***Step 1:* *Mapping strong/regular Entity***

**PRODUCT** (Product ID, Product Description, Product Finish, Product Standard Price)

**PRODUCT LINE**(Product Line ID, Product Line Name)

**ORDER**(orderID, orderDate)

**RAW MATERIAL**(matetialID, unitOfMeasure, mName, mStandardCost)

**VENDOR**(VendorID, VendorName, VendorAddress)

**SUPPLIER**(contractNumber)

**WORK CENTER**(CenterID, location)

**EMPLOYEEs**(employeeID, employeeName, employeeAddress, employeeType)

**Customer**(CustomerID, customerName)

**SaleTerritory**(saleTerritoryID,saleTerritoryName)

**SALE PERSONs** (saleID,saleName,saleTelephone,saleFax )

**SKILLs**(SkillCode, skillTitle, skillType,descriptions)

***Step 2 : Mapping of Weak Entity***

**CUSTOMER : (Customer ID,** Customer Name, Customer Address, Customter Post Code)

**ORDER : (Customer ID, OrderID,** Order Date)

**step 4: Mapping Binary 1:M relationship**

**TERRITORY(Territory ID,** Territory Name)

**SALESPERSON(SalespersonID, TerritoryID,** Salesperson Name, Salesperson Telephone, Salesperson Fax)  
**PRODUCT LINE (Product line ID,** Product Line Name)

**PRODUCT(Product ID, Product line ID,** Product Description, Product Finish,Product Standard Price)

**Step 5: Mapping Binary M:N relationship**

M:N

-Product – Work Center:

**Product in** (Product ID, WorkCenter ID)

-Product-Order:

**Orderline**(Product ID, Order ID, Ordered Quantity)

- Product-Raw materials:

**Uses**(Product ID, Material ID, Goes into quantity)

Do business in( **Territory ID, Customer ID)**

Work in(**WordCenterID, EmployeeID)**

**Step 6 : Unary relationship**

1:M

**EMPLOYEEs**(employeeID, employeeName, employeeAddress, employeeType, *employeeManager(khóa ngoại)*)

**Step 7: Mapping Multivalued Attributes**

**Employee**(EmployeeID,  employeeName, employeeAddress, employeeType)

**has**(EmployeeID,skillID)

**Skill**(skillCode, skillTitle)

**Step 9: Mapping Supertype/Subtype Relationships**

**Customer**(CustomerID, customerName,custommerType)

**NationalCustomer**(nCustomerID ->CustomerID)

**RegularCustomer**(rCustomerID  ->CustomerID)

**EMPLOYEEs**(employeeID, employeeName, employeeAddress, employeeType)

**union**E(uEID ->employeeID )

**managementE**(mEID ->employeeID )

***Database Hoàn chỉnh :***

**PRODUCT(Product ID, Product line ID,** Product Description, Product Finish,Product Standard Price)

**PRODUCT LINE (Product line ID,** Product Line Name)

**ORDER : (Customer ID, OrderID,** Order Date)

**RAW MATERIAL**(**matetialID**, unitOfMeasure, mName, mStandardCost)

**VENDOR**(**VendorID**, VendorName, {VendorAddress})

**SUPPLIER**(**VendorID, matetialID** ,Supply unit price)

**WORK CENTER**(**CenterID**, location)

**EMPLOYEEs**(**employeeID**, employeeName, employeeAddress, employeeType, *employeeManager(khóa ngoại)*)

**Customer**(**CustomerID**, customerName,Customer Post Code, {Customer address})

**Territory**(**TerritoryID**, TerritoryName)

**SALESPERSON(SalespersonID, TerritoryID,** Salesperson Name, Salesperson Telephone, Salesperson Fax)  
**Product in** (**Product ID, WorkCenter ID**)

**Orderline**(**Product ID, Order ID**, Ordered Quantity)

**Uses**(**Product ID, Material ID**, Goes into quantity)

**Do business in**( **Territory ID, Customer ID)**

**Work in**(**WordCenterID, EmployeeID)**

**Has**(**EmployeeID,skillID**)

**Skill**(**skillCode**, skillTitle, Skill Type)

**NationalCustomer**(nCustomerID ->CustomerID)

**RegularCustomer**(rCustomerID  ->CustomerID)

**union**E(uEID ->employeeID )

**managementE**(mEID ->employeeID )

