**QUIZ DATABASE DESIGN**

**NORMALIZATION ALPHAKOMAR**

Notes:

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

1. **Make normalization for Sales Invoice! (UNF, 1NF, 2NF, 3NF)**

UNF

* Sales(PaymentType, SalesId, SalesDate, {No., ProductId, ProductName, ProductSalesPrice, Quantity, TotalPrice}, GrandTotal, Payment, Change, EmployeeName, EmployeePosition)

1NF

* Sales(**SalesId**, PaymentType, SalesDate, EmployeeName, EmployeePosition)
* SalesDetail(***SalesId***, **ProductId**, ProductName, ProductSalesPrice, Quantity)

2NF

* Sales(**SalesId**, PaymentType, SalesDate, EmployeeName, EmployeePosition)
* SalesDetail(***SalesId***, ***ProductId***, Quantity)
* Product(**ProductId**, ProductName, ProductSalesPrice)

3NF

* Sales(**SalesId**, PaymentType, SalesDate, *EmployeeId*)
* SalesDetail(***SalesId***, ***ProductId***, Quantity)
* Product(**ProductId**, ProductName, ProductSalesPrice, ProductPurchasePrice, ProductDescription, ProductStock)
* Employee(**EmployeeId**, EmployeeName, EmployeePosition, EmployeeEmail, EmployeeDOB, EmployeeAddress)

1. **Make normalization for Restock Invoice! (UNF, 1NF, 2NF, 3NF)**

UNF

* Restock(RestockId, RestockDate, SupplierName, SupplierPhone, SupplierEmail, {No., ProductId, ProductName, ProductPurchasePrice, Company, Quantity, TotalPrice}, GrandTotal, EmployeeName, EmployeePosition)

1NF

* Restock(**RestockId**, RestockDate, SupplierName, SupplierPhone, SupplierEmail, EmployeeName, EmployeePosition)
* RestockDetail(***RestockId***, **ProductId**, ProductName, ProductPurchasePrice, Company, Quantity)

2NF

* Restock(**RestockId**, RestockDate, SupplierName, SupplierPhone, SupplierEmail, EmployeeName, EmployeePosition)
* RestockDetail(***RestockId***, ***ProductId***, Company, Quantity)
* Product(**ProductId**, ProductName, ProductPurchasePrice)

3NF

* Restock(**RestockId**, RestockDate, *SupplierId*, *EmployeeId*)
* RestockDetail(***RestockId***, ***ProductId***, *CompanyId*, Quantity)
* Product(**ProductId**, ProductName, ProductSalesPrice, ProductPurchasePrice, ProductDescription, ProductStock)
* Supplier(**SupplierId**, SupplierName, SupplierPhone, SupplierEmail, SupplierAddress)
* Employee(**EmployeeId**, EmployeeName, EmployeePosition, EmployeeEmail, EmployeeDOB, EmployeeAddress)
* Company(**CompanyId**, CompanyName, CompanyAddress)