2,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1748	22:08:32	INSERT INTO test_batch (test_batch_id, test_batch_descr, test_batch_date) VALUES (1, "Test new compressor",...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1749	22:08:32	INSERT INTO test_unit (test_unit_sku, test_unit_name, test_unit_descr) VALUES (52149863, "Double door refriger...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1750	22:08:32	INSERT INTO test_batch_reference (test_unit, test_batch) VALUES (52149863, 1), (45781244, 2), (22556895,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1751	22:08:32	INSERT INTO decision (decision_id, decision_descr) VALUES (1, "Repairable"), (2, "Recycable"), (3, "Disposable")	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1752	22:08:32	INSERT INTO returned_defective_item (defect_id, defect_descr, product_unit, decision, factory) VALUES (1, "Fre...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1753	22:08:32	INSERT INTO defect_type (defect_type_code, defect_type_descr) VALUES (1, "Motor problem"), (2, "Thermostat ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1754	22:08:32	INSERT INTO defect_level (returned_defective_item, defect_type, defect_level_id) VALUES (1, 2, 1), (2, 3, 2), (3, ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1755	22:08:32	INSERT INTO customer_type (customer_type_id, customer_type_descr) VALUES (1, "Consumer"), (2,"Governmen...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1756	22:08:32	INSERT INTO customer_associated_type (customer, customer_type) VALUES (1, 1), (2,2), (3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1757	22:08:32	INSERT INTO stock (stock_id, product_batch, warehouse) VALUES (1, 1, 1), (2,2,2), (3, 3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1758	22:08:32	INSERT INTO rent_factory (rent_factory_id, factory, company) VALUES (1, 1, 1), (2,2,2), (3, 3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1759	22:08:32	INSERT INTO rent_warehouse (rent_warehouse_id, warehouse, company) VALUES (1, 1, 1), (2,2,2), (3, 3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1760	22:08:32	INSERT INTO list (website, product_unit) VALUES ("https://www.samsung.com/us/", 81207252), ("https://www....	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1761	22:08:32	INSERT INTO purchase_order (customer, purchase_order_id, purchase_date) VALUES (1, 1, 20200408), (2,2,202...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1762	22:08:32	INSERT INTO payment_type (payment_type_id, payment_type_descr) VALUES (1, "Electronic"), (2,"Cash"), (3, "B...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1763	22:08:32	INSERT INTO tax_rate (tax_rate_id, percentage) VALUES (1, 10), (2,20), (3, 50)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1764	22:08:32	INSERT INTO payment (payment_id, payment_type, purchase_order, amount, tax_rate) VALUES (1, 1, 1, 500.00, ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1765	22:08:32	INSERT INTO bank_check (account_number, payment_type, routing_number, bank) VALUES (1245876, 3, 54687...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1766	22:08:32	INSERT INTO credit_card (card_number, ccv, bank, expiration_date, payment_type) VALUES (124587612, 543, "...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1767	22:08:32	INSERT INTO salesperson (salesperson_id, salesperson_name) VALUES (1, "Veronica"), (2,"Alice"), (3, "Tom")	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1768	22:08:32	INSERT INTO shopping (customer, salesperson) VALUES (1, 1), (2,2), (3, 3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1769	22:08:33	INSERT INTO store_salesperson (store, salesperson) VALUES (1, 1), (2,2), (3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1770	22:08:33	INSERT INTO line_item (line_item_id, quantity, discount, purchase_order, product_unit) VALUES (1, 2, 20, 1, 8120...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1771	22:08:33	INSERT INTO order_preperation (employee, purchase_order) VALUES (1, 1), (2,1), (3, 1)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec

1771	22:08:33	INSERT INTO order_preperation (employee, purchase_order) VALUES (1, 1), (2,1), (3, 1)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1772	22:08:33	INSERT INTO return_detail (return_id, purchase_order, return_reason, return_quantity) VALUES (1, 1, "Wrong orde...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.031 sec
1773	22:08:33	INSERT INTO logistic_provider (logistic_provider_id, logistic_provider_name) VALUES (1, "UPS"), (2,"Amazon"), (3...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1774	22:08:33	INSERT INTO delivery (delivery_id, delivery_status, delivery_date, purchase_order, logistic_provider) VALUES (1, "...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1775	22:08:33	INSERT INTO region (region_id, region_name) VALUES (1, "Within United States"), (2, "International"), (3, "US an...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1776	22:08:33	INSERT INTO delivery_limit (logistic_provider, region) VALUES (1, 1), (2, 2), (3, 1)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1777	22:08:33	INSERT INTO part (part_id, part_name) VALUES (1, "Motor"), (2, "filter"), (3, "Ice Maker")	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1778	22:08:33	INSERT INTO assembling (part, product_unit) VALUES (1,81207252), (2, 14587621), (3, 75476215)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1779	22:08:33	INSERT INTO project (project_id, project_name) VALUES (1,"New product release"), (2, "Budgeting"), (3, "New A...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1780	22:08:33	INSERT INTO participation (project, employee) VALUES (1,2), (2, 2), (3, 3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec

