Physical Data Model
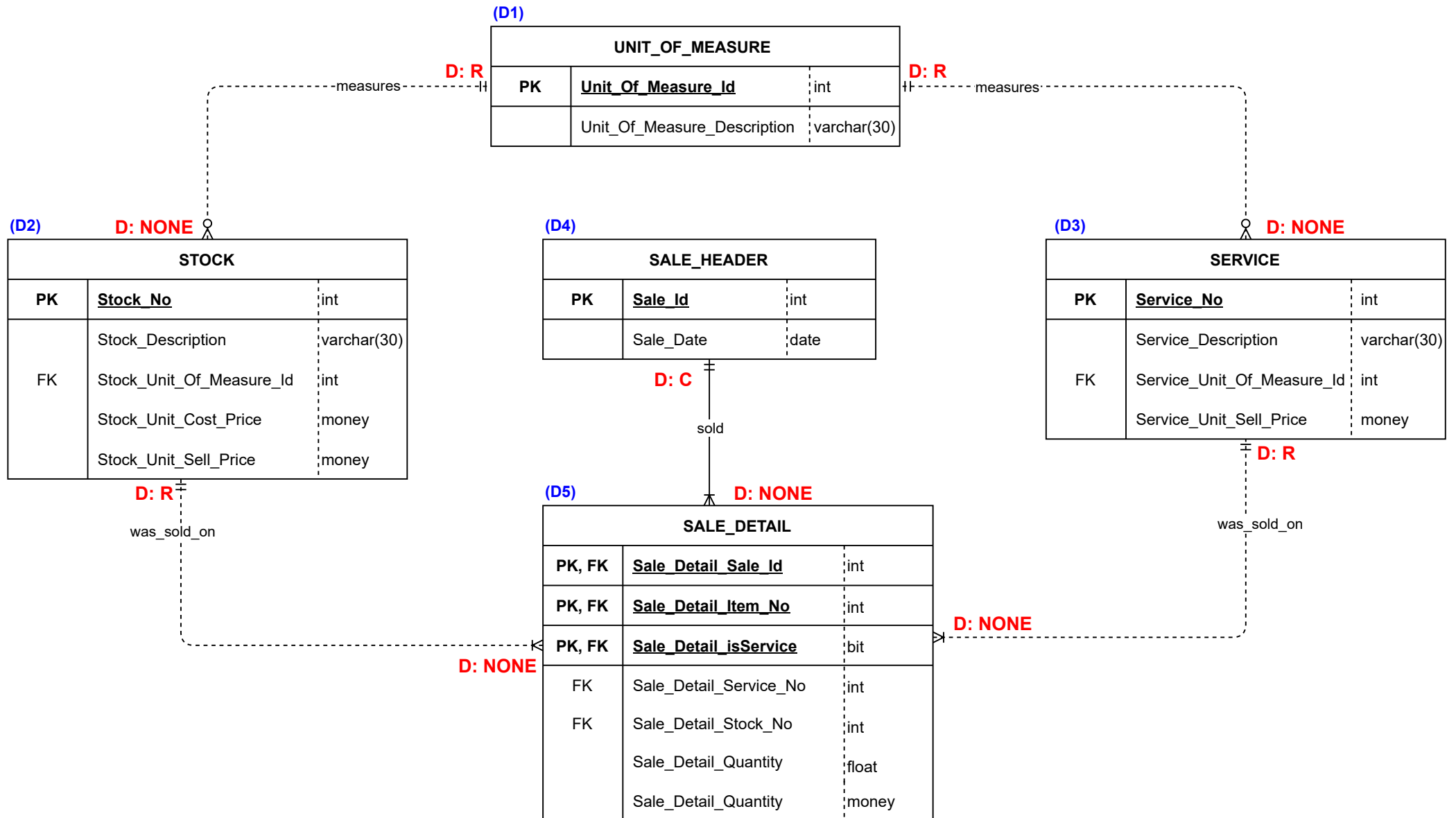
With Entities, Attributes, PK's, FK's, Relationships, Referential Integrity, 3NF + Efficient design

(D1)

UNIT_OF_MEASURE

PK	Unit_Of_Measure_Id	int
	Unit_Of_Measure_Description	varchar(30)

D: R --- measures ---

D: R --- measures ---

D: NONE

D: NONE

(D2)

STOCK

PK	Stock_No	int
	Stock_Description	varchar(30)
FK	Stock_Unit_Of_Measure_Id	int
	Stock_Unit_Cost_Price	money
	Stock_Unit_Sell_Price	money

(D4)

SALE_HEADER

PK	Sale_Id	int
	Sale_Date	date

D: C

sold

(D3)

SERVICE

PK	Service_No	int
	Service_Description	varchar(30)
FK	Service_Unit_Of_Measure_Id	int
	Service_Unit_Sell_Price	money

D: R

was_sold_on

D: R

was_sold_on

D: NONE

(D5)

SALE_DETAIL

PK, FK	Sale_Detail_Sale_Id	int
PK, FK	Sale_Detail_Item_No	int
PK, FK	Sale_Detail_isService	bit
FK	Sale_Detail_Service_No	int
FK	Sale_Detail_Stock_No	int
	Sale_Detail_Quantity	float
	Sale_Detail_Quantity	money

D: NONE

D: NONE

MS SQL CONSTRAINTS:
Implementing Domain & Referential Integrity

(D5)
[CK_Sale_Detail_IsService]
([Sale_Detail_Stock_No] IS NULL AND [Sale_Detail_isService]=(1) OR [Sale_Detail_Service_No] IS NULL AND [Sale_Detail_isService]=(0))

[CK_Sale_Detail_Quantity: No Negative Values]
([Sale_Detail_Quantity]>(0))

[CK_Sale_Detail_Unit_Price: No Negative Values]
([Sale_Detail_Unit_Price]>(0))

FK_Sale_Detail_Sale_Header
Delete Rule: Cascade

(D4)
[DF_Sale_Header_Date_Today]
(getdate())

(D3)
[CK_Services_Service_Decription: No Empty Strings]
([Service_Description]<>N'')

[CK_Services_Unit_Sell_Price: No Negative Values]
([Service_Unit_Sell_Price]>(0))

[CK_Services_Unique]
(UNIQUE([Service_Description], [Service_Unit_Of_Measure_Id]))

(D2)
[CK_Stock: Unit SP > Unit CP]
([Stock_Unit_Sell_Price]>[Stock_Unit_Cost_Price])

[CK_Stock_Description: No Empty Strings]
([Stock_Description]<>N'')

[CK_Stock_Unit_Cost_Price: No Negative Values]
([Stock_Unit_Cost_Price]>(0))

[CK_Stock_Unit_Sell_Price: No Negative Values]
([Stock_Unit_Sell_Price]>(0))

[CK_Stock_Unique]
(UNIQUE([Stock_Description], [Stock_Unit_Of_Measure_Id]))

(D1)
    [CK_Unit_Of_Measure_Description: No Empty String]
        ([Unit_Of_Measure_Description]<>N")