**UAP DATABASE DESIGN**

**NORMALIZATION SILVERFOX FABRIC**

Notes:

* **Bold:** primary key
* *Italic:* foreign key
* ***Bold + Italic:*** primary key + foreign key
* { … }: data with multiple values/*data berulang*

1. **From the above explanations and forms, you are required to:** 
   1. **Create normalization for the Sales Transaction Invoice**

UNF

* Transaction(SalesId, CustomerCompany, CustomerName, CustomerCompanyAddress, TransactionDate, StaffId, StaffName, {Material, Price, Color, Weight, TotalWeight, SubTotal}, GrandTotal, StaffName, StaffPosition)

1NF

* TransactionHeader(**SalesId**, CustomerCompany, CustomerName, CustomerCompanyAddress, TransactionDate, StaffId, StaffName, StaffPosition)
* TransactionDetail(***SalesId***, **Material**, Price, Color, Weight)

2NF

* TransactionHeader(**SalesId**, CustomerCompany, CustomerName, CustomerCompanyAddress, TransactionDate, StaffId, StaffName, StaffPosition)
* TransactionDetail(***SalesId***, ***MaterialId***, Weight)
* Product(**MaterialId**, MaterialName, Price, Color)

3NF

* TransactionHeader(**SalesId**, *CustomerCompanyId*, *StaffId*, TransactionDate)
* TransactionDetail(***SalesId***, ***MaterialId***, Weight)
* Product(**MaterialId**, MaterialName, Price, Color)
* Customer(**CustomerCompanyId**, CustomerCompany, CustomerName, CustomerCompanyAddress)
* Staff(**StaffId**, StaffName, StaffPosition)
  1. **Create normalization for the Proof of Payment**

UNF

* Payment(PaymentId, PaymentProofDate, PaymentDate, PaidAmount, PaymentType, SalesId, StaffPosition, StaffName)

1NF

* Payment(**PaymentId**, PaymentProofDate, PaymentDate, PaidAmount, PaymentType, SalesId, StaffPosition, StaffName)

2NF

* Payment(***PaymentId***, PaymentDate, SalesId, StaffPosition, StaffName)
* PaymentDetail(**PaymentId**, PaymentProofDate, PaidAmount, PaymentType)

3NF

* Payment(***PaymentId***, PaymentDate, *SalesId*, *StaffId*)
* PaymentDetail(**PaymentId**, PaymentProofDate, PaidAmount, PaymentType)
* Staff(**StaffId**, StaffName, StaffPosition)
  1. **Create combined 3NF from the Sales Transaction Invoice and the Proof of Payment**
* TransactionHeader(**SalesId**, *CustomerCompanyId*, *StaffId*, TransactionDate)
* TransactionDetail(***SalesId***, ***MaterialId***, Weight)
* Product(**MaterialId**, MaterialName, Price, Color)
* Payment(***PaymentId***, PaymentDate, *SalesId*, *StaffId*)
* PaymentDetail(**PaymentId**, PaymentProofDate, PaidAmount, PaymentType)
* Customer(**CustomerCompanyId**, CustomerCompany, CustomerName, CustomerCompanyAddress)
* Staff(**StaffId**, StaffName, StaffPosition)

1. **Create ERD from combined 3NF with its relationship.**

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