Section X: Testing

Action Output

#	Time	Action	Message	Duration / Fetch
2741	00:10:14	USE InventoryControlDB	0 row(s) affected	0.000 sec
2742	00:10:14	DELETE FROM factory WHERE factory_name = "Samsung Factory"	0 row(s) affected	0.000 sec
2743	00:10:14	UPDATE factory SET factory_id = 4 WHERE factory_name = "LG Factory"	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2744	00:10:14	DELETE FROM company WHERE company_id=1	0 row(s) affected	0.000 sec
2745	00:10:14	UPDATE company SET company_id = 1 WHERE company_name = "Whirlpool"	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.000 sec
2746	00:10:14	DELETE FROM employee WHERE salary=150000	0 row(s) affected	0.000 sec
2747	00:10:14	UPDATE employee SET employee_firstname="Omar" WHERE employee_id=2	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2748	00:10:14	DELETE FROM supplier WHERE supplier_id=1	0 row(s) affected	0.000 sec
2749	00:10:14	DELETE FROM project WHERE project_name="Budgeting"	0 row(s) affected	0.000 sec
2750	00:10:14	UPDATE project SET project_name="Statistical result" WHERE project_id=2	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.000 sec
2751	00:10:14	DELETE FROM warehouse WHERE warehouse_size=10000	0 row(s) affected	0.000 sec
2752	00:10:14	UPDATE warehouse SET warehouse_name="Costco warehouse" WHERE warehouse_id=3	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2753	00:10:14	DELETE FROM store WHERE store_id=1	0 row(s) affected	0.000 sec
2754	00:10:14	UPDATE store SET store_id=4 WHERE store_id=2	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.000 sec
2755	00:10:14	UPDATE test SET test_id=4 WHERE test_id=1	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.000 sec
2756	00:10:14	DELETE FROM test_batch WHERE test_batch_date=20181215	0 row(s) affected	0.000 sec
2757	00:10:14	UPDATE test_batch SET test_batch_descr="New motor" WHERE test_batch_id=2	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2758	00:10:14	UPDATE test_unit SET test_unit_descr="test new compressor" WHERE test_unit_name="double door refrigerator"	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2759	00:10:14	DELETE FROM decision WHERE decision_descr="recycable"	0 row(s) affected	0.000 sec
2760	00:10:14	UPDATE decision SET decision_descr="recycable" WHERE decision_id=3	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.015 sec
2761	00:10:14	DELETE FROM product_batch WHERE product_batch_descr="Mini Fridge"	0 row(s) affected	0.000 sec
2762	00:10:14	UPDATE product_batch SET product_batch_id=4 WHERE product_batch_date=20200205	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.000 sec
2763	00:10:14	UPDATE product_type SET product_type_id=4 WHERE product_type_descr="Shopping product"	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2764	00:10:14	DELETE FROM raw_material_type WHERE raw_material_type_id=4	0 row(s) affected	0.000 sec
2765	00:10:14	UPDATE raw_material_type SET raw_material_type_id=4 WHERE raw_material_type_descr="Metal"	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.000 sec
2766	00:10:14	DELETE FROM salesperson WHERE salesperson_name="Bob"	0 row(s) affected	0.000 sec

