

Cerulean Bee- Equivalent Relational Schema

Step 1: Every Entity become a Table.

1. Customer(**CustomerID**, CustomerName, Contact, Phone, Email, CurrentDiscount, Deposit)
2. ArtworkOrder(**ArtworkOrderID**, ArtworkDescription, ApparelItem, OrderDate, DateApproved, ScheduledPrintDate, OrderDiscount, TotalPrice, MaximumColors)
3. Color(**ColorID**, ColorDescription)
4. Artwork Location(**ArtworkLocationID**, **ArtworkOrderID**, Description, Cost, LocationSize)
5. Employee(**EmployeeID**, EmployeeName, WageRate, Phone, IsFullTime)
6. Employee_Work_Log(**WorkLogID**, Date, Start Time, Task, TimeSpent)
7. PrintOrder(**PrintOrderID**, PrintOrderDate, DueDate, ArtSlideDate, ArtFilmDate, ApparelOrderDate, PrintDate, DateDelivered, SetupCharge, Deposit, Discount, MaterialCharge, ArtworkFees, FixedCharges, ShippingCosts_Other)
8. PrintOrderApparel(**POApparelID**, **PrintOrderID**, BaseColor, PerUnitBasePrice, Vendor, ColorCharge)
9. StandardApparelSize(**SizeID**, SizeDescription, SizeAddCharge)

Step 2: Every Relation become a Table.

1. needs(**ArtworkOrderID**, CustomerID, Event, Theme)
2. has_prints_on(**ArtworkLocationID**, **ArtworkOrderID**)
3. has_base_color(**ArtworkOrderID**, ColorID)
4. uses_for(**PrintOrderID**, ArtworkOrderID)
5. is_on(**POApparelID**, **PrintOrderID**)
6. is_worked_on(**WorkLogID**, ArtworkLocationID)
7. WorkedOnBy(**ArtworkLocationID**, **ArtworkOrderID**, EmployeeID, Date Completed)
8. logs_hours(**WorkLogID**, EmployeeID, WageRateCharged)
9. has(**ArtworkOrderID**, **ColorID**)
10. uses(**ArtworkLocationID**, **ColorID**)
11. involves(**SizeID**, **POApparelID**, **PrintOrderID**, PriceCharged, AdditionalCharge, Quantity)

Step 3: relations will be added to entity if they have same primary key as entity and non-key columns will be added to entity.

- ArtworkOrder(**ArtworkOrderID**, ArtworkDescription, ApparelItem, OrderDate, DateApproved, ScheduledPrintDate, OrderDiscount, TotalPrice, MaximumColors)
 - needs(**ArtworkOrderID**, CustomerID, Event, Theme)
 - has_base_color(**ArtworkOrderID**, ColorID)
- will result in,
- ArtworkOrder(**ArtworkOrderID**, ArtworkDescription, ApparelItem, OrderDate, DateApproved, ScheduledPrintDate, OrderDiscount, TotalPrice, MaximumColors, CustomerID, Event, Theme, ColorID)
-
- Artwork Location(**ArtworkLocationID**, **ArtworkOrderID**, Description, Cost, LocationSize)
 - has_prints_on(**ArtworkLocationID**, **ArtworkOrderID**)
 - WorkedOnBy(**ArtworkLocationID**, **ArtworkOrderID**, EmployeeID, Date Completed)
- will result in,

Artwork Location(**ArtworkLocationID**,**ArtworkOrderID**, Description, Cost, LocationSize, EmployeeID, Date Completed)

- Employee_Work_Log(**WorkLogID**, Date, Start Time, Task , TimeSpent)
 - is_worked_on(**WorkLogID**, ArtworkLocationID)
 - logs_hours(**WorkLogID**, EmployeeID, WageRateCharged)
- will result in,
- Employee_Work_Log(**WorkLogID**, Date, Start Time, Task , TimeSpent, ArtworkLocationID, EmployeeID, WageRateCharged)
-
- PrintOrder(**PrintOrderID**, PrintOrderDate, DueDate, ArtSlideDate, ArtFilmDate, ApparelOrderDate, PrintDate, DateDelivered, SetupCharge, Deposit, Discount, MaterialCharge, ArtworkFees, FixedCharges,ShippingCosts_Other)
 - uses_for(**PrintOrderID**, ArtworkOrderID)
- will result in,
- PrintOrder(**PrintOrderID**, PrintOrderDate, DueDate, ArtSlideDate, ArtFilmDate, ApparelOrderDate, PrintDate, DateDelivered, SetupCharge, Deposit, Discount, MaterialCharge, ArtworkFees, FixedCharges,ShippingCosts_Other, ArtworkOrderID)
-
- PrintOrderApparel(**POApparelID**, **PrintOrderID**, BaseColor, PerUnitBasePrice, Vendor, ColorCharge)
 - is_on(**POApparelID**, **PrintOrderID**)
- will result in,
- PrintOrderApparel(**POApparelID**, **PrintOrderID**, BaseColor, PerUnitBasePrice, Vendor, ColorCharge)

Step 4: Final Table list

1. Customer(**CustomerID**, CustomerName, Contact, Phone, Email, CurrentDiscount, Deposit)
2. ArtworkOrder(**ArtworkOrderID**, ArtworkDescription, ApparelItem, OrderDate, DateApproved, ScheduledPrintDate, OrderDiscount, TotalPrice, MaximumColors, CustomerID, Event, Theme,ColorID)
3. Color(**ColorID**,ColorDescription)
4. Artwork Location(**ArtworkLocationID**,**ArtworkOrderID**, Description, Cost, LocationSize, EmployeeID, Date Completed)
5. Employee(**EmployeeID**, EmployeeName, WageRate, Phone, IsFullTime)
6. Employee_Work_Log(**WorkLogID**, Date, Start Time, Task , TimeSpent, ArtworkLocationID, EmployeeID, WageRateCharged)
7. PrintOrder(**PrintOrderID**, PrintOrderDate, DueDate, ArtSlideDate, ArtFilmDate, ApparelOrderDate, PrintDate, DateDelivered, SetupCharge, Deposit, Discount, MaterialCharge, ArtworkFees, FixedCharges,ShippingCosts_Other, ArtworkOrderID)
8. PrintOrderApparel(**POApparelID**, **PrintOrderID**, BaseColor, PerUnitBasePrice, Vendor, ColorCharge)
9. StandardApparelSize(**SizeID**, SizeDescription, SizeAddCharge)
10. has(**ArtworkOrderID**, **ColorID**)
11. uses(**ArtworkLocationID**, **ColorID**)
12. involves(**SizeID**, **POApparelID**, **PrintOrderID**, PriceCharged, AdditionalCharge, Quantity)