**Conversion of combined ERD to an equivalent relational schema**

**Step 1 : Entities becomes tables**

Customer(CustomerID, Customer\_FirstName,Customer\_LastName, CustomerPhone, Contact, Email, CurrentDiscount)

ArtWorkOrder\_Project(ArtWorkOrderID, ArtWorkDescription, OrderDate, MaximumColors, ArtWorkFees, FixedCharges, ShippingCosts, DateApproved, ScheduledPrintDate)

ArtWorkLocation(ArtWorkOrderID, LocationID, Cost, Description)

PrintOrder(PrintOrderID, PrintDate. PrintOrderDate,ArtFilmDate, DateDelivered, ApparelOrderDate,DueDate,ArtSlideDate,Deposit, SetUpCharge, Discount)

Apparel\_Item(Apparel\_ID,Apparel\_Type,Vendor, PriceCharged, BasePricePerUnit)

Size(SizeCode, StandardPrice)

Color(ColorID, ColorDescription, ColorCharge)

Employee (Employee ID , Employee\_FirstName ,Employee\_LastName, Phone , WageRate , FullTimeY\_N )

Task ( TaskID , TaskName )

EmployeeWorkLog(WorkLogID, StartDate, StartTime, TimeSpent)

**Step 2 : Relationships becomes tables**

has(Apparel\_ID, SizeCode, Number, AdditionialCharge)

on(Apparel\_ID, PrintOrderID)

has\_base\_color(Apparel\_ID, ColorID)

logs\_hour(WorkLogID, EmployeeID)

needs(ArtWorkOrderID, CustomerID, Event, Theme)

IsWorkedOn(WorkLogID, ArtWorkOrderID, LocationID, DateCompleted)

contains(TaskID, WorkLogID)

uses(ArtWorkOrderID, LocationID, ColorID)

produces( PrintOrderID,ArtWorkOrderID)

has\_prints\_on (ArtWorkOrderID , LocationID , ArtworkOrder.ArtWorkOrderID)

**Step 3: Combine tables with exactly same primary keys**

Combine table **needs** with **ArtWorkOrder\_Project**

Combine table **produces** with **PrintOrder**

Combine table **has\_prints\_on** with **ArtWorkLocation**

Combine table **logs\_hour and IsWorkedOn** with **EmployeeWorkLog**

Combine table **On** with **Apparel\_Item**

Combine table **has\_base\_color** with **Apparel\_Item**

**Step 4: Final Tables**

Customer(CustomerID, Customer\_FirstName,Customer\_LastName, CustomerPhone, Contact, Email, CurrentDiscount)

ArtWorkOrder\_Project(ArtWorkProjectID, ArtWorkDescription, OrderDate, MaximumColors, ArtWorkFees, FixedCharges, ShippingCosts, DateApproved, ScheduledPrintDate, CustomerID, Event, Theme)

ArtWorklLocation(ArtWorkOrderID, LocationID, Cost, Description)

PrintOrder(PrintOrderID, PrintDate, PrintOrderDate,ArtFilmDate, DateDelivered, ApparelOrderDate,DueDate,ArtSlideDate,Deposit, SetUpCharge, Discount, ArtWorkOrderID)

Apparel\_Item(Apparel\_ID,Apparel\_Type,Vendor, TotalBlankPrice, BasePricePerUnit, PrintOrderID,Color\_ID)

Size(SizeCode, StandardPrice)

Color(ColorID, ColorDescription, ColorCharge)

Employee (Employee ID , Employee\_FirstName ,Employee\_LastName , Phone , WageRate , FullTime )

Task ( TaskID , TaskName )

EmployeeWorkLog(WorkLogID, StartDate, StartTime, TimeSpent, ArtWorkOrderID, LocationID, DateCompleted,EmployeeID)

has(Apparel\_ID, SizeCode, Number, AdditionialCharge)

contains(TaskID, WorkLogID)

uses(ArtWorkOrderID, LocationID, ColorID)