Action Output

#	Time	Action	Message	Duration / Fetch
2759	00:10:14	DELETE FROM decision WHERE decision_descr="recycable"	0 row(s) affected	0.000 sec
2760	00:10:14	UPDATE decision SET decision_descr="recycable" WHERE decision_id=3	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.015 sec
2761	00:10:14	DELETE FROM product_batch WHERE product_batch_descr="Mini Fridge"	0 row(s) affected	0.000 sec
2762	00:10:14	UPDATE product_batch SET product_batch_id=4 WHERE product_batch_date=20200205	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.000 sec
2763	00:10:14	UPDATE product_type SET product_type_id=4 WHERE product_type_descr="Shopping product"	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2764	00:10:14	DELETE FROM raw_material_type WHERE raw_material_type_id=4	0 row(s) affected	0.000 sec
2765	00:10:14	UPDATE raw_material_type SET raw_material_type_id=4 WHERE raw_material_type_descr="Metal"	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.000 sec
2766	00:10:14	DELETE FROM salesperson WHERE salesperson_name="Bob"	0 row(s) affected	0.000 sec
2767	00:10:14	UPDATE salesperson SET salesperson_name="Ronny" WHERE salesperson_id=2	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2768	00:10:14	DELETE FROM part WHERE part_id=2	0 row(s) affected	0.000 sec
2769	00:10:14	UPDATE part SET part_name="wheels" WHERE part_id=3	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2770	00:10:14	DELETE FROM customer where customer_id=2	0 row(s) affected	0.000 sec
2771	00:10:14	UPDATE customer SET customer_firstname="Omar" WHERE customer_id=3	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2772	00:10:14	DELETE FROM address WHERE address_city="San Francisco"	0 row(s) affected	0.000 sec
2773	00:10:14	UPDATE address SET address_city="Alo Palto" WHERE address_id=2	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2774	00:10:14	DELETE FROM logistic_provider WHERE logistic_provider_name="UPS"	0 row(s) affected	0.000 sec
2775	00:10:14	UPDATE logistic_provider SET logistic_provider_name="DHL" WHERE logistic_provider_id=2	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2776	00:10:14	DELETE FROM customer_type WHERE customer_type_descr="Business"	0 row(s) affected	0.000 sec
2777	00:10:14	UPDATE customer_type SET customer_type_id=4 WHERE customer_type_id=2	0 row(s) affected Rows matched: 0 Changed: 0 Warnings: 0	0.000 sec
2778	00:10:14	DELETE FROM region WHERE region_id=1	0 row(s) affected	0.000 sec
2779	00:10:14	UPDATE region SET region_name="North America" WHERE region_id=2	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2780	00:10:14	DELETE FROM tax_rate WHERE percentage=50	0 row(s) affected	0.000 sec
2781	00:10:14	UPDATE tax_rate SET percentage=75 WHERE tax_rate_id=2	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
2782	00:10:14	DELETE FROM payment_type WHERE payment_type_id=3	0 row(s) affected	0.000 sec
2783	00:10:14	UPDATE payment_type SET payment_type_id=6 WHERE payment_type_descr="Cash"	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec

Section XI: Testing Table of relational model

Entity	SQLQuery	Ok/Failed	Error Description	Possible Solution
Factory	Delete	Ok	None	None
Factory	Update	Ok	None	None
Factory	Insert	Failed	Duplicate entry '1' for key 'factory.PRIMARY'	Forgot to truncate
Factory	Insert	Failed	Unknown column 'factpry_size' in 'field list'	Misspelled factory in factory_size
Supplier	Delete	OK	None	None
Supplier	Update	Failed	Unknown column employee_id in where clause	Should be supplier_id
Project	Delete	Ok	None	None
Project	Update	Ok	None	None
Warehouse	delete	OK	None	None
Warehouse	Update	Ok	None	None
Company	Delete	Ok	None	None
Company	Insert	Failed	Adding non existing fk company to child table	Foreign key company should be in company table
Company	Update	Ok	None	none
Employee	Delete	Failed	Cannot delete or update a parent row: a foreign key constraint fails	The foreign keys on delete option should be on cascade instead of no action
Employee	Update	Failed	Column is_supervisor cannot be null	Should add a value to is_supervisor
Employee	Insert	Failed	Column 'is_supervisor' cannot be null	Is_supervisor should have a value other than null
Store	Delete	OK	None	None
store	Update	Ok	None	None
Store	Insert	Failed	Data too long for column 'store_descr' at row 1	Change the length of the varchar type

Test	Delete	Failed	Unknown column test_descr in where clause	Should be test_instr instead
Test	Update	Ok	None	None
Test_batch	Delete	Ok	None	None
Test_batch	Update	Ok	None	None
Test_unit	Delete	Failed	Unknown column test_unit_id in where clause	Should be test_unit_sku
Test unit	Update	Ok	None	None
Decision	Delete	Ok	None	None
Decision	Update	Ok	None	None
Defect_type	Delete	Failed	Unknown column defect_id in where clause	Should be defect_type_id
Defect_type	Update	Failed	Unknown column defect_id in where clause	Should be defect_type_id
Product_batch	Delete	Ok	None	None
Product_batch	Update	Ok	None	None
Product_type	Delete	Failed	Unknown “Convenient product” in column product_type_descr in where clause	Misspelling, should be “Convenience product”
Product_type	Update	Ok	None	None
Product unit	Delete	Ok	None	None
Product unit	Update	Ok	None	None
Raw_material_type	Delete	Failed	Cannot update or delete a parent row	Forgot to truncate
Raw_material_type	Update	Ok	None	None
Salesperson	Delete	Ok	None	None
Salesperson	Update	Ok	None	None
Part	Delete	Ok	None	None
Part	Update	Ok	None	None
Customer	Delete	Ok	None	None
Customer	Update	Ok	None	None
Address	Delete	Ok	None	None
Address	Update	Ok	None	None
Logistic provider	Delete	Ok	None	None
Logistic provider	Update	Ok	None	None
Region	Delete	Ok	None	None
Region	Update	Ok	None	None
Customer type	Delete	Ok	None	None
Customer type	Update	Ok	None	None

Tax rate	Delete	Failed	Cannot delete a parent row: a foreign key constraint fails	The foreign keys on delete option should be on cascade/set null instead of no action
Tax rate	Update	Ok	None	None
Payment type	Delete	Ok	None	None
Payment type	Update	Ok	None	none